

The Matter of History: How Things Create the Past. By Timothy J. LeCain. New York: Cambridge University Press, 2017. xx + 346 pp. Illustrations and index. Cloth \$99.00, paper \$29.99, e-book \$29.99.

The Matter of History opens with a survey of research on the microbiome, epigenetics, and cognitive linguistics, suggesting that human bodies and minds are thoroughly entangled with the material environment. Timothy LeCain argues that new scientific conceptions of what it means to be human call for new methods in the humanities. In *The Matter of History*, LeCain aims to demonstrate that ideas and cultures derive largely from the creative agencies of the material world, to synthesize scholarship that attends to these dynamics, and to provide a framework for writing histories in which “humans are not an exception to the material world so much as an expression of it” (15).

In the mid-to-late twentieth century, LeCain argues in chapter 2, humanists increasingly studied how language and culture shaped the social world. They did so for a sound and laudable reason: resisting genetic- and environmental-determinist arguments deployed as justifications for racism, sexism, colonialism, and genocide. However, the linguistic and cultural turns produced scholarship that marginalized material environments, feeding an overconfidence in the capacity of humans to shape their worlds. Environmental historians, committed to the importance of nonhuman beings and nonliving things, figure as heroes in LeCain’s historiographic narrative. So do historians of technology, archaeologists, materially-oriented scholars of anthropology, feminist theory, and political ecology, and the sociologist Bruno Latour (“arguably the most important philosopher of our time” (xii)).

LeCain lays out his preferred method, “neo-materialism,” in chapter 3. He distinguishes his approach from “new materialist” scholarship that, in LeCain’s judgment, too often addresses

ideas about materials rather than materials themselves. Neo-materialism, in contrast, avoids anthropocentrism by “concretely engaging with things-in-and-of themselves” (16). LeCain provides four starting points for neo-materialist history: attend to “the material environment” by making material history a core subject and category for historical analysis, as race, class, and gender have become; respect “thing-power” by incorporating the creative capacities of nonhumans and environments into historical narratives; study “the matter of culture” by treating culture as a product of its material substrates rather than a symbolic system that can be analyzed apart from them; and hasten “the end of anthropocentrism” by researching nonhuman actors and eschewing human-centered concepts like the Anthropocene. (LeCain prefers “Carbocene.”)

In chapters 4, 5, and 6, LeCain exemplifies his method with historical studies of the silkworm, cattle, and the element copper. Drawing on his own research and that of his Montana State colleague and frequent collaborator Brett Walker, LeCain narrates cultural histories of ranching in Montana and sericulture in Japan centered on the evolutionary history, social intelligence, and biochemical inventiveness of the silkworm and the Longhorn. Around the turn of the twentieth century, large-scale copper mining and smelting devastated these cultures. LeCain ties these cultural transformations to the electrical conductivity of copper and the biochemical effects of arsenic liberated from copper ore. (The equally materially-engaged but more diverse and unpredictable stories in Anna Tsing’s *The Mushroom at the End of the World* would make useful companion pieces.)

Given LeCain’s Darwinian ambition of ending anthropocentrism (the book’s conclusion echoes the final sentence of *The Origin of Species*), a bit of caution is in order. As Langdon Winner pointed out, science-based appeals to the practical demands of materials constitute a moral stance that tends to obscure other dimensions of moral and political analysis. The kinds of

scientific insights LeCain deems most promising, which emphasize chaos and contingency rather than deterministic laws, are not immune to this concern.

One remedy is to take up the chaos and contingency of “science” itself, combining science-fertilized material history with the history of science. Gabrielle Hecht’s *Being Nuclear* and Angela Creager’s *Life Atomic* trace how nuclear materials shaped lives and cultures; they also show how human-made categories shaped what counted as nuclear materials and which encounters among nuclear materials, humans, and environments were cultivated, prevented, or ignored. Another is to engage the material environment without taking a putatively universal way of knowing it as a starting point. For example, as LeCain points out, the trends in Western science and humanism that he draws upon tend to converge with Indigenous thought. Material historians might therefore look to the latter traditions and to the work of present-day Indigenous scholars, as the anthropologist Zoe Todd has urged. History that gives things their due can be history that better recognizes people, too.

Evan Hepler-Smith, Boston College

heplers@bc.edu