

AHR Conversation: Historians and the Study of Material Culture

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As a field, the historical study of material culture is no longer new. It has its own journal (the *Journal of Material Culture*), its own e-mail list (H-Material Culture), its own circuit of conferences, centers devoted to the subject at several universities and museums, degree and certificate programs, and, of course, a full range of courses for students. It is also one of the most interdisciplinary ways of investigating the past, with historians comfortably in dialogue and collaboration with archaeologists, sociologists, folklorists, and anthropologists, as well as museum curators and antiquarians, among others. While some might still associate its subject matter with objects found in museums or things from the remote past, it is in fact a field that takes an interest in all conceivable objects and every historical period. Indeed, its subject matter, and especially its concern for everyday life and the material circumstances of ordinary people, place it in close proximity to social and cultural history. Many historians are students of material culture *manqué*.

But not all historians who deal with material culture are aware of, or troubled by, the methodological problems inherent in this field of study. How dependent is the study of material culture on texts? How well can we understand objects or the material conditions of life when what we know comes only through texts? Is there a meaningful distinction between what is human and what is material? How can we appreciate people's relationship to objects in the past when those objects have not survived, or even when they have? What is gained in having meaningful, direct, "hands-on" knowledge of objects, and does this kind of intimacy or familiarity endow historians with crucial insights into the past that cannot be gained otherwise? These and other questions were the themes of the following *AHR* Conversation, which took place online during the fall, and which is printed here in a lightly edited version. The participants were Leora Auslander, a modern Europeanist; Amy Bentley, a historian of food; Leor Halevi, a historian of Islam; H. Otto Sibum, a historian of science; and Christopher Witmore, an archaeologist. The questions were posed by the *AHR* Editor.

AHR Editor: To begin with, there are likely a lot of basic questions that many historians have about the field "material culture," questions that strike at the heart of methodological concerns we often don't discuss directly, but which are very impor-

tant nevertheless. One has to do with evidence. A simple way of setting off the study of material culture from other kinds of history is that it deals with “things”; and “things” are different from “texts,” the source material for most historians. But does this distinction hold? Obviously, the “thingness”—that is, the material nature or properties—of manuscripts, inscriptions, documents, archives, and other modes in which texts are encoded is as important as, or inseparable from, the texts themselves. One only has to think of the history of the book to be struck by the comparability or overlap. And, conversely, often the only way we know about things in the past—for example, the furnishings and belongings that Leora Auslander discusses in her 2005 *AHR* article—is through texts.¹ How do you think about this distinction? From your own perspective on material culture, how do you consider the difference between objects and texts? Is this a distinction that should be central to our approach to material culture, or do you think it’s one that we should somehow try to “get over”?

Leora Auslander: I would like to make a brief for the distinction, not between texts and things but among words, natural language, and things.² My argument rests on the assumption that people do different things with words and with things and that that difference has to do with embodiment and its corollaries of complex sensory perception and mortality. Whether it is in the making of things or in their using, people use them differently from words to create meaning, to store memories (or enable forgetting), to communicate, to experience sensual pleasure (or pain). A related, but separate, issue is the reproducibility of language and things. Let me address these two points in turn.

People make and use things for a vast array of reasons. Naming a few of those uses indicates the complexity: the need for warmth, to leave a physical mark of their presence, the desire for beauty, the urge to express pain, the need for a surface upon which to sleep or a receptacle in which to cook. Sometimes only an object will do—words, in whatever form, cannot keep the rain off one’s head or hunger at bay. Sometimes there is, at least in principle, a choice. Emotions can be expressed through a multiplicity of media, including words, music, visual and material culture. Sometimes, however, only one medium is, in fact, possible. Some have found that feelings about mortality are only expressible through an object that itself has a lifespan rather than in words, which are immortal (even if the surface upon which they are inscribed is not). Often objects serve several purposes simultaneously; much furniture, pottery, or textiles not only fulfill their service functions but also provide sensual pleasure and meaning. A narrative of origins can be sewn into a quilt or woven into a basket. Joys and sorrows can be expressed in how clothing is made, worn, preserved, or destroyed. Sometimes words and things come together; things are written about in diaries, inventories, letters, or songs, but the “truth” of the object is not more to be found in the words than in the thing itself. What a cabinetmaker says about a chair she has just built is not more to be trusted than the form of the chair itself. People

¹ Leora Auslander, “Beyond Words,” *American Historical Review* 110, no. 4 (October 2005): 1015–1045.

² Please note: In the interests of economy, I have included as references for this conversation only texts in which I elaborate my own arguments made here in shorthand. Complete references to the literatures upon which I rely may be found there.

who make things have repertoires of forms (and the meanings conveyed by those forms) in their heads, hands, and eyes. They do not necessarily have words for them. Even if they have words, those words may be less adequate to the meaning or feeling of the object than the object itself. Likewise, people cannot necessarily say clearly why they are so attached to a given spoon or way of making coffee. That doesn't mean that such attachments or practices are without meaning or that their meanings are inaccessible to historians.

In sum, the most important stake, for me, in historians taking material culture, things, seriously and acquiring the knowledge needed to "read" them is that because people use them differently than they do words, objects provide another, a different, source from language. Without things, our understanding of people is impoverished.

Let me turn now to the issue of the thingness of words, of texts, of archives. It is obviously true that books, manuscripts, prints, and computer disks are things. But, I would argue, their thingness is not the same as the thingness of a piece of fabric, a fork, or a tuna-fish can. The difference lies in the separability of the words they bear from their material form. While language may be reproduced, unchanged, in many different formats, the same is not true of things. The fact that language changes meaning depending on the format of its transmission (spoken, typewritten, printed, handwritten, bound, loose, etc.) only reinforces the distinction between the linguistic and the material. It is, indeed, different to read a text from a single semi-legible handwritten sheet and to read that same text reprinted in a primary-source reader, but the meaning of the words does not change. The information one has is diminished, thus part of the reason historians grant such importance to working from archival materials, but the absence of that supplemental information does not, usually, fundamentally change the meaning of the words. (And in the post-handwriting age, this becomes more and more true.) The photograph of a dress, a mug, a chair, or a cake, by contrast, bears a very different relation to the original than a printed text to a manuscript. The process of rendering an object that is usually in contact with the body, whose perception requires the senses of touch, hearing, and smell (and taste as well for food) as well as sight, flat, small, and untouchable, fundamentally changes its affective and communicative capacities. The inadequacy of description or photographic reproduction poses, of course, enormous challenges to those of us who write about objects, but that's a topic for another day.

Amy Bentley: I am in agreement with Leora's distinctions between texts and things, that there is a difference in "thingness" between the text and the object, differences that are marked enough that we should not, and could not, just "get over" them and proceed as if the two are interchangeable. Dedicated cultural theorists of a certain persuasion might argue otherwise, however. And if we placed "words" at one end of a continuum and "objects" at the other, there would not be a readily identifiable point at which one was distinct from the other. So there is an area, as the Editor suggests, where books/texts are compelling as both objects and texts, are inseparable and must be analyzed as such. Cookbooks are a great example of artifacts that easily lend themselves to being read as both a text and an object. Historians of print/the

book such as Robert Darnton have done terrific work to illuminate these dual qualities, and demonstrate the power of material culture analysis.

Leora's comment on the relative stability of the meaning of words as compared to things makes sense to me. It helps me understand better why historians feel more comfortable with the written text as evidence—because it feels more permanent. Objects can decay, break, disappear; words are transferable, and even though much is lost with the original context, as Leora points out, words can continue to exist through another format or medium. Perhaps another reason some historians might be reluctant to regard objects with the same authority given to texts is that objects can change meaning (and function) depending on context. An example is a fireplace. Originally a source of household heat, light, and energy to cook food, fireplaces have evolved in function and meaning. For many homes in industrialized countries, fireplaces might function as a decorative nicety, or (in NYC) be a demonstration of one's wealth or cultural capital. Or it could be a combination of these.

H. Otto Sibum: Indeed, historical investigations into what is commonly called material culture immediately challenge the conventional historian's craft in making sense of literary sources. By means of my own research in the history of science, I have learned that beyond the literary world that represents physical things like a scientific instrument or an experiment, there exists a material world of that past science on which our literary heritage is silent. In order to understand how a physical device worked or what knowledge was required to perform such an experiment, even literary sources like the laboratory notebook or a diary of the past actor do not suffice. They are mostly written for the historical actors themselves, and not for the historians who try to make sense of the past. For example, in one of my studies I was able to show that the visual representations of an experiment by James Joule (which he produced himself and which were published in the *Philosophical Transactions of the Royal Society*) were not sufficient to replicate the experiment. Furthermore, even his most detailed laboratory notebooks did not provide me as a historian with the key information about the techniques and working knowledge required to perform that experiment.³ Only through the historiographical approach, called experimental history of science, could I get access to hitherto unrecognized dimensions of past practice.

Hence, for me there is no doubt that we have to distinguish between texts and physical things of the past, if only for the reason that engaging with them requires different sense economies and modes of working that require and prompt cognitive effects. Moreover, I am convinced that this is not just relevant for historians of science; it is equally important for historians in general. But, and this is very important to mention, I do not want to be understood as saying that as a consequence we should

³ H. O. Sibum, "Reworking the Mechanical Value of Heat: Instruments of Precision and Gestures of Accuracy in Early Victorian England," *Studies in History and Philosophy of Science* 26, no. 1 (1995): 73–106. On the historiographical approach, see Sibum, "Experimental History of Science," in Svante Lindqvist, ed., *Museums of Modern Science* (Canton, Mass., 2000), 77–86; Sibum, "Les gestes de la mesure: Joule, les pratiques de la brasserie et la science," *Annales: Histoire, Science Sociale* 53, no. 4–5 (1998): 745–774.

simply move our interest away from texts (the software of science) to instruments, laboratory equipment, etc. (the hardware of science). Instead, we should regard this performative approach toward things (like experimenting with past scientific instruments) as a complementary technique within the conventional tool kit of the historian. Texts are still very important, but we have to rethink their exclusive status in providing evidence as much as we have to work hard to develop methods in order to make speak the silent representatives of the past, the working knowledge embodied in physical things.

Over the last decades, we have noticed various important approaches in both directions.⁴ Among historians of science, we see a growing community of scholars who try to integrate the physical things of the past into their narratives. The main obstacle, I believe, is that history as an academic field is still regarded and practiced as a pure literary genre. Hence, many of those who attempt to integrate material culture are content to focus on the literary representations of physical things of the past. Experimental history of science does not stop there. It aims at using the physical performance of experiments as a complementary means to raise social, cultural, and epistemological questions about the past. When I was teaching the history of science using replicas of scientific instruments and original devices at Cambridge University during the 1990s, students initially found it extremely challenging to actually put their hands on those things instead of reading a text about a particular experiment. In the end, however, they not only enjoyed this style of teaching but also realized that this kind of practical work could help them to better understand the literary sources they were struggling with. The tension, I noticed in these courses, between working with one's head and working with one's hands has itself a long and complex history, which deserves further enlightening. First investigations I have done myself show that engagement with physical objects as a means to create knowledge has always challenged the identity of the scholar. In the 1870s, when James Clerk Maxwell offered his first experimental class at Cambridge, hardly any students showed up. With regard to the academic milieu of that time, this is not astonishing. For the typical Cambridge natural sciences Tripos student who was taught that putting numbers into an equation was already too practical a task, the performance of an experiment must have seemed extremely odd. When rethinking my experiences in discussing the role of material culture in very different academic disciplines (natural science, the humanities, the social sciences) over the last decades, I'd like to state that I am convinced that it is extremely important for our discussion—and for answering the first question in particular—to reflect and spell out in which way our intellectual positions on material culture are determined through our respective initiations in our respective scholarly fields.

⁴ See, for example, Adrian Johns's work on the history of the book or Andrew Warwick's study of the training of Cambridge Wranglers in nineteenth-century Victorian Britain. These works most convincingly demonstrate the need to rethink traditional historical accounts of erudite culture by suggesting that we study the uses of literary technology. Johns, *The Nature of the Book: Print and Knowledge in the Making* (Chicago, 1998); Andrew Warwick, *Masters of Theory: Cambridge and the Rise of Mathematical Physics* (Chicago, 2003).

Christopher Witmore: There is a question of how to make the distinction between language and things without falling into that familiar and debilitating two-world gap between words and the world. This distinction can easily slip into a situation where either language or the material comes to subsume the other: on one side, we are left with a dominant logocentric tradition; on the other, with an equally domineering materialism. Ontologically, there are no sides. Rather, there are bewildering diversities of things, people, and other, let's use the term "entities," which are more or less connected.

For example, when we speak of a historical text, we are also speaking of archives, institutions, administrative personnel, curators, ordered shelves, air conditioning, organizational standards, databases, not to mention the long chains of articulation, selection, filtering, acquisition, and so on that gave rise to that text. We could just as easily speak of old family accounts from the mid-nineteenth century inside a dusty, neglected box in a descendant's attic, but until these documents come under the scrutiny of a historian, they may not yet be "historical texts." They may very well be the packing material encapsulating a crystal chandelier.

It takes a great deal of hard work, care, and passion, not to mention a vast network of other entities, to maintain a historical text as such. Things, respecting the etymological roots of the term, "gather" relations (this is why Martin Heidegger, Bruno Latour, and others make the distinction between "objects" and "things").⁵ To reduce a historical text to its attributes as defined by language is to neglect the network that the text as thing gathers, along with the subtle action afforded by its other qualities. Without the network, the historical text does not exist. From this orientation, language is but one mediating artifact among many.

Of course, there is a distinction between speech acts and material acts. But an *AHR* article is a very specific mixture of such acts, and as such it circulates and amplifies events that are otherwise located. For me, the distinction between language and things should be no more or no less privileged than the distinction between well-ordered metal archival shelves and dusty cardboard attic boxes.

Following on Otto's comments regarding scholarly fields, in the hands of a good historian a wage labor petition from 1829 becomes a fascinating window into the lives of Baltimore street workers.⁶ Likewise, in the hands of an archaeologist, a polychrome ceramic fragment collected from the slopes of Mt. Kotena in Greece indicates the presence of Late Neolithic agriculturalists. These are different styles of craftsmanship (to reiterate Otto's thoughtful use of the term "craft") with respect to disparate objects of concern. And it requires a substantial investment of labor to link such things up into an authoritative account, whether historical or archaeological. We happen to craft books and articles, and, as Leora and Otto point out,

⁵ Here I refer to Martin Heidegger, "The Thing," in Heidegger, *Poetry, Language, Thought*, trans. Albert Hofstadter (New York, 1975), 161–184; Bruno Latour, "From Realpolitik to Dingpolitik; or, How to Make Things Public," in Bruno Latour and Peter Weibel, eds., *Making Things Public: Atmospheres of Democracy* (Cambridge, Mass., 2005), 14–43.

⁶ Seth Rockman, *Scraping By: Wage Labor, Slavery, and Survival in Early Baltimore* (Baltimore, 2009).

these do different things from a carpenter's chair or a microscope. Should the former be privileged over the latter? As an archaeologist, I prefer to place all these things on the same footing (not that all archaeologists do so), but one cannot deny the fact that our texts draw more colleagues, politicians, or regular people to an otherwise singular interaction in an archive or laboratory (again, consider the networks).

With respect to the distinction between language and things, there are numerous underlying and pesky bifurcations, as old as Plato himself, which hamper our ability to come to terms with these issues. This bifurcation plays out in rendering things as carriers of meaning, as means to specific ends, as vehicles for language. Here we encounter a stubborn divide that exists between essence and substance or form and material.⁷ We need not think, act, or work in these terms. Indeed, these bifurcations predefine our objects of concern. Whether something is spoken, an e-mail, a Word document, or a handwritten letter, all these translations are different in small, often subtle ways, and they impact the outcomes of our engagements with them.⁸

All entities perish. The language of a text transforms with every translation—this is not only the lot of “objects”—and because of this, no essence, no language endures irrespective of the transient things around it. Following the lead of Alfred North Whitehead, I would prefer to regard all these entities as events.⁹ Just as no text will be read in the same way twice, the “language” of a wage labor petition will not endure without the hard work of librarians, curators, or historians. It is our charge, whether as historians or archaeologists, to constantly struggle against such entropy.

What I think is an interesting historical question is how these distinctions come to be made in the first place and whether or not the actors we study subscribe to them. Not all of the answers are open to us as researchers of the past, but that doesn't mean we cannot improve our craft by being aware of these issues.

I believe that much of what I write resonates with the previous points. Still, given our disparate disciplinary, personal, and practical backgrounds, I wish to emphasize that it is more than likely that our vocabulary will betray us with regard to our common concern of “material culture.” Indeed, I hope we will return to the issue of vocabulary, and specifically the term “material culture,” at some point in our conversation.

Leor Halevi: How I think of things, as historical sources, in relation to texts has a lot to do with time period. This reflection stems from the jolt I've suffered by jumping from early Islamic times, on which I focused in *Muhammad's Grave*, to the modern era, on which I'm now concentrating. Material evidence for the seventh and eighth centuries is tremendously important; it often reveals significant social and cultural

⁷ For more on these divides, see Graham Harman, *Prince of Networks: Bruno Latour and Metaphysics* (Melbourne, 2009); Tim Ingold, “The Textility of Making,” *Cambridge Journal of Economics* (online version, 2009), <http://cje.oxfordjournals.org/cgi/content/abstract/bep042>.

⁸ On media as modes of engagement, see the various papers in Krysta Ryzewski, ed., *Experience, Modes of Engagement, Archaeology*, Special Issue, *Archaeologies* 5, no. 3 (December 2009).

⁹ Alfred North Whitehead, *Process and Reality: An Essay in Cosmology* (New York, 1978).

practices for which we have no textual evidence. Let me give an example. Early Islamic funerary law denounces memorials for the dead. From this we might infer the existence of such memorials. But we'd have little idea of what they looked like, what function they had, etc. It is only by inspecting epitaphs and archaeological reports that we can really learn about these early medieval practices.¹⁰

When we turn to the modern period, by contrast, we face so much textual evidence of different sorts that the actual objects, taken in aggregate, matter less (relatively speaking) as historical sources. I don't mean by this that modernists need not pay attention to objects—that would be heresy in the context of this conversation; I just mean to say that we can typically locate a wide range of texts about the objects under consideration. Allow me to illustrate. Recently I began researching a fatwa (a legal opinion) about the permissibility of using the phonograph to play a record of the Qur'an. Now, listening to an old vinyl recording of Muslim scripture on a Victor Talking Machine would enrich my experience of the past. But after considerable efforts, I was able to find detailed literary evidence to understand how Muslims themselves in particular places, in the early twentieth century, related to Qur'anic recitations on this machine.

I prefer not to speculate about their encounters with this Western instrument on the basis of my own subjective experiences or personal assumptions. Experiments such as those that Otto describes sound fascinating; and they'd be extremely valuable if I were a historian of science or technology aiming to reconstruct the techniques and practices of the men who invented gramophones and phonographs. But my aim in this instance, as a historian of religion, is to understand how a novel device affected Muslim belief and culture at a given time and place. Otto's point about "our respective scholarly fields" is therefore very well taken. Even though I deal, like him, with material culture, the methods and goals of a history of experimental science and of a history of Islam obviously need to be different.

My own approach to material culture is very much based on texts. It's not so much that I feel uneasy about arguments that derive from the examination of objects in the absence of texts; it's more that I find really exciting evidence that weaves objects and texts inextricably. I still remember how intrigued I was when I first found out about textiles (shrouds for the dead) embroidered with Arabic texts. This evidence allowed me to make some historical arguments that I could not have made by texts alone or by textiles alone. More recently, I came across some theological reflections about the Muslim use of paper with Christian watermarks, representing Greek or Latin crosses, the paschal lamb, or a crusader's shield. It turns out that Muslims used such paper, and not just for secular writing—there exists one copy of the Qur'an made on Italian paper with watermarks of the cross. Evidence of this sort just doesn't allow a neat separation of words and things: they are intimately linked.¹¹

¹⁰ Leor Halevi, *Muhammad's Grave: Death Rites and the Making of Islamic Society* (New York, 2007).

¹¹ Leor Halevi, "Christian Impurity versus Economic Necessity: A Fifteenth-Century Fatwa on European Paper," *Speculum* 83 (2008): 917–945.



FIGURE 1: Historians of early Islam have by and large paid attention to textual evidence, but the material record can reveal new facets of history. The wool tapestry depicted here stems from the reign of caliph Marwan I (684–685) or Marwan II (744–749), as can be deduced from the Arabic text embroidered near the top, below the horizontal line, in a decorative Kufic script. Within the roundel at the bottom appears a cock, stylized according to the Sasanian tradition. This combination of Kufic script and a Sasanian motif illustrates the hybrid style that characterized the Umayyad period. Like other early Islamic textiles displayed today in museums, this tapestry survived through burial. Originally, it formed part of a Muslim's shrouds. The material evidence allows us to conclude that during the formative period of Islam, some Muslims buried the dead with textiles that displayed blessings from caliphs, as well as figurative representations of animals. This conclusion could not have been reached by reading the prescriptive literature alone, for it greets gifts from caliphs with some suspicion and it makes few allowances for richly decorated garments. Evidently, the iconoclasts who recommended plain white shrouds did so against a colorful background—alienated from the material realities of their age. Photo courtesy of The Textile Museum, Washington, D.C., 73.524. Acquired by George Hewitt Myers in 1947. Reproduced with permission.

Responding to one strand of the conversation between Amy and Leora, I do agree that emotions can be expressed through objects in unique ways that cannot be captured by language. But the question then arises, how can we access those emotions and sense experiences as historians? Let's say that we find a Spanish book that includes a recipe for an unusual dish that makes plentiful use of chocolate. We can follow the recipe, and then try to imagine what that dish tasted like three or four centuries ago. Perhaps we can even try to express in words what a Spaniard felt when he or she first sampled that chocolaty concoction, justifying our description by the argument that, biologically speaking, the alkaloids in cocoa and the other chemical compounds which constitute that dish will affect our moods and bodies in a similar way. But this leads me to an *AHR* article by Marcy Norton about the Spanish taste for Mesoamerican chocolate. Basing herself on textual sources, rather than on subjective tasting experiences, she makes a fairly persuasive argument that Spaniards initially imitated in some respects the aesthetic values of the colonized. Yet worries about acculturation affected their receptivity. Significant differences in taste and in the style of consumption eventually emerged, particularly as chocolate crossed the Atlantic, for it was sometimes necessary to substitute Old World spices for Mesoamerican ingredients. Rather than focusing on universals or seeking a unified theory of chocolate, Norton delves into particulars, into cultural singularities and changes, the stuff that history is made of.¹²

Christopher's evocation of Plato seems to me very appropriate, although everything in the world was, for him, a "dusty cardboard box." Our interest in knowing corruptible objects historically, whether through words or things, would indicate to him that we're all stuck together in the same dark cave.

AHR Editor: In different ways and degrees, each of you has attempted to finesse the "thing-text" distinction as fundamental to the definition of the field of material culture; that is, I think I'm correct in concluding that all of you reject the simplistic view that material culture deals with things, while traditional history looks at texts. Indeed, I am struck by how unimportant this distinction seems to your understanding of the field. To be sure, it can be instructive in helping us appreciate what might be gained in shifting our gaze away from words or texts alone. Leora reminds us of the emotional and embodied aspects of objects, as opposed to words. Amy, too, points to the impermanence of things, which, unlike ever-reproducible words, tend to decay and disappear over time (a point that interestingly jars with Leora's comment about having only material evidence from the seventh and eighth centuries for which there is no textual commentary). For Otto there is a living dimension to science which, while it cannot dispense with texts, is accessed primarily through reenacting experiments in order to "make speak the silent representatives of the past, the working knowledge embodied in physical things." Again we have this notion of embodiment. Chris is the most insistent on avoiding this distinction—"the familiar and debilitating two-world gap between words and the world." His view might be rendered as the opposite of the poststructuralist perspective that sees everything as a text: everything

¹² Marcy Norton, "Tasting Empire: Chocolate and the European Internalization of Mesoamerican Aesthetics," *American Historical Review* 111, no. 3 (June 2006): 660–691.

is an “entity.” Finally, Leor asks us to consider the periodicity of the balance between texts and objects (a consideration—that is, periodicity—I would like us to keep in mind). He also notes that in his own work, the very objects he investigates disallow, in a sense, an easy distinction between language and things.

My sense is that this is a problem that, while clearly limited in terms of what it can yield for our understanding of the field, is not easy to dispel, especially for people who come to the subject from the outside. But from some of your comments, another question suggests itself, which points to another distinction—this one between things and people. For many, even most, historians, “material culture” means stuff found in a museum. Leaving aside the ways today’s museums go to great lengths to make the relationship between humans and the objects they have created and used a part of exhibitions, how do you understand this relationship? Marx argued that commodities were embodied human labor. In your own work, how do you factor in the human—especially when evidence of people’s relationship to objects is hard to come by? What can the historian “do” to objects to endow them with the characteristics and meanings of their possessors and creators? In other words, from your particular perspectives, how do you address the “culture” in material culture?

Leor Halevi: To unravel this knot of questions, we should perhaps begin with the relatively straightforward approach of the Australian archaeologist Vere Gordon Childe. In *The Danube in Prehistory*, he defined a “culture” or a “cultural group” as consisting of the complex of objects, fashioned or manipulated by human beings, which appear in recurring patterns at archaeological sites. Prehistoric remains, such as “pots, implements, ornaments, burial rites, [and] house forms,” constituted for him “the material expression” of an ethnic group. A committed Marxist, Childe associated excavated objects, the embodiments of human labor, very closely with culture and ethnicity. Such a materialist conception of culture may seem odd today, given the prominence of semiotic interpretations, which consider culturally significant not just the object itself, but also what it symbolizes for the subject. (Consider, for instance, Daniel Roche’s *A History of Everyday Things*. Like Childe, Roche pays close attention to material realities, but these do not fully determine for him the culture of consumption in early modern France. Aiming to describe the complex and inextricable relations between objects and subjects, Roche analyzes not just furniture or clothes or bread, but also “networks of abstraction and sensibility,” the “surplus of meanings” that human beings attached to these objects.) Childe did not strive to occupy a middle ground between materialist and symbolic interpretations. Yet in his defense, it must be said that he published his book in the late 1920s, long before the cultural turn. And it is important to state the obvious: that the prehistoric archaeologist needed to rely entirely on artifacts to describe a culture. Lacking a written record, he would have been unable to substantiate any speculation about the system of symbols at play.¹³

¹³ V. Gordon Childe, *The Danube in Prehistory* (Oxford, 1929), v–vii; Daniel Roche, *A History of Everyday Things: The Birth of Consumption in France, 1600–1800*, trans. Brian Pearce (Cambridge, 2000), 2, 7.

Historical context plays a key role in our understanding of culture in relation to persons and objects. We place great significance on the way by which objects were acquired—through scavenging or hunting, by means of trade or gift giving, as a result of conquest or piracy. Is the focus of inquiry production in a preindustrial economy, consumption in an early modern nation, scientific experimentation in the capital of an empire, or technological diffusion to a colony? The context largely determines the cultural and personal significance of things. Think, for instance, of Bronislaw Malinowski's *Argonauts of the Western Pacific*. In the Trobriand Islands, we find out, people made necklaces and bracelets of red and white shells. But this fact is insignificant. What captures our attention is the non-capitalistic system of exchange (the famous Kula trade) by which these objects circulated. Or think about Rudolf Mrázek's *Engineers of Happy Land: Technology and Nationalism in a Colony*. The colony in question is Indonesia under Dutch rule in the early twentieth century. His book shows brilliantly that it is one thing to deal with elements of material culture (radio, asphalt roads, tennis costumes) in a European context, where the technologies and styles originated—but quite another thing to deal with the same elements in a colonial context.¹⁴

In my own work, Islamic law provides a cultural context that bears upon the relationships between objects and persons. Jurists offer Muslims religious guidelines, forceful advice, declaring certain goods harmful or desirable, forbidden or permissible. I've researched their opinions, together with the goods in question, in different historical frameworks.

In the first chapter of *Muhammad's Grave*, I analyzed early Muslim tombstone inscriptions. These epitaphs are extremely valuable, historically speaking, because they offer some of our earliest dated evidence for the origins and early development of Islam. Muslims began to inscribe tombstones in the late seventh and early eighth centuries in the lands of the eastern Mediterranean. In doing so, they adopted, modified, and appropriated a practice that had already existed in those lands before the rise of Islam. They began to Islamize the medium by, for example, purging tombstones of icons and decorating them instead with quotations from the Qur'an. Tradition-minded jurists, however, reacted to this emerging practice; they argued that in the holy cities of Arabia in the age of the Prophet Muhammad, Muslims had not dedicated such memorials to the dead. They perceived tombstones and epitaphs as execrable innovations. In the end, what we see is the rise of a fascinating disjunction between early Islamic culture in Arabia and in the Mediterranean, on the one hand, and between popular practice and legal ideals, on the other. In my argument, such productive tensions shaped the early Islamic tradition, with profound cultural, religious, and social implications.

Currently I'm researching commodities, made in Europe and in the United States, that crossed over into Muslim lands and, for one or another reason, became em-

¹⁴ Bronislaw Malinowski, *Argonauts of the Western Pacific: An Account of Native Enterprise and Adventure in the Archipelagoes of Melanesian New Guinea* (London, 1922); Rudolf Mrázek, *Engineers of Happy Land: Technology and Nationalism in a Colony* (Princeton, N.J., 2002).

broiled in religious or legal controversies. For some Muslims, these goods symbolized a cultural boundary between Western civilization and Muslim tradition. For others, they represented modern developments that appeared perfectly compatible with the spirit of Islam. I'm especially interested in figuring out how jurists interpreted the consumption of these controversial objects, while seeking to shape a modern Islamic culture.

Amy Bentley: How to locate, and correctly interpret, the “culture” in material culture is important and complicated, and no doubt the answers and methods vary for different time periods, as we've just discussed. As Leor has written, historical context plays a great role, as does the means by which the object was created or circulated, the way in which the object was acquired, and the multivalent meanings that humans both bring to and inscribe upon the object.

As the Editor pointed out in reference to Marx, there is a disconnect between the value of the object produced—the cost of the labor and materials, the social meanings and value accorded by the creators, and the value of the object as it circulates in and through networks of commerce, trade, and other forms of transmission. These sets of meanings/values can be dramatically different. Whether the object is industrially mass-produced or handcrafted from scarce materials doesn't matter; it works in much the same way: its meaning shifts in part from those who control it, admire it, seek to manipulate it, throw it away, and so on. At one level, the meaning and value is intensely personal and idiosyncratic; at another, broader level of culture, the meaning takes its cue from larger social mores. Bourdieu's notions of field and habitus make a lot of sense, I think, in trying to articulate and understand these different levels of meaning and the connection between them.¹⁵

I have been writing about the industrialization of food and its relationship to (among other things) culture. I focus on commercially prepared baby food, a twentieth-century “invented” product that went on to become a staple of and even a rite of passage for most American households with infants.¹⁶ In a relatively short time, the little jars of baby food became packed with multiple meanings. For many, at the time they were first produced in the 1930s, they represented advancements in science and technology, or convenience, time-saving and labor-saving devices, modernity, ease in preparation, luxury. During the Cold War period, baby food, along with other industrially produced products, came to embody the civilized and even superior nature of American society. The age at which infants were first fed solids dropped dramatically, from around nine months in the early twentieth century to a matter of weeks, even days, after birth by the 1950s. Most American mothers appreciated the time and labor saved and the increased mobility that jarred baby food provided; they could easily pack jars of baby food for a picnic or a trip to the park. Yet the discourse surrounding infant feeding is in many ways startling, because embedded in this seem-

¹⁵ See, for example, Pierre Bourdieu, *Pascalian Meditations* (Stanford, Calif., 1997).

¹⁶ Amy Bentley, “Booming Baby Food: Infant Food and Feeding in Post-World War II America,” *Michigan Historical Review* 32, no. 2 (Fall 2006): 63–88; Bentley, “Inventing Baby Food: Gerber and the Discourse of Infancy in the United States,” in Warren Belasco and Phillip Scranton, eds., *Food Nations: Selling Taste in Consumer Societies* (New York, 2001), 92–112.

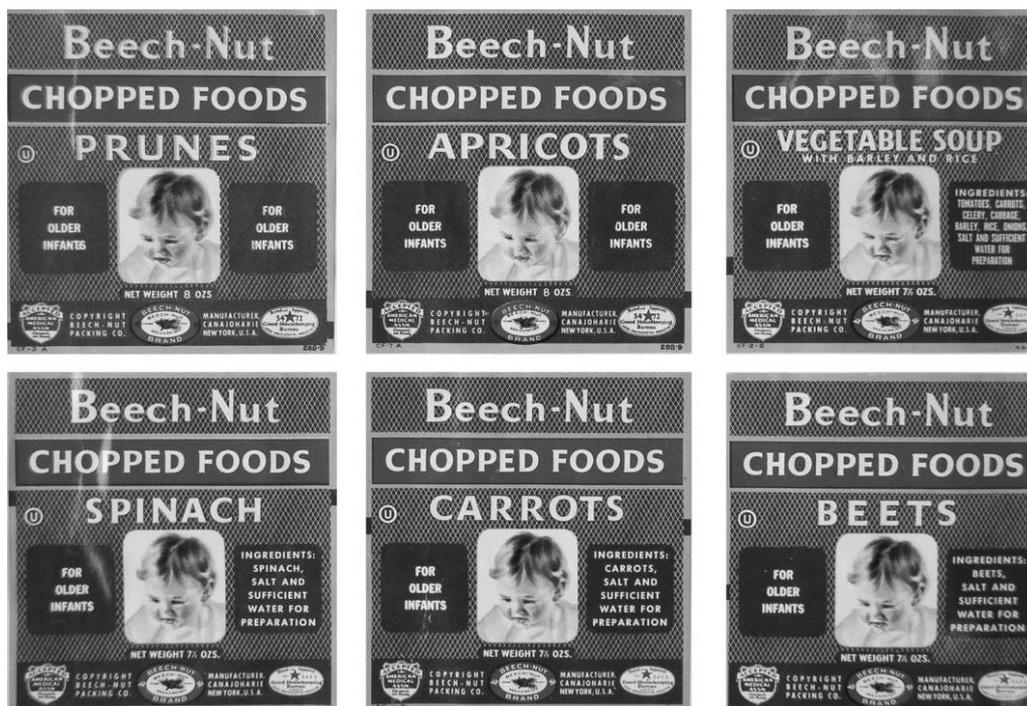


FIGURE 2: Beech-Nut baby food labels from the 1950s. Courtesy of the Beech-Nut Nutrition Corporation, Canajoharie, N.Y.

ingly insignificant food item (for babies, no less) are assumptions about nation, power, wealth, privilege: We feed our babies Gerber or Beech-Nut or Libby's baby food because we can. Because we can afford it, because we have the technology to produce it, because it is modern—unlike the backward and primitive breastfeeding common in less-developed countries. The early feeding of solids to infants had not only cultural but also material implications and health consequences: a steep decline in breastfeeding, stress on an underdeveloped digestive system, increased likelihood of developing food allergies, and so forth. Of course, there were always critics of sugar- and salt-laden baby food and the cultural push to feed it to infants at earlier and earlier ages, but those critics, such as nutritionist Adelle Davis, were considered radical and even “communistic.” It was not until the counterculture movements of the 1970s that a reevaluation began to take place in mainstream culture.

How do I “know” this—the Editor's question of how a historian finds and determines the culture in material culture? I do what other historians do, which is to try to find evidence from as many different kinds of sources as possible: nutrition and other scientific studies, government reports, advertising, corporate archives, periodicals, letters from consumers and citizens, and so forth. But it's also important to take cues from the objects themselves. While no actual baby food exists from the 1950s, I can examine jars, labels, lids, and lists of ingredients, and gather as much evidence as possible about the taste, texture, flavor, uses, and production processes. Do I feel comfortable with my assertions? We all bring to the evidence, to the object, a certain

set of assumptions, theories, and discourses through which we then make our judgments. I could be wrong, and other historians may come along and refine or outright challenge my claims. But of course this is the nature of historical scholarship.

Christopher Witmore: I don't find the term "material culture" particularly helpful with respect to symmetrical treatments of people/thing relations as it sets out the configuration of material ties in advance.¹⁷ Are all materials cultural? If we take this line (which is not saying very much), then we have already relegated things to a derivative, secondary position of being endowed with "cultural" properties. Moreover, to take such a position is to foreclose on other non-human relations by abandoning them to the "non-cultural" sciences—here we encounter a familiar partitioning based upon a presumed duality of human/world. I reject this dualism, and "material culture," in my opinion, doesn't give us much traction in bypassing it.

Regarding "culture," I have never been able to forget Raymond Williams's assessment of "culture" as "one of the two or three most complicated words in the English language."¹⁸ While I have a great deal of respect for the work of Childe, I find overdramatized terms like "culture" unhelpful as starting points. If we are going to be more discriminating in our accounts that deal with such relations, then we need to begin *in medias res* with the utterly specific associations underneath. In any case, because "material culture" predefines the path of study for the relations between people and things, some archaeologists have placed the label to one side after a long period of having accepted it uncritically.¹⁹

For me, the distinction between people and things is not ontologically fundamental (regarding it as fundamental resulted in that modern chasm between thinking subjects and inanimate objects). Why should this distinction be any more important than the one between, for example, boundary markers, ridgelines, and arbitration inscriptions between two poleis from the second century B.C.E.? All contribute to the maintenance of the polis.

Things are folded into humanity.

¹⁷ "Symmetry" is an awkward term. It is part of an admittedly poor, but necessary, vocabulary meant to help anthropologists and archaeologists move from a very problematic rendering of reality to a hopefully more refreshing and interesting one. Here the "symmetrical" is simply meant to remind us not to assume the nature of relations between, for example, boundary cairns, arbitration inscriptions, and the governance of Greek poleis by imposing an asymmetric scheme based upon a discord between intentional social players and objective matter. For more on symmetrical anthropology, see Bruno Latour, "The Recall of Modernity: Anthropological Approaches," *Critical Studies Review* 13, no. 1 (March 2007): 11–30. Concerning symmetrical archaeology, refer to Alfredo González-Ruibal, ed., "Arqueología Simétrica: Un giro teórico sin revolución paradigmática (with commentary)," *Complutum* 18 (2007): 283–319; see also the papers by Bjørnar Olsen, Michael Shanks, Timothy Webmoor, and Christopher L. Witmore in the special section on symmetrical archaeology in *World Archaeology* 39, no. 4 (2007): 546–596.

¹⁸ Raymond Williams, *Keywords: A Vocabulary of Culture and Society* (Oxford, 1985), 87.

¹⁹ Michael Brian Schiffer, William Rathje, and Michael Shanks, "Michael Brian Schiffer," in William Rathje, Michael Shanks, and Christopher L. Witmore, eds., *Conversations through Archaeology* (forthcoming).

In place of any rift, I have found much traction in recognizing how there are always a bewildering variety of heterogeneous entities which enter continually shifting alliances, and no entity, whether we speak of a path of transhumance, a party of shepherds, a wife and daughter, various pack animals, sheep, goats, or a dog named Tsopana, can ever be contained within or reduced to the other.²⁰ All entities, again returning to Alfred North Whitehead, are events or occasions which crystallize within very specific sets of relation. For Whitehead, no entity can be said to endure, because they will be modified or transformed by every new relation in some small, often unacknowledged way. Consider the preceding roster of participants in the course of a journey from the winter pastures in the southern Argolid to the summer pastures in the western Korinthia, Greece. Traveling under the cover of darkness in the late hours of night affords the transhumant party an ease of movement and the likely avoidance of landowners or lorry drivers. Should a landowner decide to fence in his orchard, they all might be obliged to move along a stretch of paved road where the members of the party are at greater risk. In the event of a collision with a truck, the loss of even one sheep will transform the composition of the flock and modify the wealth of the shepherd and his family. Likewise, this whole scenario would be transformed with the presence of a new flashlight.

Does the initiative for action always come from the human side (assuming there are sides for the sake of argument)? Even in this brief vignette, there are multiple mediators. In the course of this movement, any entity, no matter how big—the lorry—or how small—the flashlight—can impact and did impact these relations on the ground. But there is more to the question of relations. Consider the metal fencing containing the orchard. A landowner has delegated the task of preventing unwanted movement to several hundred meters of metal fencing, and it is this fencing that works to deny the flocks and droves passage through the orchard, but the fence is not reducible to the actions of the owner—the orchard, property boundaries, and many other factors come into play. What is more, the fence goes on to take on new configurations, and “meaning” may be but one potential outcome of its relations.

Of course, historians, and especially archaeologists, are not often afforded such intimate details, details which were recorded ethnographically on the 20th and 21st of May, 1972.²¹ Indeed, I have tried to trace portions of this old transhumance path (shepherding has now shifted from the boot and hoof to the tire and tarmac) through the Argolid. In my work I am fascinated by the multiple lives that things—in this case, landscape features such as iterative paths of transhumance, enclosure walls, or stone terraces—can have. Depending on the relations, a terrace, for example, can be a collector of soil, a property boundary, a 2,000-year-old enclosure wall, or a useless pile of stones. To establish each of these connections, as I have repeatedly emphasized, often requires painstaking work.

As archaeologists and historians, I don't believe we have to tackle difficult metaphysical questions of people/things relations directly. Rather, we only have to be

²⁰ For the genealogy of this thought, see Harman, *Prince of Networks*.

²¹ Harold Koster, “The Thousand Year Road,” *Expedition* 19, no. 1 (Fall 1976): 19–28.

open to other associations that things might be implicated in, and not decide in advance what role things, people, whatever, or whoever should play in the world.

Leora Auslander: My work with things has focused on objects understood by their designers, makers, distributors, consumers, and critics or commentators to be laden with cultural value. To be more specific, I have worked primarily on furniture, textiles, and architecture and secondarily on pottery. I should say that although my preoccupations have persuaded me to narrow my thingly world to such objects, I make no general brief for such a delimitation. Let me try, however, to explain that choice.

In all of my research, regardless of its empirical base, I strive to understand the relationship of abstract transformations—monarchical to republican systems of governance, colony to nation-state, commercialism to capitalism—to the concrete elements of everyday life—domestic interiors, clothing, food practices.

In my first book, for example, I used a close analysis of French furniture from the late seventeenth century through the early twentieth, in all of the moments of its life cycle, to explicate the ramifications of the massive political and economic changes of the period. My goal was not to understand shifts in furniture styles, but rather to understand how those variations came about and what one could learn about the people, and their institutions, who had imagined, crafted, sold, bought, and used these objects.

My research involved, first of all, a practice of the trade. I had earned my living (this was not field work or research, in other words, but rather my occupation at the time) as a cabinet- and furniture-maker before I started this project. I remain convinced that that practice was as essential to my grasp on the subject as all of the archival, library, and museum research I conducted. The fact that my eyes, my mind, my hands, and my shoulder muscles knew the challenges and joys of imagining and drawing, building, and finishing a piece of furniture changed how I looked at past furniture, past tools, past technical manuals, and even account books and customer lists. Grasping the meaning people attributed to the furniture also and of course involved looking at as many objects and drawings as I could and reading as much as possible of what they wrote about it as well as comparing what they wrote and what they did. I discovered, thus, that the almost universal condemnation of artisans in the Parisian trades in the late nineteenth century, the assumption that they had become incompetent, was false. They were accused by critics, government inspectors, and later by art historians of being incapable of doing anything but making bad copies of Old Regime furniture. If one looks at the objects carefully, if one studies the drawings from which they were constructed, if one reads technical manuals and memoirs, as well as trade union reports and those written by worker delegates to the Universal Expositions, one realizes that these are not bad copies, but rather a form of historicist pastiche. Distributors knew that the consumers insisted on furniture that could be given an Old Regime name, and so that's what they commissioned. Bored and creative artisans took that mandate and invented new forms that could pass for old.

Once one realizes that “joke,” a whole set of questions is opened concerning every individual, social group, and institution through which furniture moved in this period, and new insights concerning the organization of labor, of consumption, and the engagement of the state in the everyday become possible.²²

I moved on from that project in a number of directions, all focused on people’s relation to things. One paper analyzed the meanings of racialized figurines on the streets of Paris in the 1990s, including an explanation for why they were literally invisible to many passers-by.²³ Another, more recent essay joined the debate on colonial and postcolonial sartorial practices in metropole, colony, and new nation-state.²⁴ My preoccupation in these essays has been to understand how people use material culture to position themselves in social and political contexts fraught with ambiguity and conflict. In each, objects, visual representations of objects, their naming, and conversation around them have provided essential clues.

Finally, in two projects I had running simultaneously, one on material culture and everyday life in revolutionary conjunctures and another on twentieth-century Paris and Berlin, in the first I came face to face with material practice working against discourse, and in the second with objects whose only extant traces were on paper.²⁵ In my research on the use of things in the French Revolution, I came to be puzzled by both a presence and an absence. The presence was that of domestic objects decorated with revolutionary emblems that no text mandated (and which therefore shouldn’t have existed). The absence was that of domestically produced revolutionary samplers, quilts, or needlepoint. Both, I argued, spoke volumes about the boundary drawn between the public and the private by revolutionary thinkers, about the role of women, and about popular initiative in revolutionary practice. In a project on domestic objects and citizenship in twentieth-century Europe, I found that absent, stolen, things became a means for reimagining a place in the future.

To sum up a too-long intervention: It is precisely the interaction between people and objects that is the subject of my attention, the uses to which people put objects. This is not to say that I deny the possibility of the agency of things, but I do retain a distinction between things and people, just as I retain that between things and language.

²² See Leora Auslander, *Taste and Power: Furnishing Modern France* (Berkeley, Calif., 1996).

²³ Leora Auslander and Thomas C. Holt, “Sambo in Paris: Race and Racism in the Iconography of the Everyday,” in Sue Peabody and Tyler Stovall, eds., *The Color of Liberty: Histories of Race in France* (Raleigh, N.C., 2003), 147–184.

²⁴ Leora Auslander, “Accommodation, Resistance, and Eigensinn: Evolués and Sapeurs between Africa and Europe,” in Belinda Davis, Thomas Lindenberger, and Michael Wildt, eds., *Alltag, Erfahrung, Eigensinn: Historisch-anthropologische Erkundungen* (Frankfurt, 2008), 205–217.

²⁵ Leora Auslander, *Cultural Revolutions: Everyday Life and Politics in Britain, North America, and France* (Oxford, 2008); Auslander, “Regeneration through the Everyday? Furniture in Revolutionary Paris,” in Katie Scott and Deborah Cherry, eds., *Between Luxury and the Everyday: Decorative Arts in Eighteenth-Century France*, Special Issue, *Art History* 28, no. 2 (April 2005): 227–247. Some of the findings from the twentieth-century project can be found in Auslander, “Coming Home? Jews in Postwar Paris,” *Journal of Contemporary History* 40, no. 2 (2005): 237–259; and Auslander, “‘Jewish Taste’? Jews and the Aesthetics of Everyday Life in Paris and Berlin, 1933–1942,” in Rudy Koshar, ed., *Histories of Leisure* (Oxford, 2002), 299–318.



FIGURE 3: Image of the master bedroom in the home of Dr. Ernst Frankenstein before the family fled Berlin in 1933. The photo album (of forty-nine pictures) is typical of those compiled by bourgeois Jewish refugees from National Socialism. They are characterized by an effort both to document the home and to remind the family of the everydayness of life lived there. Such albums also contain an unusual number of “threshold” pictures—images in which one is standing in one room looking into another—seeming to mirror lives at a moment of radical transition. Such albums provide extraordinary information concerning both the material culture of Jews in Weimar and how people imagined a future voided of those everyday objects. Fotoalben Wohnhaus von Rechtsanwalt Dr. Ernst Frankenstein, Berlin (Dahlem, Goebenstraße 51), ca. 1933. Geschenk der Tochter Bettina Roth, Paris (81, Boulevard du General Koenig, 9200 Neuilly sur Seine). © Stiftung Neue Synagoge Berlin-Centrum Judaicum, Archiv.

H. Otto Sibum: The Editor wants us to reflect on the “culture” in “material culture,” and I am glad that he poses this question, because we need to be very clear about the role that physical things play in understanding the past. In history of science we find various accounts of dealing with material culture, and unfortunately this is not the place to discuss all these methodological approaches. Since we have quite a long tradition in studying the material culture of science, let me just refer to some more recent studies that address the role of material culture in the creation of natural knowledge. Of course there is the classic study by Steven Shapin and Simon Schaffer, *Leviathan and the Air-Pump*, which reveals the tension that exists between those investigators of nature who do experiments and those who are convinced that you do not need to conduct experiments in order to make sense of the world.²⁶ Since then, a considerable number of further studies have shown in detail how this tension is played out in different ways in different countries over time. For the twentieth cen-

²⁶ Steven Shapin and Simon Schaffer, *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life* (Princeton, N.J., 1985).

ture, I should mention Peter Galison's study *Image and Logic*.²⁷ He argues that we see two different groups of physicists at work, whose identities center around a particular type of instrument—on the one hand, those physicists who allow measuring and counting of values, and on the other hand, those who are occupied with building machines that allow the production of images. Each group develops very different views (even concepts) of nature, different scientific languages and even habits and attitudes of scientific work. These groups may be best described as subcultures in physics. Unfortunately, this approach implies a strong determinism at work; it assumes that a specific set of instruments afford a specific set of skills which finally lead to a subculture of physicists. For twentieth-century physics, with its highly developed division of labor, his analysis works brilliantly. However, there remains a problem similar to that which Christopher Witmore addressed in his answer to question 2: "I don't find the term 'material culture' particularly helpful with respect to symmetrical treatments of people/thing relations as it sets out the configuration of material ties in advance." If we apply his remark to the above-mentioned analysis of subcultures in physics that center around instruments, we can say that it is the materials that determine in advance what culture we will get. But could it not well have been the other way around? I.e., the existence of a subculture of physics might prompt the construction of specific instruments that make sense only in that particular subculture of science. And I do think here of a mid-nineteenth-century episode in which we have two completely different subcultures of electrodynamicists: two groups of physicists who worked on electrical and magnetic phenomena, one in Britain, the other in Germany, who each developed their own theories of electrodynamics, which differ completely in concepts, metaphors, and instrumentation but are an integral part of their respective wider cultures.²⁸

But in order not to get stuck on the question of what came first, the material or the culture, a closer look at recent attempts in history of science might be of help. In particular, attempts to tackle the question of how local affairs are tied into larger cultural affairs and what role material culture plays in this process appear to me as the more promising way to continue. In his foundational paper "Mediations" from 1993, M. Norton Wise has put forward the issue most tellingly by asking, "How does local knowledge get extended to, or incorporated into, systems and networks of knowledge? The question requires answers with different sizes, because the cultures of science come in different sizes, from a particular research group or laboratory to groupings identified by technology, discipline, ideology, language, nation, geography, and time." It would be impossible here to describe the whole line of argument. But let me try to be brief: by using "culture" in a general anthropological sense, Wise invites us to look at the familiar size of rationalist scientific culture in Enlightenment France. He wants us to understand instruments, or material technologies in general, as active "mediators" constructing agreements of two different kinds. Instruments mediated between subcultures, like chemistry, political economy, mathematics, etc.

²⁷ Peter Galison, *Image and Logic: A Material Culture of Microphysics* (Chicago, 1997).

²⁸ J. Meya and H. O. Sibum, *Das fünfte Element: Wirkungen und Deutungen der Elektrizität* (Munich, 1987); Jörg Meya, *Elektrodynamik im 19. Jahrhundert: Rekonstruktion ihrer Entwicklung als Konzept einer redlichen Vermittlung* (Wiesbaden, 1990).

But they also connected ideas with realities. What is important here for our argument is that Wise talks about a specific instrument—a balance—that acts in Enlightenment France as a mediator between subcultures so that it facilitates a description of rationalism which preserves its reality as a historical structure and yet denies that it can be subsumed under a single monolithic concept. “The structure is constantly being produced as a set of interdependent actions. It maintains its stability so long as these actions are reproduced, but the actions are always subject to contest. Consequently, the structure is always threatened by instability.”²⁹

In order for local knowledge to be incorporated into larger systems and networks of knowledge, for local affairs to be tied into larger cultural affairs, these structures have to be produced and maintained. Within the large range of cultural repertoires of actions, the use of material technologies plays an important role—they act as mediators. What Wise has shown in great detail can be complemented by my study on Charles Agustin Coulomb, the French engineer who built and experimented with the electrical torsion balance. In spite of the fact that the precision measurements he performed with this instrument could have been shown to be highly unreliable, within a very short time his device became the emblem of enlightened rationality in French culture. His instrument acted as a mediator to reinforce different subcultures in maintaining the emerging larger structure of French Enlightenment rationality.³⁰

My final example concerns James Joule’s experiment to determine the mechanical equivalent of heat. In early Victorian England, Joule conducted experiments of such high precision and delicacy that nobody could repeat them. Moreover, hardly anyone understood the importance of his work for our understanding of the nature of heat. Conventionally, this episode is described as the work of a great genius whose success rests on his mysterious tacit knowledge. My investigations into the material culture of Joule’s research led, however, to a different story. Indeed, in performing heat measurements, Joule must have had extraordinary practical knowledge that nobody else possessed in his day. But we can show where he might have gained it. Joule participated in various cultural activities through which he acquired the necessary skills and theoretical insights that led to his famous experiment and his claims about the nature of heat. His singular work can be seen as having emerged at the intersection of several different subcultures of Victorian society. As a member of Manchester’s most prominent brewing family, he learned thermometric skills and gained insights about the nature of heat that were key to his scientific experiment. Most importantly, these were unknown outside the brewing culture. Furthermore, he worked with the instrument maker to produce a thermometer that enabled him to make advanced determinations unheard of in his time and to observe a constancy

²⁹ M. Norton Wise, “Mediations: Enlightenment Balancing Acts; or, The Technologies of Rationalism,” in Paul Horwich, ed., *World Changes: Thomas Kuhn and the Nature of Science* (Cambridge, Mass., 1993), 207–256, quotes from 207–208.

³⁰ H. O. Sibus, “Charles Augustin Coulomb: Einfache Maschinen in Theorie und Praxis,” in Karl von Meyenn, ed., *Die großen Physiker*, 2 vols. (Munich, 1997), 1: 241–262; Sibus, “‘Une Balance Electrique’: Investigating the Material Culture of French Enlightened Rationality” (paper delivered at the Swedish Collegium for Advanced Studies, Uppsala, February 18, 2009). See also Christine Blondel and Mathias Dörries, eds., *Restaging Coulomb: Usages, controverses et répliques autour de la balance de torsion* (Firenze, 1994).

in nature's behavior that nobody else would have been able to detect. And finally, as a member of the Manchester Philosophical Society, he participated in the actual philosophical discourses related to industrialization. Joule's famous contribution to the science of energy can only be understood as work performed at the interface of these subcultures that involve material as well as theoretical technologies. As I have shown elsewhere, even in his own attempts to publish his achievements and to become accepted as a first-rate natural philosopher, he worked hard to conceal his connection to these subcultures. He helped to construct the image of the disembodied genius.³¹

Christopher Witmore: I would like to briefly reply to Otto's observations regarding material versus (sub)cultural initiatives for action, as this is precisely the strife that I seek to avoid. By stating that "material culture" sets out the configuration of material associations in advance, I did not wish to imply that the world is therefore reducible to material factors. To the contrary, the instance of transhumance was a seemingly mundane, if altogether too brief, example of a course of action where there were multiple actors whose mediating roles were all respected without the assumption of primary and secondary positions. To ask whether or not it could have been "the other way around" is to fall back into the human/world duality. If we are left with a choice between only two sides, then the discussion will quickly result in an intellectual impasse. Indeed, it was precisely the wider fields of science and technology studies that Otto refers to that recognized that the key to such material and cultural (chicken and egg) questions is to realize that this dual configuration is the outcome of a long series of transformations and not the starting point (again, we begin *in medias res*). This is exactly why I agree that we should look to how local relations succeed or don't (as in the case of transhumance by boot and hoof) in linking up to ever vaster arrays of associations we might label as "global" in reach.

H. Otto Sibum: I think I should briefly respond to the response by Chris. I thought my last reply was much clearer than it seems to be. First of all, I should remind us that it was the *AHR* Editor who presented us with the notion of material culture and said that we should respond to it from our disciplinary perspective. And I did. However, in referring to Chris, I meant to indicate that I share his concern with not wanting to reduce the world to "material factors." Hence my starting point about the implied determinism I see in approaches that construct a subculture around certain instruments. As a Gedankenexperiment, I wanted us to think of the opposite stance and ask what a culture would look like that imagines and produces specific objects, machines, instruments, architecture, etc. But finally I suggested that we should not fall into the trap of oscillating between the two poles of material and cultural (chicken and egg), because this is partly implied through the question posed by the Editor. Hence I do not fall back into the "human/world duality." Instead I suggested that we use an anthropological definition of culture and discuss their techniques of knowledge production. In such an approach, a mathematical equation written down on a piece of paper is as much an article of material culture (if this is the term we want to tackle) as is a thermometer built by a Victorian instrument maker. Both

³¹ Sibum, "Les gestes de la mesure."

might be regarded as indicating the endpoints of a rich spectrum of cultural repertoires that investigators of nature employ to produce and to circulate natural knowledge.

They could be material as well as ideal and investigate how local cultures manage to produce natural knowledge and how they manage (or do not) to become globally accepted. I mentioned some studies from colleagues and some of my own that show how locally identifiable cultures manage to produce natural knowledge and how they manage (or do not) to circulate or distribute globally. So, Chris, what is it that you wanted us to think about when you wrote your reply to my answer?

Christopher Witmore: Many thanks for the clarification. I did not mean to imply that you had fallen back into the “human/world duality.” Your argument here comes across clearly. My point was quite specific to the issue of how you positioned my statement—“material culture sets out the configuration of material ties in advance”—with respect to your argument: “If we apply his [Witmore’s] remark to the above-mentioned analysis of subcultures in physics that center around instruments, we can say that it is the materials that determine in advance what culture we will get. But could it not well have been the other way around?” For me, your *application* of “material culture sets out the configuration of material ties in advance” suggested that my statement could be construed as a materialist one. As this was not my point in making this statement, my response aimed to further clarify my own position, not yours.

Halevi: Are all materials cultural? This question brings us back to cardboard boxes, or categories, and forms. My son Joshua, six years old, has a black shoebox. In this box he stores arrowheads and fossils and stones, all of which he categorizes as part of his “rock collection.” He distinguishes, of course, between objects of nature and objects fashioned by human hands. But that distinction is not more important to him than the distinction between, say, the rocks that he found on the beach of Hilton Head Island and the rocks that he found while hiking in a forest near Crystal Lake. To analyze his way of relating to these things, we need to take account of his own personal history, and the meanings that he himself grants to the elements that constitute his collection. We would do violence to his collection, and to his own worldview, if we ourselves separated handcrafted from natural materials; they all belong, in this instance, in the same box.

Any object, then, can become personally or culturally significant, but it would be absurd to hold that all objects possess personal or cultural significance. Interpreters do often take all objects within a delimited space—Joshua’s shoebox, Benjamin Franklin’s house, an archaeological site in the Danube valley—as expressions of a material culture. But that sort of interpretation does not get us very far in the absence of evidence to show how an individual or a community actually related to the objects within that space at a particular time. We should not rush to endow things—even handmade or manufactured things—with “cultural” properties. And whatever we might mean by the word “culture,” in the term “material culture,” a strictly mate-

rialist understanding of that word, such as Vere Gordon Childe's, fails to turn it into a useful or dynamic concept.

For my current research project, I have been examining multiple objects that have passed—by commercial channels, as gifts, through raids—from non-Muslim to Muslim hands. The vast majority of these objects do not provoke a religious or cultural response, by which I mean that Muslims do not use them to mark a symbolic boundary between themselves and others. Such goods I would not consider the objects of “cross-cultural” trade. However economically important they may be, their cultural or religious significance, in connection with the process of communal identification, seems very limited. It is only when Muslims deliberately associate particular goods with non-Muslim production or consumption, so as to imagine themselves as a separate group, with a distinct culture, that I would speak of “cross-cultural” trade.

Think, in the American context today, of the difference between a toy that happens to be made in China and a toy that is labeled, as a result of controversy, a “Chinese” toy. Consumers might buy the first without much awareness of its country of origin. The second, by contrast, becomes a boundary marker that serves protectionists to make general statements about the differences between “American” and “Chinese” manufacturing practices, while lamenting China's rising economic dominance and the forces of globalization. The rejection of the toy embellished with lead paint encapsulates, in this instance, not just a health concern, but also a cultural statement.

Reflecting on how things can cause tension between groups makes me think about what I'll call “the insider/outsider problem in the study of material culture.” That problem has risen to the forefront of anthropology (Marshall Sahlins vs. Gananath Obeyesekere) and Middle Eastern studies (Edward Said vs. Bernard Lewis); and it bedevils religious studies, where, to simplify, strong differences exist between the believer, who claims to possess the right understanding of things, the sympathetic apologist, and the skeptic. Leora's view that her apprenticeship in a furniture shop allowed her to attain an insider's grasp of things past strikes me as roughly comparable to the believer's contention. (To be more precise, imagine an initiate who, after induction into a sect, begins to see what used to seem an ancient tradition as his own native country.) In religious terms, Leora appears to be arguing that her personal experiences led her not just to ask new questions, but to experience empathy, and to reach insight and understanding: to know in her mind and in her muscles “the challenges and joys” of making furniture, to appreciate the kind of boredom and creativity that artisans once felt, and even to get an inside joke. My suspicion is that Leora would defend this perspective by referring to an assumption that she shares with psychoanalysts and phenomenologists, that a quality called “universal embodiedness” enables her to experience many things exactly the same way that they were experienced in the past, by other people, in other historical circumstances.³² There is much to commend that view of things: having slammed my thumb with a hammer, I feel that I have some inkling of the kind of pain that a furniture-maker experienced long ago when he did the same. But why was woodworking “essential”

³² Auslander, “Beyond Words.”

to the grasp of the subject? Can woodworkers, like population geneticists, advance new arguments about the past for which no historical evidence exists? Otherwise, if a textual or material record can corroborate the arguments, then all that can be said about the benefits of woodworking to the historical profession is that it can lead the historian to pay close attention to evidence that others would perhaps overlook. Basically, I'd like Leora to persuade me, as someone who stands outside the charmed circle of understanding, that making furniture in Woburn, Massachusetts, in the late twentieth century can lead to revelations about the culture of furniture-making in France of the eighteenth and nineteenth centuries.

Leora Auslander: I would, of course, like to respond to Leor's question/challenge. I would never argue that I can "*experience* many things exactly the same way that they were experienced in the past, by other people, in other historical circumstances." While I do make other claims based on universal human embodiedness (for example, mortality), this isn't one of them. I would argue that I *understand* something different about furniture-making for having accumulated the *knowledge, skill, and craft-sense* needed to design and make it. Likewise a musician who has played a piece hears something different when s/he listens to that piece than someone who has only a passive knowledge of music, and foods taste different to cooks than to those who only eat. This is a question of knowledge as surely as the difference in understanding between an eighth-grade anglophone French student reading Camus' *La peste* and a fluent reader. It is as much a question of knowledge as the difference between someone who has read two books on a topic and someone who has studied archives, read manuscripts, surveyed the secondary literature, and, when appropriate, analyzed material culture. This is not to say that only those who have practiced a craft should write about it—I have since written on clothing, porcelain, and a number of other artisanal objects without having the knowledge that practice yields. I have done the academic work (including reading, touching, and looking) to feel justified in that writing, but I wouldn't claim to know those objects the same way I know furniture. Leor seems skeptical that "hands learn." Just reflect for a moment on learning how to ride a bike, write, or play a musical instrument. Or on the process of teaching one's child to do any of those things. As the literature on the subject has long ago demonstrated, muscles also learn, and that learning is essential for those activities.

For me, the issue of religion is a different one. I think that believers and outsiders do understand religion differently, but one not necessarily better than the other. The fact of belief necessarily produces a different kind of relation to the object. There is a close parallel here to working on the history of "one's own" culture, however defined, and that of one in which one has no, or at any rate a quite different, emotional investment. These are questions of investment, different from that of knowledge.

There is yet a different effect of kinds of lived experience, one that has to do with the *perception* often needed before the process of *acquiring knowledge* can even start. Leor might characterize this as "merely" enabling one to see a question, but one cannot research a question that one is unable to formulate. Let me clarify with an

example. Years ago, my husband and I were walking the streets of Paris looking for someplace to eat. I saw a restaurant that looked appealing and suggested we stop there. Tom glanced at it and said rapidly and rather curtly, "I don't think so." I was startled at his refusal and brusqueness and asked, "Why?" He then queried, "Don't you see what's holding the menu?" It turned out that the menu was being held by aloft by a racialized, and arguably racist, representation of a black man. My husband is African American and was raised in the rural South. I am a northern white American. He saw, and I just didn't see. Literally. Our experiences of life, well outside of what we read, had an emphatic impact on what we could see, perceive, and therefore what questions we could ask. After puzzling over this encounter and failing to understand both the sudden disjuncture in abilities to see and to grasp the meaning of this menu-holder, we engaged in an extensive research project. We investigated the origin of these figures, we studied company records and advertisements. We read the scholarly literature on perception and French advertising strategies as well as representations of race. We roamed the streets of Paris to determine how common such representations were. We did ethnography and oral history. Thus the "privileged" gaze of the insider and the aporia between the blindness of the outsider and the sight of the insider was the *beginning*, not the end, of a rigorous scholarly project.³³

I'm working on some thoughts about the earlier sets of exchanges on question 2 as well as the first part of Leor's e-mail, but they will follow later. For now, I would simply like to say that I don't think that any participant in this conversation fetishizes objects, nor do I think that essentialism is really an issue. I think/suspect that we all take both material culture and natural language to be valuable (and complementary) sources, although I think we differ on exactly how we understand the relation between them.

AHR Editor: It seems as if we have (at least) two different sets of concerns that have generated some differences of opinion; and I'm wondering if they can be joined, or whether they have a common source. The first, which Chris and Otto have brought to light, involves the legitimacy of even formulating a distinction between humans and materiality, for fear of reifying that distinction and thus privileging one aspect or another. If I hear Chris correctly, his finely tuned approach dissolves the distinction into a holistic treatment which, in his example of Greek or Mediterranean transhumance, results in the kind of ethnography that defies, indeed challenges, any attempt to break down this lived reality into its various components, actors, things, etc. After some back-and-forth with Chris, Otto seems to concur with his approach and his critique of the human/world distinction, but his concern seems to be less with an ethnographic reconstruction and more with avoiding "an implied determinism" that might result from positing a "subculture around certain instruments." While I think most of us would appreciate both variations on this concern to avoid the human/world duality, I'm not sure I know how we proceed from here in this conversation. After all, most historians are not practitioners of the study of "material culture"; and being told that to think of material things as separate from their historical subjects is to create an artificial distinction is not the most effective way to invite them

³³ The analysis can be found in Auslander and Holt, "Sambo in Paris."

to consider their relationship to the subject—that is, to ask them to reflect upon considering material things in their historical thinking is, at the outset, at least, to ask them to entertain these things as characterized by a distance from them and/or their historical actors.

Leor and Leora, on the other hand (despite the material “a” that separates them), seem to take a separation between themselves as historians and the objects of their study as a problematic starting point. While for Chris and Otto the separation they consider, and then deny, is that which relates to their subjects, for Leor and Leora the distance between the historian and the objects—either still at hand or absent—is acknowledged as a problem. First, though, Leor wants to remind us—and here there seems to be an implicit response to Chris’s formulation—that the meaning of objects, even the meaningfulness of objects, is the province of “culture” as a human endeavor that generates discourses, textures, and hierarchies of meaning. And, again contra Chris, Leor seems to find “material culture,” with the accent falling on both words in the term, quite serviceable. His example, to be sure, involves exchanges and endowing trafficked objects with significance as they cross boundaries between religious communities: some have great significance, some much less or even none, at least in a religious sense. And one wonders whether liminal encounters of exchange are somewhat special in that the very process entails discrimination and valuation, operations less urgent (perhaps) in other sets of social relationships. In any case, this leads him to the interesting distinction between “insider” and “outsider” when regarding objects. Are some of us privileged by virtue of our direct encounter, through fashioning, through belief, or through other involving processes, with an intimate knowledge of things denied others? In a related sense, one thinks of the whole notion of connoisseurship, connoting a deep knowledge of *objets* as somewhat akin to the kind of “hands-on” knowledge that Leor queries. In Leora’s response she expands upon this notion, moving beyond the claim that participating in the fashioning of objects leads to a more expansive understanding of different levels of awareness and perception, levels of sensitivity that—so her example suggests—may be the result of life experiences, background, and the like.

If we are to find some convergence in these two sets of interventions, it may be helpful to return to Amy’s description of her jars of baby food and her comment about how important it is “to take cues from the objects themselves.” How important is an encounter with the “material” in material culture? It seems to me that peeking through many of the comments is an evocation of the experiential, the lived experience, a deep, even personal, familiarity with things—on the part of the historian—which is not simply mediated through texts. Is this a special feature of the study of material culture, a feature that those who practice it might endow with more intellectual rigor or sophistication, or indeed acceptance, than it usually has in scholarly discourse?

Christopher Witmore: Two points are at play here. On the one hand, we have touched upon the question of the lot delegated to things in past relations—what role do things play in Joule’s research, or in the identity of American mothers in the

1950s, or in the course of movement along a path of transhumance? On the other hand, we have queried the nature of things as objects of concern for historians—how does working with furniture provide insights into understanding transformations across France in the seventeenth to twentieth centuries, or engaging tombstones connect to the ongoing formation of Islam? Along the way, we have all removed a number of obstacles to taking things seriously, both in terms of past relations and in terms of the historian's craft. Part of the challenge in such a cross-disciplinary conversation has been in judging where best to dig in one's heels.

I should like to begin with another clarification: for me to suggest that there are no distinctions between shepherds, flashlights, fences, paved roads, and lorries would be simply foolish. To the contrary, the world is brimming with bewildering diversities of entities with their own idiosyncratic actions, genealogies, properties, qualities, roles, and so forth.

The thrust of my interventions has been to emphasize how there is no fixed gap, separation, or chasm between humans and other actors in the world. Gaps are legion; however, the negotiation of these is a problem for all entities, not only humans.³⁴ A major hurdle in understanding the importance of the material comes when a distinction is bracketed out and elevated to the level of an opposition between two purified realms: whether language and things, meaning and material, or subjects and objects.³⁵ We can bypass these oppositions while being open to distinctions. To begin as if there are purified territories set within a fundamental opposition between human and world is to set out the character of events in advance. In so doing, we impose arbitrary limits upon the range of entities at work in a particular situation. For me, being aware of these obstacles more than opens us up to the work things do, it is an exercise in good empirical practice. It is a question of where to start. Indeed, the strength of these points for historians lies in a freedom of movement that comes with placing all entities on the same footing.

From here, I believe we all are now better situated to follow associations wherever and whenever they may lead. Does it matter that an arbitration inscription between two poleis is set up within earshot of the temple containing the cult statue of Asklepios in the sanctuary of Epidauros? Absolutely. Is it important that the British spy/classical topographer William Martin Leake not only wrote a travelogue of his journeys through the Peloponnesus but also invested a huge amount of labor in counting the paces taken by his mount, marking the time at which he passed a landscape feature deemed worthy of note or measuring angles from prominent points of observation with the aid of a compass and “a sextant of 4 inches radius made by Berge”?³⁶ Definitely. With the former, the installation of a stele at the heart of a sanctuary sets out an official inscription for repetitive relations with priests or pilgrims and stabilizes a shared commitment between the inhabitants of two poleis by

³⁴ Harman, *Prince of Networks*.

³⁵ The classic text here is Bruno Latour's *We Have Never Been Modern* (Cambridge, Mass., 1993).

³⁶ Christopher L. Witmore and T. V. Buttrey, “William Martin Leake: A Contemporary of P.O. Brøndsted, in Greece and in London,” in B. B. Rasmussen, J. S. Jenson, J. Lund, and M. Märcher, eds., *P.O. Brøndsted (1780–1842): A Danish Classicist in His European Context* (Copenhagen, 2008), 15–34.

placing it under both community and divine sanction. In this, the exchange between various spaces, things, and observers on the ground modifies the meaning of the inscription (this is one reason why looking at reports inscribed in two dimensions is not enough). With the latter, all of Leake's work was necessary for producing the first map built upon actual measurements of the interior of the Peloponnesus. Indeed, the production of a planometric, optically consistent map will come to impact all subsequent knowledge craftsmanship and interactions with places on the ground.³⁷ In order to understand the heterogeneous nature of past societies or the heterogeneous nature of knowledge craftsmanship, we must allow for the parts played by non-humans: stone inscriptions set within places of religion and healing, horses, survey instruments, mathematical calculations, and maps (these statements, I believe, align well with Otto's work). Tracing the exchange between all these entities is a necessary aspect of crafting better historical accounts.

Returning to the second of the two points I began with—the importance of the encounter with materials—again, I cannot speak for historians. Amy, Leor, Leora, and Otto have all addressed this in their own ways. I can only speak as an archaeologist (though I make absolutely no claims to speak for all, as there will likewise be a range of responses). I have alluded to this point by suggesting: “language is one mediating artifact among many.” To put this another way, we could say that things present themselves in styles other than language or the visual and therefore are irreducible to spoken or visual forms of translation, with respect to the five senses, that is. When it comes to flat modes of transport, a path of transhumance is neither fully translatable nor transferable. (In my work, I have continually struggled with these issues along a number of lines, and, indeed, these concerns form the core of my forthcoming book.) I want to briefly make two observations here.

First, things resist translation. Because of this, a fortress or a perfume jar will always hold something in reserve that will not be brought forward in a given set of relations (as a flat surface, for example). Things hold forth various orientations depending on the *whos*, *whats*, and *wheres* that conspire with them (this observation poses an interesting historical conundrum as to whether group controversies actually produce different material entities).

Second, the problem of translation is central to the production of the past. Archaeologists radically transform their objects of study through their very interventions, and therefore it is important to deploy a range of practices for manifesting those qualities of former plaster floors or remnant portions of mudbrick walls that fall through the sieve of paper-based documentation. Recognizing how lists, photography (both digital and analog), maps, digital video, soil samples, or collected bits of pottery mobilize different qualities of our engagements helps us to transport richer pasts into the future.³⁸ We may not always have the answers for why non-visual

³⁷ Christopher L. Witmore, “Vision, Media, Noise and the Percolation of Time: Symmetrical Approaches to the Mediation of the Material World,” *Journal of Material Culture* 11, no. 3 (2006): 267–292.

³⁸ Christopher L. Witmore, “Prolegomena to Open Pasts: On Archaeological Memory Practices,” in Krysta Ryzewski, ed., *Experience, Modes of Engagement, Archaeology*, Special Issue, *Archaeologies* 5, no. 3 (December 2009): 511–545.

qualities of things, the background noise that cannot be conveyed in two dimensions, should matter, but that does not mean others will not draw weighty connections down the road (signal and noise are always fluctuating).

H. Otto Sibum: Of course, in order to make sense of an object, it makes a difference whether you put your hands onto that physical object, whether you read about it or study an image of it. The Experimental History of Science program is taking this insight seriously, and for that reason we build replicas of old instruments or machines to such a high degree of fidelity that museums have even expressed a fear that our replicas would ruin the market value of the original. But we do not build devices with the intention of making money. No, crafting these “silent representatives of the past” leads to important knowledge about the objects; they embody clues about the past that you can detect only through such a hands-on encounter. In a sense, this project can be regarded as a material-aesthetic approach in the history of science—with aesthetic understood in the sense of aisthesis, meaning that which you can perceive with your senses. And we might want to call this kind of practical investigation of past objects “Probehandeln,” with the aim to acquire insights about past (scientific) practice that you could not gain through a pure literary approach. This complementary approach even leads to a specific kind of knowledge, which I have termed “gestural knowledge.” With this unusual term I want to overcome such comfortable dichotomies as mind and body, head and hand, episteme and techné, and to plead for the existence of a working knowledge that is historically embodied. Gestural knowledge is that kind of knowledge which is intimately linked to human actions performed by a social group or an individual. Although gestural knowledge is constantly in flux, it is the performance of work (with replicas) that evokes questions about that past working knowledge that reach beyond mere literary investigations of this practice. And gestural knowledge is not restricted to working with physical objects. Even the mental work of a nineteenth-century Cambridge mathematician developing mathematical equations requires a certain gestural knowledge acquired through constant practice in that academic milieu. Only in encounters between different subcultures of science did their different gestural knowledge become noticeable. Furthermore, I would like to argue that scientific controversies are often fueled by these often unarticulated differences in gestural knowledge.³⁹

The *AHR* Editor touches on this issue as existent in our interdisciplinary conversation. As I stated earlier on, the problem with material culture or better physical objects is that these objects are not among the standard resources of academic research in the humanities and social sciences. Historians are used to dealing with literary sources, and all our sophisticated methodology focuses on the investigation of these. Meanwhile, we observe the march of images into the historian’s study, but physical objects are still mostly kept at arm’s length. Only a few historians, like Leora, have approached material culture in depth. She took nineteenth-century French fur-

³⁹ On gestural knowledge, see Sibum, “Reworking the Mechanical Value of Heat”; Sibum, “Experimental History of Science”; Sibum, “Les gestes de la mesure”; and particularly my forthcoming book on this approach. See also Simon Schaffer’s elaboration on this topic, “Experimenters’ Techniques, Dyers’ Hands, and the Electric Planetarium,” *Isis* 88, no. 3 (1997): 456–483.

niture as her object of study. And she is quite outspoken about why she feels rather comfortable with having engaged with these sorts of objects. It was her training as a carpenter, her work experiences in this cultural field, that she could fruitfully draw upon when writing history. In my view, she obviously has acquired a gestural knowledge of furniture-making that is of tremendous advantage in her work as a historian. Even if she might not agree with my wording, I can say this for my own case: being trained as a physicist myself, I can draw on rich experiences in engaging with physical objects and have developed a gestural knowledge that allows me to set up and run an experiment or solve mathematical equations. Furthermore, this working life and the knowledge acquired has even partly shaped my identity as a historian.

Why do I say all this? I know from my experiences over the last twenty years in making space for objects in history (of science), and I notice in our current conversation that the topic of material culture still poses a major challenge to professional identities today. The two sets of concerns identified by the Editor are a good example of this. With regard to the first concern, I'd like to repeat that I explicitly emphasized at the beginning of our conversation that we should not fall into the trap of asking what came first, the chicken or the egg, when we use the term "material culture." Instead I hoped I had shown through my work and other examples that in engaging with material culture, historians of science have successfully overcome the comfortable and well-established modes of thought that favor dichotomies such as the artificial distinction mentioned by the Editor. Among historians of science, meanwhile, there is a consensus that everything in science has a history. You may find controversies, however, about how to investigate these objects adequately.

Our interdisciplinary conversation shows that the status of objects and the potentials and limits of investigating them are valued differently by the respective disciplines. But this wrangling about the meaning of material culture points to something rather fundamental in academia: namely what counts as knowledge. The fact that engagement with physical objects has been labeled connoisseurship and the investigation of literary sources as scholarship demonstrates that a sharp line is implicitly still being drawn between object-related work that leads to academic knowledge and object-related work that does not. This epistemological divide has a long history and goes back at least to the seventeenth century, when experimental natural philosophy took off and humanists enacted the shift in authority from texts to things. Over the last decade, historians of science have begun to rewrite important episodes of this vexed history (predominantly the early modern period). And it is impossible to exaggerate the importance of further interdisciplinary efforts to write this history of material culture. Hence anyone is invited to study material culture, even someone who considers himself/herself to be an outsider to this approach. Hopefully this conversation will help to dissolve the latter hesitation. Let's just remind ourselves that the gap or the distance that appears to exist between the object and the investigative subject is culturally made but not ontologically given. Historians of science have drawn important consequences from this, like the enforcement of interdisciplinary research projects on scientific objects, close research collaboration between history of science departments and science museums, the use of exhibitions as a means to

publish historical research, the inclusion of objects in the teaching of history of science, and the use of replicas of historical experiments in teaching introductory classes in science (physics, chemistry) even at the university level.⁴⁰

Amy Bentley: The relationship between lived experience and varieties of knowledge is of course critical. Scholars in several disciplines wrestle with these kinds of questions, most notably those who employ ethnography as a method in order to understand and interpret culture and meaning within groups. Leora's example of how she and her husband "read" the restaurant iconography differently is a sobering illustration of these different kinds of knowledge—"ways of seeing" as articulated by John Berger.⁴¹ While "insiders" do not have a monopoly on, say, racial sensitivity, any more than "outsiders" are better capable of critical distance from an event or object, I do think knowledge accrued from intimate, lived experience can allow for a richness of meaning that is qualitatively different from the perspective of those without an experiential connection. Knowledge gained through lived experience as well as mediated through texts, however, is equally critical to a full understanding of an event or, in our case, an object in history. To give a personal example, years ago when I was writing about food rationing in the United States during World War II, I felt compelled to involve myself concretely in food production as I was researching and writing about it.⁴² When I reached the last chapter, where the U.S. fails to meet its food donation goals (including grain) in the midst of terrible world famine conditions (pre-Marshall Plan), I had a strong urge to learn how to make bread from scratch. (I had never done so before.) It got to the point where every morning before I sat down to write, I would pull out a recipe book, decide what kind of bread I was going to make that day—rye, sourdough, wheat, millet—mix the ingredients, knead the dough, and set it on top of the refrigerator to rise while I worked at my desk. My husband points out that this was a convenient delay tactic, which it was, but the two activities became intertwined, and I think the act of making bread while writing about bread shortages and famine influenced my scholarship in important and, for me, profound ways.

I see that I may be in danger of backing into a corner of essentialism and binary opposites. My real intent, however, is to assert that objects and events require multiple perspectives and readings (as we have discussed earlier). I would go back to that earlier exchange and reiterate that multiple perspectives, multiple sources of data (texts, objects, quantitative data, lived experience, hands-on knowledge) acquired in a multi-sensorial fashion, firmly grounded in and maintaining a credible link with existing knowledge, help provide the fullest meaning possible. Some historians might regard such diverse and non-traditional data-gathering and interpretation with skepticism, as perhaps a nice extra at best, and more commonly as a venture into others'

⁴⁰ See the attempts to use museum exhibitions as a means of publishing historical research. J. Bennett, R. Brain, K. Bycroft, S. Schaffer, H. O. Sibum, and R. Staley, *Empires of Physics: A Guide to the Exhibition* (Cambridge, 1993); J. Bennett, R. Brain, S. Schaffer, H. O. Sibum, and R. Staley, *1900: The New Age* (Cambridge, 1994).

⁴¹ John Berger, *Ways of Seeing* (New York, 1990).

⁴² See chap. 5, "Freedom from Want: Abundance and Sacrifice in U.S. Postwar Famine Relief," in Amy Bentley, *Eating for Victory: Food Rationing and the Politics of Domesticity* (Urbana, Ill., 1998), 142–170.

disciplinary territory outside the plausible boundaries of traditional history. I do not, but my interdisciplinary training in American studies fortunately created an intellectual space (and a moral imperative) for finding meaning in non-traditional nooks and crannies.

Whether the “evocation of the experiential, the lived experience, a deep, even personal, familiarity with things” is a special feature of material culture—I’m not sure. It may come more easily in material culture analysis, but can occur elsewhere, also. Those emulating the Geertzian tradition of “thick description,” for example, may strive for rich detail and craft an interpretation from this detail, an endeavor that may take the form of an ethnography, material culture analysis, or historical scholarship. It depends on the researcher, the approach he/she takes, and his/her goals. For me, some of the richest examples of historical scholarship, rich in the sense that it seems to capture the intimacy of lived experience, are those inquiries that dig down and aim to evoke the experiential, including Rhys Isaac’s *The Transformation of Virginia*, Sidney Mintz’s *Sweetness and Power*, and William Cronon’s *Changes in the Land*.⁴³ Not surprisingly, each historian (or anthropologist, in Mintz’s case) mentioned above employs tools of analysis from cultural studies or anthropology, and draws from a range of data to tell his or her story. Their use of vivid language and the synesthetic analysis employed to evoke sights, smells, textures, sounds, and tastes brings the reader into the world of the thing (historical event, object) and creates a tangibility, an intimacy akin to someone who has a “deep, personal familiarity with things.” Is it a fiction? In a way, yes, but arguably no more a fiction than any retelling of an event firmly bound to its sources.

As I think more about it, the “telling a story” part may be a key factor for me. This is sort of tangential to the discussion we’ve been having, but a “more expansive understanding” and a sensitivity to and articulation of that understanding may have as much to do with a historian’s approach to crafting the narrative as it does with his/her “intimate connection” to an object and the tools employed to create meaning from that thing. One could argue that for academic historical scholarship, accuracy, establishing proof, and creating a provenance are the primary concerns, much more central than demonstrating intimacy and deep familiarity with the thing, and also more central than creating a compelling and readable account. I applaud these goals and strive to attain them myself. Perhaps, however, we should also consider emulating the qualities found in compelling writing by our most talented essayists, novelists, and journalists. Why can’t we have both? I think we can and in many instances, for example, the works mentioned above, do. In addition to precision and accuracy, for me good history is the product of those historians who evoke a multi-sensorial rendering of the period/thing they are describing—in clear, accessible language that perhaps even contains a ring of poetry (without sacrificing sophistication or scholarly expertise). Is it possible? I think so; at least it’s a worthy goal to strive for.

⁴³ Rhys Isaac, *The Transformation of Virginia, 1740–1790* (Chapel Hill, N.C., 1999); Sidney W. Mintz, *Sweetness and Power: The Place of Sugar in Modern History* (New York, 1986); William Cronon, *Changes in the Land: Indians, Colonists, and the Ecology of New England* (New York, 2003).

Finally, the Editor wonders about the criticism that material culture studies—especially those that engage an object with intimacy and deep familiarity—lack “rigor or sophistication, or indeed acceptance.” I have gone on too long already, but this is certainly a criticism. My thoughts above do speak to this a bit. Briefly, I would say that material culture studies, as with all kinds of scholarship, are not exempt from unevenness in quality. This is probably important to pursue, and I can say more on this later if need be.

Leor Halevi: The two sets of concerns that the Editor presents us with can be related theoretically, because Leora and I were discussing an instance of the broader problem: how separable is one group of human beings (crafty historians) from one category of material objects (wooden artifacts).

In Islamic law, as in other legal systems, persons and objects are, of course, sharply distinguished; the law treats the taking of a human life and the destruction of personal property as different sorts of crimes. I say this without implying that the law should determine how we view historically the relationship between persons and objects, in recognition of the fact that Neo-Platonic philosophers, Zen monks, pantheistic transcendentalists, environmental ethicists, and cognitive neuroscientists would offer different and varied perspectives on this matter. Nevertheless, the Editor’s comment about the “legitimacy” of making that distinction struck me as curious. The categorization of persons and objects as separate entities does seem artificial, from a juridical perspective, when one considers the case of slaves. Legally speaking, they counted in some respects as commercial articles, in others as human beings. Yet jurists did not allow them to close the gaps or bridge the chasms that preoccupy Chris. On the contrary, by reflecting systematically about their status in relation to free humans, animate possessions, and inanimate objects, they used them to elaborate deeper distinctions.

With my thanks to Leora for her reply, and for her eloquent defense of method, I’d like to clarify that I am not at all skeptical that hands can learn. But I challenged her approach to material culture in part because I find intriguing the ways in which historians come to identify more closely with their subjects. It is true, of course, that personal background, life experiences, and quirky obsessions inspire research projects and enrich our field. It is no surprise that the author of a history of the bicycle, David Herlihy, is a passionate cyclist—and that is a good thing.⁴⁴ But the question that we face is a different one: what the discipline of history gains when historians of objects, as of war or sex, embark on a journey to attain “hands-on” experience. I can easily imagine a history of the bicycle that would be based solely on textual and material evidence. Evoking multiple senses, as Amy desires, it would be written by someone who had never learned how to ride a bike. That history would not be as lively or exciting as a history written by an avid biker who would dare to insert himself into the narrative. Let us not presume, however, that the biker possesses a privileged understanding of the historical evidence. Here I am thinking only of bikes past. Different considerations apply to a history of, say, a bicycling club in

⁴⁴ David V. Herlihy, *Bicycle: The History* (New Haven, Conn., 2004).

the present. An oral historian or an anthropologist who deals with a living, if vanishing, tradition can easily justify taking up a native craft or mastering a skill, so as to gain greater access to informants and to acquire the kind of “gestural knowledge” that Otto ascribes to a “cultural field.” But a historian whose subjects are dead must immediately confront doubts about the degree to which such experiences might actually correspond to those of the past.

With all the authority that I might summon as a “hands-off” historian, I’d like to propose that we distinguish an experimental from an experiential approach by “hands-on” historians. The first aims to generate, through scientific analysis or technological research, new data about things past. Experimental research can lead to tremendously exciting and significant findings. Vernard Foley, a historian of technology who replicated a device that Leonardo da Vinci sketched, can serve as an example of this approach. Not only did he create an artifact, but he also, with the new tool in hand, advanced arguments about the development of precision craftsmanship and the early use of interchangeable parts.⁴⁵ An experiential approach is something else altogether. It aims at personal edification—the accumulation of “knowledge, skill, and craft-sense” (to use Leora’s formulation)—in order to gain a heightened perception that enables the initiated to see or hear or taste that which had previously eluded the senses. It benefits the general reader insofar as the historian can skillfully convey to the uninitiated the “mysterium tremendum” of bygone experiences.⁴⁶

Not all “hands-on” historians can be categorized as practitioners of the experimental or the experiential approach. Otto, for one, seems to fall between the two. If I understand him correctly, he replicates instruments in order to re-create historical experiences, or technological processes, about which the literary record is silent. This raises all sorts of interesting possibilities for historical reconstruction. Like Otto, “hands-off” historians often encounter silences. After they have teased all that they can from the sources, it is sometimes impossible to resist the temptation to speculate—as John Demos did, with verve and imagination, in *The Unredeemed Captive*—so as to try to fill silences with words.⁴⁷ But such speculation might appear to the experimental scientist like little more than exquisite intuition. In Otto’s laboratory, however, the historian can apparently conjure plausible scenarios about how things were, more or less. Here we have a modern version of Plato’s parable of the cave, with historical objects, the craftsman’s replicas, and shadows on the wall.

Leora Auslander: Given that I’m the last respondent on this question, I’d like to respond at least a bit to others’ comments and then go on to the other questions, or associations, they sparked for me.

⁴⁵ Vernard Foley, with Steven Rowley, David F. Cassidy, and F. Charles Logan, “Leonardo, the Wheel Lock, and the Milling Process,” *Technology and Culture* 24, no. 3 (1983): 399–427. For broader context, see Joseph J. Corn, “Object Lessons/Object Myths? What Historians of Technology Learn from Things,” in W. David Kingery, ed., *Learning from Things: Method and Theory of Material Culture Studies* (Washington, D.C., 1996), 35–54.

⁴⁶ I make this allusion to Rudolf Otto’s famous dictum with tongue in cheek, but see Russell T. McCutcheon, *The Insider/Outsider Problem in the Study of Religion: A Reader* (London, 1999), 69.

⁴⁷ John Demos, *The Unredeemed Captive: A Family Story from Early America* (New York, 1994).

I agree very much with Chris Witmore's comments concerning the challenges of translation, Amy Bentley's concerning the need to use multiple strategies to produce the richest interpretation possible, and Otto Sibum's reclaiming of the aisthesis sense of aesthetics, and I find his term "gestural knowledge" extremely useful. I am still not sure about the full implications of Chris Witmore's insistence that we not make oppositions between genres but rather make distinctions. I certainly agree that things can be actors, but I am not sure that I can go with "placing all entities on the same footing." I find myself particularly nervous (less perhaps from a scholarly than an ethical standpoint) about the idea that one cannot assume a fundamental difference (if not an opposition) between humans and inanimate things. I look forward to reading more of his work (and that to which he refers) and thinking more and harder about this question. Finally, although I agree with Leor concerning the distinction between the "experimental" and the "experiential," I continue to disagree with him concerning his relegation of the "experiential" to the status if not of the decorative than of the "enlivening," serving a rhetorical but not evidentiary or interpretive function.

Let me return to Leor's example of the history of bicycling and the cyclist. He says that the work of someone who is a cyclist shouldn't be privileged above that of a historian who approached the topic in a purely scholarly manner. I disagree. The following analogy may be helpful—a comparison of the work of two historians of the bicycle, neither of whom had ever ridden a bike but one of whom had looked at a broader and deeper part of the existent written, visual, and material archive than the other. Given equal intelligence, general historical knowledge, research skills, and so on, I would argue that the history written by the scholar who used the broader array of sources would be better. Let me reiterate that I think it crucial to distinguish between "insider" and "outsider" knowledge of the kind that belief systems produce and this kind of bodily or gestural knowledge, or knowledge gained in other contexts. I do think that a history of a religion written by a believer should not be assumed to be better than one written by a non-believer, but rather different. In that case, the non-scholarly knowledge can blind as well as enlighten. I do not think that riding a bicycle or baking bread will limit the historian's capacity for scholarly knowledge in the same way that religious (and other kinds of) belief may.

This discussion seems to me to have at least three parts:

- (1) Is the ideal that historians extract ourselves from our own time, place, and existence other than scholarly? Or is the ideal that historians act as a bridge between present and past, faithful to both?
- (2) Should the scholar bring all the relevant tools, all the knowledge, to which s/he has access to bear on interpreting an object?
- (3) Is the goal of our trade the most accurate and fullest documentation of the sources that have produced our interpretations?

By now, my stance on the first question must be obvious. We necessarily think like, react like, people of the twenty-first century of whatever part of the globe we inhabit. We can and should, of course, strive to grasp historical actors and objects in their own terms, but it is not by denying our own situatedness, or the varieties of knowledge to which we have access, that we can achieve that goal. (This part of the discussion reminds me of contemporary debates in France about race and its naming. The dominant argument among those opposed to racism there is that one must not name racial categories because by doing so one creates the very thing one hopes to eradicate. And yet, empirical observation has demonstrated that discrimination on the basis of racial categories is very much practiced. A refusal to name, a refusal to make explicit, does not eliminate bias of any kind.)

My stance on the second question is, therefore, equally clear. I continue to think that if what is at stake is the most powerful interpretation of the object, then we should use the whole tool kit available. The issue of reception, however, as the Editor suggests, complicates things. As our conversation indicates, there is, among historians, much disagreement concerning what constitutes legitimate, persuasive, evidence, just as there is much disagreement concerning what constitutes ideal prose style. Some find the idea of actively working with the historian's lived experience dangerous, that it risks producing interpretations that are anachronistic or essentialist. That is indeed a danger, although I would argue that it is a danger intrinsic to the practice of history, *tout court*. As has been the subject of endless texts in the philosophy of history, historians are necessarily of and in their time, writing about a past time.

That leads to my answer to the last question, which I think has been less discussed in this conversation. A substantial part of why I acknowledge the insights yielded me by sources other than the texts or objects produced or used by the historical actors I study is simply honesty. Just as it is dishonest to not cite a colleague's text when that is the source of evidence or interpretation, it is dishonest to not cite the insights reached through other kinds of knowledge transmission—in a workshop, in the kitchen, on the street.

Let me just underscore that I do not think that these issues are particular to those who study material culture. I do think that those who work on highly literate modern societies and who choose to use material culture as a source face these issues more than those who work on times and places where written texts are scarcer, or modernists who restrict themselves to the textual. If one works on many parts of the modern world, it is very much *a choice* to use material culture, a choice that implies dissatisfaction with the limits of written sources. I suspect that that dissatisfaction often, but not inevitably, goes along with a questioning of the discipline's conventional modes of citation, of argumentation and conceptions of objectivity.

AHR Editor: The drift of our conversation might strike many readers who are not historians of material culture as somewhat paradoxical. For my hunch is that most think of this subdiscipline as characterized by a concreteness of reference, as be-

fitting its name, that other historical methods lack. And yet our discussion has, in fact, been rather abstract, dealing with profound questions about the relationship between things and texts, material and culture, and materiality and the human, which, like all such binaries, suggest widely relevant methodological, hermeneutic, and epistemological problems.

For this last question, I would like to shift gears and ask you to comment on how the historical study of material culture relates to questions of historicity. There are, it would seem, ways in which a focus on materiality suggests a certain trajectory of “time’s arrow”—that is, the shape and direction of history. Perhaps this is a naïve set of assumptions, but at least from an outsider’s perspective on the field, the impression is that certain developments characterize “material” over time, and that the appeal of the study of material culture might indeed be in seizing a developmental structure of history that other historical approaches these days have largely abandoned. We might entertain the possibility of two axes of development. The first is a movement over time from a world of objects more natural or closer to their natural sources to one whose materials are increasingly “man”-made, naturally unrecognizable, or otherwise estranged from what is considered to be “natural” or organic. Another axis of development is quantitative: a world where things are scarce, precious, or perhaps unequally distributed according to class to a social context defined by a plethora of ever-proliferating objects and material such that the world is literally littered with things. Now, these and kindred trajectories of development might seem naïve and even wrong-headed to the serious student of material culture (maybe not). But I would suggest that they are the sort of assumptions that people, or students, bring to the subject—an expectation that focusing on material culture will reveal “secrets” of the past and a key to its development over time. What do you do with this sort of expectation? Is it helpful to the study of material culture, or an obstacle to a more refined appreciation of what it can reveal? And in any case, how *does* time figure into your own approaches to the “things” you study?

As an addendum to this question, I note that in February’s issue we will publish Laurel Thatcher Ulrich’s AHA Presidential Address. In her talk she focuses on a single quilt. The quilt is, like most quilts, handmade and was created in a historically remote period. For the hundreds of people listening to her address and the thousands of readers of her text, the interest in the quilt, apart from her treatment of it, will likely be immediate *precisely because of these features*. To put it differently, they would not bring the same interest to the object in question if it were, say, a blanket of synthetic materials made in Taiwan purchased the other day at Target. As serious students of material culture, how do you respond to these (presumed) different responses?

Leora Auslander: I am always made anxious by the idea that any given source “will reveal ‘secrets’ of the past.” On the one hand, I clearly believe that to be true of any source I use, whether material or textual. I hoped to know more about the English Civil War as a result of studying the use of clothing, pamphlets, and architectural drawings during those years. I hoped to understand something different about Jewish

life in France and Germany in the interwar period as a result of my analysis of photographs, inventories, and memoirs that yield information on domestic interiors. On the other hand, I find the language of “secrets” rather mystifying (that is, productive of a mystique, and perhaps risking a romanticization of the material). I’m thinking here of some of the claims material culturalists make for the capacity of non-linguistic objects to “speak” directly across time and space. I see no justification for a claim that objects communicate in a less mediated fashion than any other source.

I am more positive on part 2 of the question. I do think that analysis of objects is a tremendously rich strategy for understanding change over time. One of my pre-occupations, for example, has been the dating of the onset of “consumer society.” Obviously the dating cannot be done without defining the meaning of “consumer society.” Both the definition and the dating have important implications for many questions having to do with identity formation, including social and political mobilization. (Can one argue, for example, on the basis of a shared consumer culture, that “Americanness” predated the American Revolution and that part of the motivation for participation was a desire for a political form to match an emotional and social reality?) Historians have been pushing the onset of consumer society—a society in which, for the majority, a sense of self is derived as much, if not more, by the objects they acquire and use as by their working, religious, or reproductive lives—earlier and earlier. While it was originally assumed to be synonymous with mass consumption (and therefore mass production) and to be a product of the twentieth or perhaps the nineteenth century, but not earlier, some have pushed it to as early as the sixteenth. Most of the arguments for the much earlier dating rest on very small amounts of empirical data, sometimes from advertisements, sometimes from archaeological data, sometimes from shipping manifests, sometimes from commentary about objects.

Detailed knowledge about how many goods, of what kind, at what price, and learned about and acquired under what circumstances is essential to advancing this debate. *Longue durée* analysis of people’s possessions—one subfield of material culture studies—is therefore vital for this analysis.

Equally salient, however, is analysis of production and distribution, since it is a question of not only the quantity of goods acquired but the meanings that they bear to all with whom they come in contact that is relevant to the question of the onset of consumer society. Implicit in a shift to a consumer society is an argument concerning an increase in the alienation of labor and increasing distance between producers and consumers. Those topics, too, fall within our purview.

This leads me to the Editor’s final query concerning the relative interest of a unique object made far away and long ago by unknown hands and in an unknown location and a mass-produced one made yesterday in a specific factory. I think it entirely possible that most people—historians or not—find the former both more intriguing and more worthy of study than the latter, but I would disagree rather fiercely with that. One can learn as much about the present from the blanket made in Taiwan and

sold in Target as one can about the colonial world from a quilt. (I used to start many of my material culture classes by asking my students to do all they could with a FedEx envelope. Given the effects of technological transformation, that no longer works—e-mail attachments having largely supplanted FedEx envelopes. A detail that reinforces the utility of material culture for the study of change over time.) From work on Tupperware, to pencils, to blue jeans, to cars—to name only a few possible—scholars have demonstrated the capacities of analysis of the products of industrial production to deepen our knowledge of the twentieth and twenty-first centuries.

Amy Bentley: I agree with Leora that modern-day mass-produced objects (a blanket from Target) are as important as earlier handmade ones (a handmade quilt from the eighteenth or nineteenth century), but I also would venture to say that for most people the older artisanal object holds more intrigue, precisely because, first, it is “old,” and second, it was (presumably) made by a person or a group of people closely connected to one another by dint of some cultural or religious affinity, instead of by a machine operated by low-wage factory workers somewhere in the offshore world. Such an object seemingly places us in direct contact with an earlier era, or with someone in an earlier era. We can hold that object—a woodcarving, hand-blown glass, a kitchen utensil—in our hands, wonder about who made it, used it, in what way, and to what end. We might admire the skill and craft or the roughness and utility of the object. This intrigue created in part through relics from a past era is, after all, what drives many of us historians to do what we do. That the blanket from Target was also made by human hands (running the machines, performing the finishing work) makes it, I suppose, equally about connecting with humans, but in a different way, mediated by machinery and also the fact that dozens, thousands, even millions of the same object were made at the same time. Thus a main difference is that the handmade quilt from an earlier era not only is “older,” but as an artisanal object it contains an “aura” as detailed by Walter Benjamin, compared to a mass-produced article.⁴⁸ We are cognizant of the labor differences that went into the “craft” or homemade version versus the industrial and factory-made, and also the kind of ties of ethnic and cultural affiliation and affinity that we read into and out of those objects.

An “old” object of course can also be mass-produced (seed packets from the early twentieth century, a nineteenth-century book), which theoretically diminishes an artisanal “aura,” but it retains intrigue because of its age, its distance from our own time. Maybe the compelling aspect of historical objects is not so much about unlocking the secrets of the past, but that the past, because it is the past, seems to contain more secrets than the present. As a historian of the twentieth-century United States, practically everything I study is mass-produced (WWII food rationing cards, industrially produced baby food). Because of their historical time frame, such studies are regarded as more legitimate than, say, work I have done on fairly contemporary phenomena (southwestern cuisine and politics, the Atkins diet and masculinity).⁴⁹

⁴⁸ Walter Benjamin, *The Work of Art in the Age of Mechanical Reproduction* (New York, 2008).

⁴⁹ Amy Bentley, “From Culinary Other to Mainstream American: Meanings and Uses of Southwestern Cuisine,” in Lucy M. Long, ed., *Culinary Tourism* (Lexington, Ky., 2004), 209–225; Bentley, “The

The passage of time seems to confer a gravitas upon the thing, whether deserving or not, a gravitas that most historians and others would acknowledge.

To further explore these connections, in contrast to the “old” artisanal quilt, it is interesting to contemplate the place of handmade objects in contemporary times, a handmade quilt when many mass-produced ones are available for a much cheaper price. Why do we purchase a handmade object (or make it ourselves) when a world of mass-produced goods is readily available, costing much less (or not requiring hours of time to create)? Why indeed do artisanally produced objects maintain a place in culture and the marketplace when they are not really “necessary”?

We could venture to guess that some impulse has to do with conspicuous consumption. As Thorstein Veblen articulated a century ago, only someone with a certain level of wealth—allowing for enough leisure time or money to spend on household help—would really be able to produce, say, handcrafted artisanal dishes for a dinner party: to make the bread from scratch, to hollow out tiny cherry tomatoes to fill with grilled shrimp and corn salad, and so forth. A person’s ability to do this for any more than an occasional recipe signifies one’s status, as measured at least in part by leisure time, anticipated or real.

Yet others, less concerned with displaying status, may seek a sense of artistry and artistic distinctiveness in an age when the non-distinctive is continually and inescapably available within a market nexus. To stay with the example of handcrafted food items, such an activity offers an antidote to mass-produced goods, and is, implicitly, a food-oriented exponent of the mass society critique. Such artisanal production implies authenticity, control, and also a connectedness with the past (whether contrived or not), all of which serve an important purpose. In fact, at some point in the future, cultural historians, and especially material culture historians, will look at our current era and locate the recent rise of “nostalgic” craftsmanship/do-it-yourself culture (artisanal food production as well as non-edible objects) in places such as Brooklyn and elsewhere as evidence of many cultural tendencies—a rejection of faceless, nameless, placeless industrial capitalism; an embrace of localism and environmentalism; a celebration of craft labor; an appreciation of high-quality raw materials turned into high-end consumer goods; a form of resistance; a mode of identity formation; a different kind of economy operating on a different scale (one involving barter, for instance, as well as cash exchange); an aura of quality and distinctiveness; and an economy based on an admixture of economic privilege combined with a nostalgia for a craft labor sensibility. It’s a rich site for historical analysis—as all material objects are, when raw materials combine with labor practices combine with conditions of production, conditions of consumption and exchange, combined with the identity formations that go into both the production and the consumption.

Other Atkins Revolution: Atkins and the Shifting Culture of Dieting.” *Gastronomica: The Journal of Food and Culture* 4, no. 3 (August 2004): 34–45.

Such practices help make people feel unique and in control of their circumstances. Jackson Lears, in his exploration of bourgeois culture in *No Place of Grace*, found similar longings and accompanying actions from those espousing the arts and crafts movement during the Gilded Age.⁵⁰ Lears points out, however, the accommodationism inherent in the movement. Simplifying one's life through the production of certain domestic items did not challenge the existing capitalist status quo, the troubling force that was altering society to begin with, but in fact accommodated it. Developing an artisanal cheese-making enterprise and marketing one's wares directly, for example, may circumvent the excesses of industrial capitalism, but it doesn't do much to restructure the federal dairy subsidies and conglomerates that dominate market share and continue to drive small producers out of business.

To conclude (rather abruptly), the Editor's articulation of two trajectories, time and quantity of goods through mass production, is helpful to me in locating meaning in objects.

Christopher Witmore: If we accept the argument that things are mediators, then past achievements, whether they are manifest as a monumental stone wall, the line of a paved road between Argos and Nafplion, Greece, or a travelogue with accompanying maps published by John Murray in 1830, are not past, but impact concurrent relations now. Here, the image of a unidirectional "arrow" flying from the past into the future may be a good metaphor for a particular passage temporality, for a specific form of historicity, but surely not for time. Time passes and doesn't pass; in any case, to regard time as an external parameter is to confuse the measurement of time, a succession of dates—*chronos*—with the nature of time, which, like the weather, is much more chaotic and unpredictable—*kairos*. Everything changes when we open our accounts to the mediating roles of things (or our companion species), and once we are free of the constraints of a past firmly separated from the present (and the future), it becomes apparent how radically we have oversimplified time.⁵¹

Consider an example. At Mycenae and Tiryns, Bronze Age walls are part of the composition of Archaic communities who asserted their independence from Argos by sending troops to battle the Persians at Plataea (a confrontation in which Argos remained neutral). Irrespective of the lapse of more than six hundred years, Bronze Age achievements—monumental walls of ashlar and cyclopean masonry—hold together Archaic societies and add to their confidence behind shared walls. Ontologically, these Bronze Age achievements are no more past than the temple erected on top of the summit of Mycenae in the decades before 479 B.C.E. Likewise, eras more proximate in a linear temporality can become more distant.

In 1972, only a few hours before the party of transhumant shepherds mentioned earlier passed within sight of the Bronze Age walls of Mycenae, visitors, site guards,

⁵⁰ Jackson Lears, *No Place of Grace: Antimodernism and the Transformation of American Culture, 1880–1920* (Chicago, 1994).

⁵¹ Regarding companion species, see Donna Haraway, *When Species Meet* (Minneapolis, 2008). On the oversimplification of time, see Michel Serres with Bruno Latour, *Conversations on Science, Culture, and Time*, trans. Roxanne Lapidus (Ann Arbor, Mich., 1995).

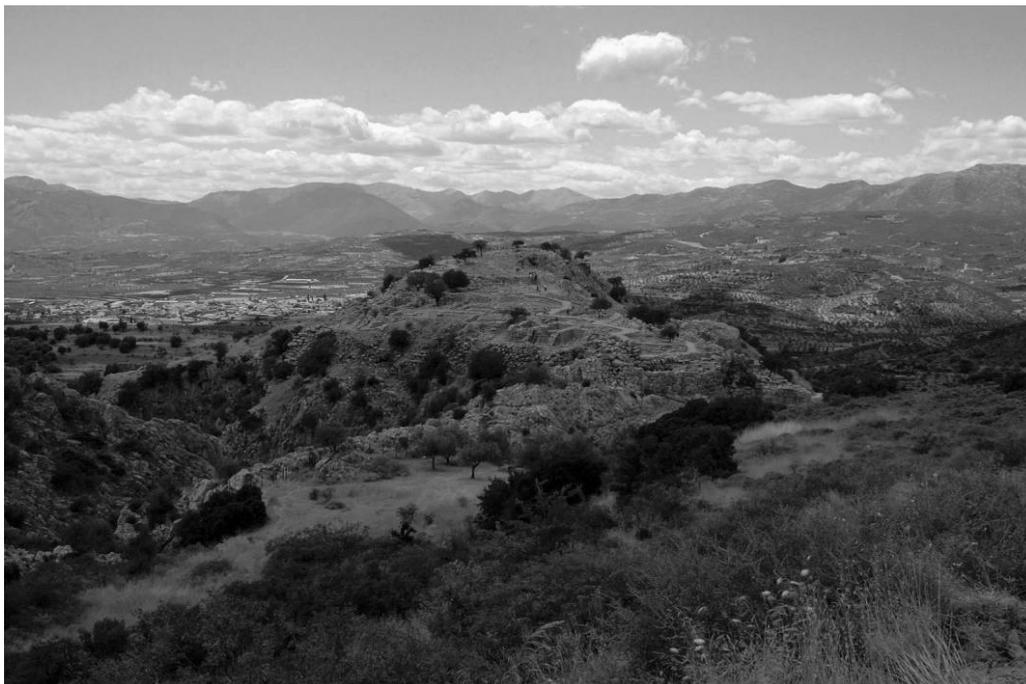


FIGURE 4: The citadel of Mycenae in July 2008. It was near the village of Phikhtia, in the distance beyond Mycenae, that the transhumant party of shepherds, along with several thousand sheep and goats, crossed the Argive Plain under the cover of darkness in the early hours of May 21, 1972. Photo by Christopher Witmore.

and archaeological guides had walked paths whose courses were dictated by architectural features of the late Bronze Age. Few of these visitors were aware of the entire Hellenistic settlement and temple, along with earlier Geometric/Archaic remains, which were displaced in the excavations of Heinrich Schliemann, Christos Tsountas, and Alan Wace. The experiences of visitors to Mycenae thirty-seven years ago were influenced by far older material traces than those dislocated remains that came afterward in a linear temporality. An era roughly a thousand years closer to us along a timeline is now more distant insofar as the corporeal experience of Mycenae is concerned.

Stated differently, the arrangement, the aggregation, of Mycenae in 1972 was not made by time; to the contrary, time was, and is, the outcome of the aggregation, which emerged out of the polychronic associations between archaeologists, instrumentalities, remnants of stone walls, the *Iliad*, the politics of value associated with Bronze Age Mycenae, along with myriad other entities. Rather than understanding change as spawned out of the succession of dates, in my work I have attempted to account for such multi-temporal simultaneities and voids.⁵²

⁵² Witmore, "Vision, Media, Noise and the Percolation of Time"; Christopher L. Witmore, "Landscape, Time, Topology: An Archaeological Account of the Southern Argolid, Greece," in Dan Hicks, Graham Fairclough, and Laura McAtackney, eds., *Envisioning Landscape: Situations and Standpoints in Archaeology and Heritage* (Walnut Creek, Calif., 2007), 194–225.

There is a related point here in that historians and archaeologists often assume the past as preexisting, as preceding, the present occasion of our relationship with the materials at hand. But to always regard old things as “of the past” is to ignore the fact that they exist within concurrent sets of relations with those whose orientation is not always to study them. Just as I maintained earlier that to reduce texts to the attributes of language is a partial rendering of experience, so too is any act which predefines things as “of the material past” *exclusively*. Again, things hold forth various orientations depending on the whos, whats, and wheres that conspire with them. This very faculty may be well illustrated in a case where synthetic conditions exist to suppress it.

A museum display lauds a black figure amphora as an exemplary achievement of Athenian potters 2,500 years ago. In this, observers take it for granted that the specific determination of the amphora is derived from the past and is permanent. Yet regarding the amphora as an “enduring object” ignores how museum curators labor to constantly maintain a pot as an amphora by enrolling the aid of conservators, laboratories, glass cabinets, labels, attribution studies, archaeology, and so forth (this echoes my earlier comments concerning historical texts). Just as previous relations transformed the amphora into an Etruscan funerary urn, every subsequent study of this pot will modify it in such a way that it will no longer be what it once was (the mythological scene once believed to be a battle between the gods and giants may become a battle between the Greeks and Trojans). In this, we do not discover new attributes that the pot previously lacked; rather, we bring new networks of relations to bear upon the object and its relations. We can only speak of the pot as an “enduring object” if we take into account the lengths that museums and art markets go to stabilize its existence as an Athenian black figure amphora. No thing, no person exists exclusive of its, his, or her relations. Were we to fill the pot with wine produced in the way of the ancients or water drawn from a 2,600-year-old well, we would transform the museum object back into a vessel, now situated within relations similar to those operative in Late Archaic Athens. Contrary to Amy’s argument that “the passage of time seems to confer a gravitas upon the thing,” I would suggest it is the actor-relations that do so.

Moreover, what were mass-produced products only yesterday will become items of cult value tomorrow; so long as the majority of items are filtered away through “mass consumption,” so long as they pass through the requisite channels of collectors, and so long as they undergo little transformation through use—such proves to be the rule, whether we speak of Kenner action figures (in their original packaging, of course) or Ford Mustangs. Often irrespective of a so-called “alienated” mode of mechanical production, the masses, collectors, eBay, and action figures or Ford Mustangs become co-producers of “collectibles” and their associated cult value, that is, the “aura.”

Admittedly, I am passing lightly over topics that require far more detailed elaboration, and in such cases one can only invite the reader to engage the literature I have

referenced further.⁵³ To conclude, I would like to briefly address a point wisely broached by Leora earlier. Placing all entities on the same footing is bound to raise the question of morality—this flattening is analytical; it is neither ethical nor axiological (something I think Leora recognized in distinguishing between scholarly and ethical commitments). While this qualifies the grounds traced by our discussion here, this move elides the question of morality which sooner or later needs to be addressed—and very carefully. Here I merely want to point out how modern humanism, which underlies contemporary ethics, does not provide the grounds for addressing the moral relevance of non-human action as objects are denied any ethical dimension in order to maintain the sovereignty of the modernist subject. Again, these are very delicate issues, which need to be worked through with great care and sensitivity tempered by a deep knowledge of the past.⁵⁴

Leor Halevi: “Only by harking back to the day of the roller skate or the bicycle craze,” wrote the American composer John Philip Sousa roughly a century ago, “can we find a parallel to the way in which these ingenious instruments have invaded every community in the land.” The new trend to acquire phonographs, he complained, threatened the art of music. In an age of mechanical reproduction, babies would no longer hear their mothers singing; they would go to sleep, instead, listening to canned lullabies played by tireless machines. Elaborating a modern myth—a myth that resembles in many respects the pastoral romance about women’s handicrafts which Laurel Ulrich unraveled in *The Age of Homespun*—Sousa celebrated amateur country bands, while predicting their imminent demise. Whom did he blame for this unfortunate turn of events? Not just technological devices, but also the “powerful corporations” whose commercial interests were increasingly influencing the production of music. Although colorful and original, Sousa’s article, titled “The Menace of Mechanical Music,” forms part of a powerful, enduring, and ubiquitous critique of modernity. Time’s arrow, according to this critique, points toward an ever-deepening alienation of human beings from the products of machines.⁵⁵

Alienation is a sentiment whose depth cannot be measured. But how exceptional is the modern feeling? Did the ancients not feel something similar when they reflected on artificial objects and human designs?

The modern myth about the progress of alienation depends in part on the notion that in preindustrial times, persons and artifacts were intimately linked, so closely linked that in certain contexts a thing could appear to possess the spirit of a man.

⁵³ See also Bjørnar Olsen, Michael Shanks, Timothy Webmoor, and Christopher L. Witmore, *Archaeology: The Discipline of Things* (Berkeley, Calif., forthcoming).

⁵⁴ For more on posthumanist ethics, see Bruno Latour, “Morality and Technology: The End of Means,” *Theory, Culture & Society* 19, no. 5/6 (2002): 247–260; Peter Sloterdijk, “Rules for the Human Zoo: A Response to the *Letter on Humanism*,” *Environment and Planning D: Society and Space* 27 (2009): 12–28. Peter-Paul Verbeek, “Cultivating Humanity: Towards a Non-Humanist Ethics of Technology,” in Jan Kyrre Berg Olsen, Evan Selinger, and Sren Riis, eds., *New Waves in Philosophy of Technology* (New York, 2009), 241–263.

⁵⁵ John Philip Sousa, “The Menace of Mechanical Music,” *Appleton’s Magazine* 8 (1906): 278–284; Laurel Thatcher Ulrich, *The Age of Homespun: Objects and Stories in the Creation of an American Myth* (New York, 2001).

Within my own work, burial attire represents the best example of a handmade object to which human beings grew deeply attached. Early Muslims frequently selected their own clothes in anticipation of death. They expended an inordinate amount of time, money, and effort to make, procure, or buy the perfect outfit, hoping that it would reflect their status and capture their individual taste. They invested dearly in these garments for another reason as well: they believed that they would dwell within the grave, in body and spirit, between the moment of burial and the resurrection. So it made sense to plan carefully what to wear for that long sojourn. These powerful bonds between early Muslims and their shrouds may lend support to the impression that long ago men and women did not suffer from an old strain of the disease now known as industrialized alienation.

Yet ancient and classical history offers its share of stories about estrangement from material culture. *The Epic of Gilgamesh*, one of the oldest works of literature, expresses serious misgivings about the felling of cedar trees to make wooden artifacts. On the seventh clay tablet of this Mesopotamian poem, Enkidu, the wild man who has been initiated into civilization, curses a door. Addressing it “as if it were human,” he fantasizes about chopping it up with an axe. The Roman philosopher Seneca, in his tirade against superfluous commodities and the spirit of avarice, denounces the commerce in Chinese silks: women wearing these expensive garments, he exclaims, “can scarcely, with a good conscience, swear that they are not naked.”⁵⁶ And what of the early Muslim pietists, whose approach to everyday practices I analyzed in *Muhammad’s Grave*? In the name of Muhammad, and on the basis of their collective memories of ancestral practices, they decried tombstones, they criticized extravagant, colorful shrouds, and they preached against the candles that Christians used to accompany funerary processions toward the grave. In short, they felt, very much like Sousa, quite distressed by new developments in the material culture of their age.

Sousa told a good story about the historical trajectory to modernity and its discontents. However, as my students often remind me when I grumble about cellular telephones and other novelties, there are scores of enthusiastic adopters of new technologies for every disaffected intellectual. My research in progress on the Muslim reception of the phonograph shows, for example, that many of Sousa’s contemporaries felt an overwhelming affection for the new instrument. In the city of Kazan, Russia, Tatar Muslims, although geographically isolated from the heart of the Muslim world, imagined themselves, thanks to the phonograph, in close proximity to Arabic singers and Qur’an reciters from the Middle East. Together with alienation, enthusiasm for new things has been part and parcel of the world, both before and since the industrial revolution.

H. Otto Sibum: This question asks us to spell out in more detail how studies of material culture relate to questions of historicity. And you suggest two axes of directionality in the development of history. The first is a movement over time of objects that are more natural as opposed to those that are man-made. The second

⁵⁶ *The Epic of Gilgamesh*, trans. Maureen Gallery Kovacs (Stanford, Calif., 1989), 60; L. Annaeus Seneca, *On Benefits, Addressed to Aebutius Liberalis*, trans. Aubrey Stewart (London, 1887), 206.

trajectory you qualify as quantitative, i.e., objects that are scarce in (or unequally distributed to) a world that is filled with objects of all sorts.

Let me try and formulate my thoughts about these suggestions. With regard to the first trajectory, I have my doubts as to whether we should start with such a dichotomy at all. Humans living in the material world, past or present, always manipulate objects—that is part of our human existential condition. But how we do it and to what extent and with what consequences differs from culture to culture today and in the past. Hence, for me it is not so much a question of whether there were times when we had more objects “more natural or closer to their natural sources” as opposed to artifacts.

As a historian of science, I would tackle the issue implied in your first trajectory by studying the various cultures and their complex historical conditions in which practices like the collecting, manipulating, and manufacturing of objects became culturally acknowledged human experiences that constitute factual knowledge about nature. The so-called scientific revolution in the sixteenth and seventeenth centuries is such a historical moment, in which things experienced by humans became the new mode of natural inquiry, and testimony and authority were resorted to only when individual experiential access was not possible.⁵⁷ In a nutshell, the genesis and development of the whole of modern science hinged on this important shift from texts to things that started to take hold in Western cultures in the seventeenth century, and just a few landmarks in this cultural process of making space for the manipulation of physical objects as the most promising means to make sense of our world have been studied yet. And if we look at the current research in nanophysics, for example, where scientists manipulate physical objects on an unprecedented scale, we see that even our comfortable categories of thinking about the material world as divisible into organic and inorganic or natural and artificial are about to collapse.

With regard to the second trajectory, the scarcity of physical objects or the uneven distribution of them and the increasing universal distribution over time, I would also make slight refinements. The collecting and trading of strange objects from all over the world have undoubtedly provided the preconditions for investigating and producing reliable knowledge about nature. Hence I agree that the circulation of objects has importantly shaped our history, and the development of the sciences in particular. But despite globalization and a nearly global distribution of Western science, we see more than ever today traditional knowledge about a vast array of physical objects like plants, herbs, etc., located on continents that have been marginalized for a long time now. These communities of traditional knowledge rightly claim their

⁵⁷ See, for example, Steven Shapin, *The Scientific Revolution* (Chicago, 1996), 74. See also the literature on the history of collecting and travel; e.g., Pamela H. Smith and Paula Findlen, eds., *Merchants and Marvels: Commerce, Science, and Art in Early Modern Europe* (New York, 2002); Marie-Noëlle Bourguet, Christian Licoppe, and H. Otto Sibum, eds., *Instruments, Travel and Science: Itineraries of Precision from the Seventeenth to the Twentieth Century* (London, 2002); Lissa L. Roberts, Simon Schaffer, and Peter Dear, eds., *The Mindful Hand: Inquiry and Invention from the Late Renaissance to Early Industrialisation* (Amsterdam, 2007).

intellectual property rights, thereby questioning the legitimacy of scientific claims. This field still deserves further exploration.

Hence, studies of material culture, the trajectories and transformations that physical objects undergo, are clearly providing important insights about broader historical developments that we have not been able to anticipate so far. Thus the trajectory you suggested is not one from scarcity or uneven distribution to equal diffusion. We always will have scarce objects, and knowledge about them that will challenge modern science and societies.

But by saying this, I would not want to be understood as implying that the historical development of cultures is fully materially determined. I would strongly object to this. Objects—human-made or found in nature—gain meaning only through humans' use of them. Human-made objects in science, like instruments, may even be understood as reified theories (G. Bachelard) and hence prompt their users to act and think accordingly. In practice, however, historical actors may decide to use a particular object in a way very different from the one embodied in this object. In the process, they transform the object and create a new one, often prompting unintended consequences and unforeseen new meanings. In order to get at these moments of change in history, we need to employ all the intellectual tools that are available to us, of which the study of material culture is just one extremely important one.

Let me finally come to the quilt. Of course, the modern equivalent, the synthetic blanket from Taiwan, is a different object, and the audience would possibly react differently to that one. But what does that mean? I am of the opinion that every object, whether it be the old quilt or the contemporary blanket, has its own attractions, and it depends on the audiences what they make of it. Many years ago, when I presented the replica of James Joule's paddle-wheel experiment (1840s) at an arts exhibition called "Laboratorium," I invited the audience to participate in performing the experiment.⁵⁸ They were very enthusiastic and later told me that they were extremely grateful because they had learned some physics—a subject which they regarded as having given them their most frustrating life experience during their school years. At this arts exhibition, however, they were simply impressed by the aesthetics of the old experiment; most importantly, it did not remind them of their school physics. Moreover, they became curious to learn more about this strange-looking object. While working with it, they learned some hard physics without initially noticing it as such. It was just fun, they later commented. When I asked students of physics at the university to work with this device—instead of conducting their standard practical physics experiments with modern equipment—they reacted like typical scientists: "Why should I work with this old stuff? I am not interested in history; I want to make history" was one of the typical initial reactions. But after working for a while, they learned something about their discipline which they had never even thought of, like: these old experiments are much more difficult than the new standard ones. They gained great respect for the work of their predecessors. Furthermore, they noticed that certain practical knowledge was required that does not exist any-

⁵⁸ Hans Ulrich Obrist and Barbara Vanderlinden, eds., *Laboratorium* (Antwerp, 2001).

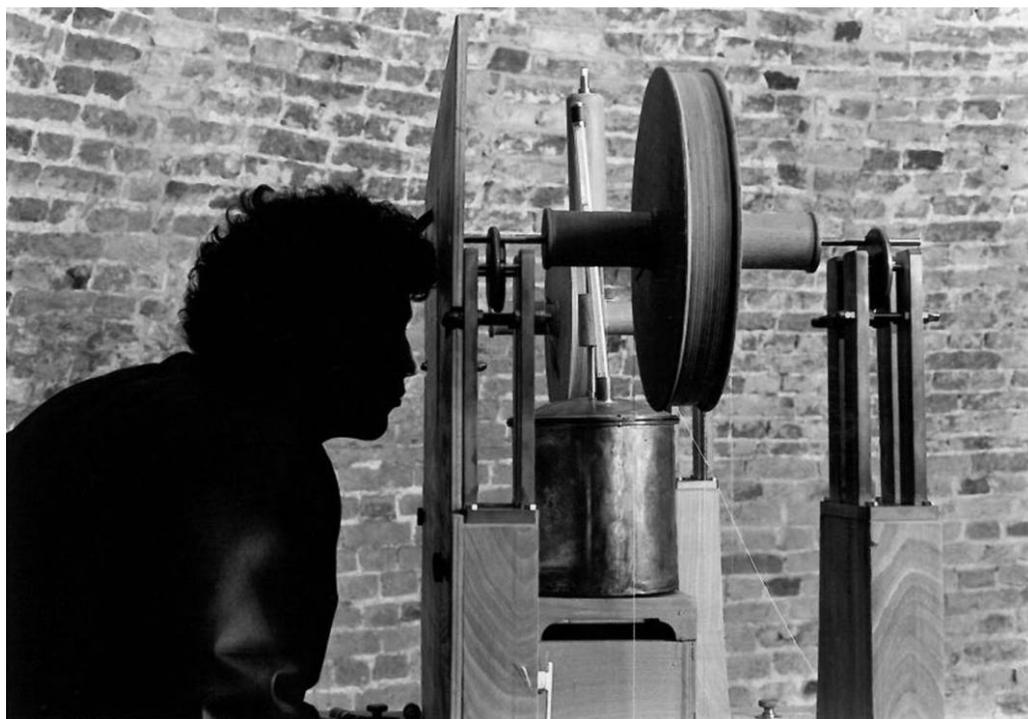


FIGURE 5: A sequence in the restaging of James Joule's paddle-wheel experiment with a replica. The experimenter is reading a thermometer scale while hiding behind a wooden shield so that the radiation of body heat will not interfere with the thermometer placed in the water-filled copper vessel. Photo by Norbert Gerdes, Oldenburg, Germany.

more. The craftsmen in the university workshops even realized that special craftsmanship was required to build certain devices that no longer exist in our culture.

What do I want to say with this? Whether it was laypersons still frustrated by school physics or physicists-to-be, their educational experience brought about the initial response to this old experimental apparatus. Only through working with it did they realize that it might well pay off. Afterward they even judged it as highly enlightening. I am convinced that historians would have the same experience through engaging with material culture.

AHR Editor: This has certainly been a far-ranging conversation, which is not surprising considering the range of objects, things and materials, as well as periods and cultures, that, together, you have evoked in elucidating your approach to the study of material culture. If nothing else, you have certainly made us much more wary of the simplistic assumptions readers might have about this field, especially those based on the notion that material culture is merely evocative or illustrative of the lives of people in the past. Clearly it is much, much more, as this discussion has abundantly demonstrated. As a concluding remark, I am moved to note the material aspect of reading this conversation in the *AHR*, which is to say the two ways it will, physically, materially, be read. Some readers will have the printed version of the journal open

to this page, will hold it in their hands or on their laps, reading it perhaps on the subway or at the breakfast table, having a sense of the journal's physical dimensions as well as easy access to the rest of its contents with a simple turning of the pages; others will be reading it on a screen, their hands on a mouse, with all the instant accessing and surfing possibilities that this invites. In either case, the experience will vary; despite the fact that the text, as a configuration of words, sentences, and paragraphs, is the same in both formats, readers' relationship to that very text will differ in ways that many of us might appreciate and acknowledge but perhaps not fully understand. Here is the province of the study of material culture.

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