

Deep Culture

A Very Brief Brief of the New Materialism

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I HELD THE FIRST MEETING of my graduate seminar in environmental history last August and had planned what I hoped would be a big Socratic reveal at the end. The readings for the day included the usual suspects: Fernand Braudel's materialist *Annales* perspective through Roderick Nash's American studies-inflected deconstruction of the "wild" to Donald Worster's agroecological approach and William Cronon's disruptive "The Trouble with Wilderness." R. G. Collingwood's 1946 unflinching claim that all true history is really the history of human thought and Richard White's 2004 case for "hybrid landscapes" served as rough historiographical bookends.

To set up my "big picture" conclusions, I suggested my students place these articles on a crude spectrum ranging between the idealist/culturalist on one end and materialist/scientific on the other. They were good sports, and this somewhat rigid approach worked for a while. But by the second half of the three-hour seminar, the conversation was bogging badly. Finally, visibly frustrated even behind her COVID mask, one student bravely said what many others were probably thinking. "Well, isn't *everything* just a mix of the material and cultural?" she asked. "What's the point of just constantly repeating these 'chicken or the egg' debates about which came first?"

I floundered out some sort of response that I (and probably everyone else) promptly forgot. It was only later—*l'esprit d'escalier*, Owl of Minerva, whatever—that I realized that her question had perfectly set up my Socratic moment, but I had stupidly failed to recognize it. What I wish I'd said was: "That's it exactly! We *do* need to get beyond these old material-versus-cultural debates. They're taking us nowhere because they're based on the mistaken belief that human culture is mostly about abstract ideas or discourse, when it's really inseparable from our material bodies and environments. What we need now is to develop a materialist and environmentally grounded cultural history, a sort of *deep culture*."

That response, had I made it, would have offered a pretty good step toward capturing what I consider to be the central goal of so-called New Materialism: to escape the traditional idea that we are mostly creatures of a disembodied and displaced mind or spirit and put humans and their cultures back into the material world.

At some level, this basic point has been kicking around for quite a while. In 2005 the feminist material theorist Elizabeth Grosz captured it nicely, observing that “nature and culture can no longer be construed as dichotomous or oppositional terms when nature is understood as the very field on which the cultural elaborates and develops itself.”¹ Even earlier, the architects of actor network theory and “flat ontology” (Bruno Latour, Michael Callon, John Law, among others) had taken aim at the same target.² The environmental historian Paul S. Sutter seemed to suggest something similar in his 2013 survey of the discipline when he concluded that the then-dominant Latourian concept of hybridity seemed provisional, a step toward something else whose nature was not yet clear.³

With so many antecedents, it would seem presumptuous to claim that the New Materialism(s) is that “something else.” Moreover (as the previous parenthetical *s* not so subtly suggests), today the term itself covers such a wide range of often ill-fitting ideas and methods as to effectively defy definitive definition. My own preference has been to distinguish the more scientifically and environmentally grounded varieties of the New Materialism under the lower-caps umbrella of “neo-materialism.”⁴ The intent is not to dismiss other approaches but, rather, to suggest that the union of some key contemporary scientific insights with old humanistic questions offers the most exciting and productive path to new insights into the past or what I think of as “deep culture.”

What might such a theory look like? For the sake of speed and space, I shoot out these three bullets as broadly diagnostic:

- That humans are inescapably material creatures, not just in the obvious sense that we are embedded in complex ecologies, but also because our thoughts, ideas, societies, and cultures emerge in significant part from our embodied engagement with a dynamic and vibrant material world;
- That this material environment is best understood not as a limiting factor on an abstract and solely human imagination but as a creative force that sparks and nurtures human (and nonhuman) thoughts, beliefs, cultures, and actions;

- And that previously justifiable fears of some sort of materialist determinism are in this new framing misplaced because they (1) presuppose a mistaken modernist dualism between the human and the environment, and (2) wrongly assume that the nonhuman material world is largely static rather than creative.

The theory, however, is not where the real action is. At least in my view, what is most exciting about neo-materialism is the way these abstract ideas resonate powerfully with an array of new scientific insights. So rather than dwell on theory, let me use my remaining space to focus on some concrete examples of how contemporary science gives support to a “deep culture” approach.

One relatively easy point of entry is the science of the human microbiome, the roughly 1.1 kilograms of bacteria and other nonhuman microorganisms we all carry around in our guts. While most historians today continue to assume that their human subjects are clearly unitary, bounded, and discrete subjects, today some students of the microbiome think of human beings as symbiotic “superorganisms” more akin to coral reefs than discrete actors. Superorganism is apt both physiologically and cognitively, as our microbial fellow travelers not only help to digest our food but also play a significant role in how we feel and act. They synthesize, for example, much of the mood-regulating hormone serotonin found in our bodies.⁵ The recent socioecological concept of human niche construction theory likewise undermines conventional distinctions between the brain, body, and environment, arguing that humans (like all organisms) create niches that in turn serve to create, sustain, and define them. In this view, the beaver—and by extension you’re to think “human” here—does not just create its dam; rather, the beaver simply is its dam. Both beavers and humans cannot logically be understood apart from the novel environmental niches in which they live and develop.⁶ Similarly, the evolutionary biologist Kevin Laland proposes the concept of an extended evolutionary synthesis that incorporates niche construction, culture, and learned behaviors under the umbrella of evolution. In this framing, culture is not an abstract epiphenomenon layered on top of a slow process of evolutionary development. Rather, culture emerges as organisms engage with their constantly shifting material environment, built and otherwise—a process that plays out not only over the long spans of evolutionary time but also over the far briefer time periods historians typically study.⁷ A deep culture indeed.

The contemporary ideas of epigenetics are also offering many useful points of collaboration between scientists and historians. One reason that

anthropologists and humanists erected conceptual barriers between culture and matter in the first place was to avoid any repeat of the disastrous genetic determinism of the first half of the twentieth century. It was a necessary bulwark at the time. But today the novel science of epigenetics offers powerful evidence that the hoary old nature-versus-nurture and matter-versus-culture debates were simply wrongheaded. Both scientists and historians should understand human physiological and cognitive processes as the product of organismal development in their environment or niche rather than as a simplistic hard-wired product of genes. The genotype does not determine the phenotype; rather, environmental cues turn genes off and on during the course of our lives in response to a changing material environment. In this very concrete biological sense, the material world enters into human bodies and brains, shaping—without determining—how they might think and act.⁸

A small but growing number of contemporary cognitive scientists and theorists now go so far as to argue that even our much-vaunted human intelligence—presumably the first source of what we typically think of as an abstract symbolic or discursive “culture”—must also be understood as a material phenomenon. By this they mean not merely the largely undisputed point that all thought and consciousness emerge from entirely physical biochemical processes. Rather, they argue that the human mind (versus the brain) is not confined to our skulls, or even our bodies, but is extensive with its surrounding environment. Andy Clark, the most prominent advocate of this “extended mind” thesis, suggests that human cognitive abilities are distributed in a network of external props and aids like notes, maps, and files, material aspects of our surroundings without which some fundamental part of what we consider to be our intelligence would vanish. In changing our physical environment (the parallel to niche construction seems productive), Clark suggests, we also reconfigure “our minds and our capacities of thought and reason.”⁹

Some historians have already begun to incorporate these and related scientific insights. Daniel Lord Smail and other developers of “neurohistory” make convincing use of neuroscience to argue that the brain is highly plastic, capable of both shaping and being shaped by the environment. As humans use their intelligence and culture to change their material surroundings, neurohistory suggests that they evince new patterns of behavior that in turn “generate new neural configurations or alter brain-body states.”¹⁰ As Clark, Smail, and others suggest, our brains and minds are porous rather than bounded, plastic rather than fixed, and shaped by matter rather than merely a means of shaping it. Contemporary cognitive science and theory thus offers

perhaps the most direct attack on the still-dominant Cartesian and postmodernist idea of an abstract human mind and culture that exist in isolation from their material environment.

Finally, recent advances in the study of animal cognition offer a more oblique but equally powerful challenge to the longstanding immaterial anthropocentrism of humanistic studies. It has been several decades now since the western lowland gorilla Koko showed that she could understand spoken English and communicate using sign language. We also now know that the use of simple tools is not unique to humans, as with the New Caledonian crow Betty who was famously caught on tape bending a wire into a hook to snare some otherwise impossible-to-reach food. As the ethologist Frans de Waal argues in his latest book, *Mama's Last Hug*, it has also become increasingly difficult to deny that other animals experience feelings and emotions that were long believed to be solely human.¹¹ Even the lowly little white lab rat can be empathetic and altruistic, postponing the immediate gratification of a chocolate treat to first rescue another rat from an unpleasant (though not life-threatening) swim. It is difficult to overstate the importance of these ethological insights for the humanistic and historical endeavor. If altruism, a sense of justice, or even an appreciation for beauty can be understood as shared with at least some other animals, albeit in an attenuated form, then it seems apparent that the material world itself must generate these traits through evolutionary, biological, and developmental processes.

In sum, it seems that the older immaterial and ideational concept of culture, for all its virtues, holds a dangerous flaw at its core. Indeed, such an abstracted concept of humans and their sociocultural systems could probably have emerged only in the post-World War II era of material abundance when, for the first time, at least some humans could entertain the illusion that they were godlike creatures who created themselves and shaped a distinctly separate world as they willed. Ironically, an age of material abundance gave rise to what we might well term an age of immaterialism. Yet today, as we grapple with the hydra-headed threats of a warming planet, novel diseases, and other persistent material consequences of such misplaced human arrogance, it seems well past time to put these immaterialist illusions behind us and finally recognize and embrace the materiality of the human animal in all of its dimensions, the social and cultural as much as the physiological and environmental. That such a neo-materialist and deep cultural approach might finally begin to bridge the old divide between scientists and humanists would be a welcome, necessary, and long-overdue step forward as well.

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Notes

1. Grosz, *Time Travels*, 44.
2. Latour, *Reassembling the Social*.
3. Sutter, "World with Us."
4. LeCain, *Matter of History*.
5. Reid and Greene, *Human Microbiome*.
6. Ertsen, Mauch, and Russell, *Molding the Planet*.
7. Laland, *Darwin's Unfinished Symphony*.
8. Brooke and Larsen, "Nurture of Nature."
9. Clark, *Supersizing the Mind*, xxviii.
10. Smail, *Deep History and the Brain*, 155.
11. De Waal, *Mama's Last Hug*.

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