ALEXA WEIK VON MOSSNER, *Affective Ecologies: Empathy, Emotion, and Environmental Narrative* (Ohio State UP, 2017), 271 pp.

One oft-repeated tale from the American Civil War era has it that Abraham Lincoln greeted Harriet Beecher Stowe, author of the anti-slavery novel *Uncle Tom's Cabin*, as "the little woman who wrote the book that made this great war." Much more recently—and more in line with Alexa Weik von Mossner's project here—the U.S. anti-captivity documentary *Blackfish* (dir. Gabriela Cowperthwaite, 2013) has been widely credited with the decline of marine mammal amusement park SeaWorld, which saw an 84 percent drop in revenue in 2015.[1]

These examples speak to a long-held hope of artists and scholars alike: that literature and film can change hearts and minds. But *how*, exactly, do they do that? And how do we *know* that they do it? In her impressive new book, *Affective Ecologies: Empathy, Emotion, and Environmental Narrative*, Weik von Mossner tackles these questions with a specific focus on environmental issues. She draws from the findings of cognitive science and cognitive cultural studies, combining them with narrative theory and other humanities approaches to develop a framework that she dubs a "cognitive ecocritical approach to narrative emotion" (4). For example, she explains how audiences "ma[p] the sensations, emotions, and movements of a character onto their own brains, thereby understanding, and literally *feeling*, their interaction with the character's environment, its pleasures, and its pains" (25), and theorizes how such processes can lead to pro-environmental reasoning and behavior in the "real world." Here, we see that the U.S. focus of Weik von Mossner's archive is important: enduring a dismal record of environmental protection under the current presidential administration, Americans also "live on a landmass that is more severely affected by climate change than many other regions in the world, [but] seem to have particular difficulties in registering the urgency of the issue" (139).

Affective Ecologies is divided into three sections, with two chapters each. Part I "explores the sensory and affective experiences cued by the American environments … in literature and film" (13), including the nine-

teenth-century nature writing of John Muir and Jan de Bont's 1996 disaster film *Twister*. Part II focuses on strategic empathy, looking at narratives of environmental injustice and animal exploitation ranging from Helena Maria Viramontes's 1995 novel *Under the Feet of Jesus* to Louis Psihoyos' 2009 documentary film *The Cove*. The third and final part investigates audiences' experiences of speculative environments, such as T. C. Boyle's 2000 satirical dystopian novel *A Friend of the Earth* and the glorious utopia of James Cameron's 2009 blockbuster *Avatar*. Interestingly enough, the latter film allegorizes the very topic of Weik von Mossner's book, insofar as its protagonist undergoes an embodied simulation of a particular environment, sparking politicized empathy for its indigenous inhabitants. Weik von Mossner closes the book with a gesture toward potential future paths for cognitive ecocriticism: first, the application of this approach to forms beyond literature and film, such as video games, graphic novels, and music; and, second, the need for further empirical research on environmental narratives.

As these descriptions indicate, Weik von Mossner's archive is diverse and generous, drawing little distinction between canonical texts and mainstream spectacles, or between fictional and nonfictional works. And for good reason: all have potential environmental relevance. Indeed, perhaps the most surprising finding Weik von Mossner reports is that "[t]here is no qualitative difference between fiction and nonfiction when it comes to processes of narrative transportation and readers' affective engagement with the storyworld that is evoked by a literary text" (14). Even so, she is careful to stress that the potential impact of a given book or movie is always contingent, or dependent, on multiple factors, ranging from the audience member's disposition to the physical context in which they encounter a work. For example, drawing on the work of Dan Flory, Weik von Mossner concludes that *The Cove*'s exposé of dolphin slaughter in Taiji, Japan may not resonate with viewers who have "inhibited their empathy as a result of cultural belief systems or [who] try to avoid seeing the gruesome representation of animal suffering by looking away or engaging in other ways of imaginative resistance" (119). Moreover, not just any environmental narrative will do, as renowned climatologist James Hansen's (admittedly rudimentary) stab at science fiction makes clear; after briefly analyzing this

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[1] See: http://time.com/3987998/seaworlds-profits-drop-84-after-blackfish-documentary/.

stab, Weik von Mossner wryly reminds us that narratives must "engage readers' imaginations and emotions" and "invit[e] readers to simulate in their minds the characters' actions and emotions or the worlds they behold through the use of vivid sensory and motor imagery" (144).

From my view, Weik von Mossner's book is important on at least three fronts. First, it offers a fresh approach to the question of whether the empathy generated by narratives has significant political implications—a question that stretches back to Stowe's 1852 novel, if not earlier, and to which Weik von Mossner answers in the affirmative. Second, *Affective Ecologies* builds on an important tradition of interdisciplinary work that takes the humanities seriously from a scientific perspective and vice versa, as seen, for example, in the rise of the medical humanities and narrative medicine in the past few decades. Storytelling, Weik von Mossner reminds us, has unique capacities for affecting audiences that other vehicles of information, such as scientific data, cannot match. Third, her work participates in the recent "affective turn" within the environmental humanities—as seen, for example, in Heather Houser's 2014 monograph *Ecosickness in Contemporary U.S. Fiction: Environment and Affect* (Columbia University Press) and Kyle Bladow and Jennifer Ladino's forthcoming edited collection *Affective Ecocriticism* (University of Nebraska Press). Weik von Mossner insists that this turn include cognitive approaches. Her book thus constitutes an exemplary model of interdisciplinary work, as well as a useful primer for readers new to cognitive research. Admittedly, some may be daunted by the proliferation of specialized terms—from "conditional realism" to "consciousness-enactment"—but Weik von Mossner's clear organization and writing style keep the reader from being overwhelmed.

Affective Ecologies will spark spirited debate among some readers. For one thing, Weik von Mossner tells us that the lack of engagement with cognitive research on the part of ecocritics and other environmental humanists is "remarkable not only because these fields have always been more open to scientific approaches than many other [frameworks in] the humanities, but also because scholars working in these fields are often so intent on changing human-nature relationships for the better" (7). But humanists also know that scientific research can be deeply biased and flawed (and yet always better-respected and -funded, I am moved to grumble). Indeed, the sciences as a whole are currently struggling with a so-called "replication crisis" that has resulted from multiple factors, including the push to publish statistically significant research. Moreover, scientific findings are often contradictory or preliminary, meaning that our understandings of various phenomena can change radically over time—as anyone who has witnessed, say, the egg's trajectory from cholesterol-laden killing machine to component of a balanced diet can attest. In this, of course, the humanities are no different; just like that of scientists, our work is speculative and ever-shifting. Environmental humanists' reluctance to engage with scientific research is thus perhaps not so surprising.

Weik von Mossner's argument is ultimately utilitarian—and, we might say, utopian. For example, when considering the difficulties of rendering nonhuman perspectives through art, she claims that "[p]erhaps [these limitations] do not have to be overcome ... The question should rather be whether anthropomorphic inhabitations of animal minds can have any positive influences on how we look at real-world animals" (129). Put more broadly, and plainly: "we are in dire need of alternatives and visions of better ways of being on planet earth" (134), and Weik von Mossner wants to know how literature and film can, in engaging our emotions, prompt us to develop those ways. This raises a final set of questions: What are the larger implications for art and art-making from this perspective? More pointedly, if we could in fact determine exactly how novels or films or music can foment environmental action, would that give rise to an instrumentalist, or even propagandist, approach to art? Or would it simply enable artists to fulfill their hopes of changing hearts and minds? As a seminal step in the interdisciplinary subfield of cognitive ecocriticism, *Affective Ecologies* will no doubt inspire further work poised to take on these questions.

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