Why Ecocriticism Needs the Social Sciences (and Vice Versa)

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Uses of Environmental Humanities

Tools Used in Connection with the Soil by May Rivers, from the Fruit Grower's Guide (vintage illustration digitally enhanced by rawpixel, and modified here by the authors), **CC BY-SA 4.0**

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Knowing that you need to tell a new story does not always mean that you know what to say, or how to say it. This is the situation we find ourselves in today. Most environmental scholars, thinkers, and activists agree that to respond to the existential socio-ecological challenges we currently face, we need new narratives of who we are, how we are entangled with the rest of the natural world, and how we might think, feel, and act to preserve a stable biosphere and a livable future. But what kinds of stories should we tell? To which audiences? Are some stories more impactful than others? Might some even be counterproductive?

These are critical questions. We might imagine that ecocritics, who have been examining environmental narratives for decades, would be at the forefront of answering them. Yet this has not been the case, partially because ecocriticism as it has typically been practiced is not well-equipped to do so. Since its inception, ecocriticism has generally assumed that the texts it studies have a significant impact on readers and the world at large. However cautious our position in print, most ecocritics believe that studying environmentally engaged texts is a valuable enterprise not only because this work is fascinating and gratifying, but because narratives matter—socially, culturally, politically. We repeat this claim *ad infinitum*, in publications, talks, and to our students. But our proof comes primarily through anecdotes or a close reading of a handful of selected texts, which may or may not be representative or widely read. Is such proof sufficient? If not, does ecocriticism need some new tools?

Put plainly, there is a gulf between common beliefs and assertions about the power of environmental storytelling—expressed by ecocritics, environmental humanists, authors, artists, and other cultural producers—and the state of research on this topic. This is partially because the scholarly literature on environmental narratives is so fragmented that it is difficult for researchers (and even more difficult for practitioners) to assemble a reliable picture of how compelling narratives really are, how they work, and how they affect flesh and bone audiences.

While ecocritics offer an abundance of fascinating claims and arguments about all kinds of formal, thematic, intertextual, cultural, and ideological factors that might contribute to the social influence of environmental stories, we typically do not test our claims and arguments with the aid of empirical methods. In fact, apart from a growing list of important exceptions,[1] most ecocritics do not connect their work to the copious empirical data on the psychological work of stories, which come from fields such as environmental communication, media studies, the empirical study of literature, and environmental psychology.

Environmental communication is a particularly important connection.[2] For the last two decades, researchers in this field have been applying methodologies from the social sciences to understand different forms of communication on environmental issues, with the (often unstated) goal of maximizing the efficacy of such environmental communication to address urgent socio-ecological problems. While these researchers have been interested primarily in journalism and activist rhetoric,[3] a number of important studies have examined the influence of environmental media, such as film and photography.[4] And over the last few years, there have been calls within the field for a diversity of approaches to environmental communication[5] and increasing attention to the potential impact of environmental literature and art.[6] While environmental communication (and other social sciences) pays attention to the psychological mechanisms of narrative impact and uses empirical methods to test those claims, it typically neglects formal dimensions such as voice, style, and narrative perspective, as well as intertextual aspects such as genre and tradition.

Ecocriticism and environmental communication have largely operated as if they were trains running on parallel tracks. Both fields are heading in the same direction, powered by the same concerns, and their passengers occasionally glance at their neighbors and make eye contact. But until recently there has been a distinct lack of

communication, collaboration, and cross-pollination.[7] This is to the detriment of both fields, and to our collective ability to develop a holistic understanding of the function, efficacy, and potential of environmental narratives and environmental media at a moment in which this subject has assumed a critical significance.

To expand our understanding of the psychological, social, and political influence of environmental narratives by combining the strengths of the environmental humanities and social sciences, we have been developing the field of **empirical ecocriticism**. Empirical ecocriticism aims to take the most relevant claims about environmental stories made within the environmental humanities and contextualize them within the scholarship in the social sciences. Similarly, it connects relevant claims from the environmental social sciences to existing humanistic scholarship on environmental narratives and submits them to empirical tests, so that the resulting data can be interpreted under the brighter light of both bodies of knowledge. The goal is to obtain conclusions that will be valid according to the established conventions of the social sciences and appropriately sensitive to the aesthetic, ethical, cultural, historical, and political dimensions of narratives.

Studies in empirical ecocriticism can bridge the gap between ecocriticism and the social sciences, incorporating theories, insights, and methodologies from both fields. For example, hundreds of critics have made claims (explicit or implicit) about the ability of climate fiction to have an impact on contemporary environmental beliefs and politics. But who actually reads climate fiction? How does it influence readers' beliefs, and how long does this influence last? Inspired by the copious ecocritical scholarship on climate fiction and an exploratory qualitative study on its reception,[8] one of the authors partnered with five social scientists to design and conduct a controlled experiment to empirically evaluate the influence of climate fiction.[9] They found that whether the stimulus was a speculative dystopian story or a realist story exploring the psychological dynamics of climate change awareness and denial, climate fiction short stories had small but significant positive effects on several important beliefs and attitudes about global warming. While these effects diminished to non-significance after two weeks, the authors contextualized this result within the existing empirical scholarship on narrative impact to conclude that longer narratives (such as novels) and multiple exposures (reading many texts) can be expected to result in larger and longer-lasting impacts.

Other empirical ecocritical research has addressed subjects that are of similar concern to many ecocritics and environmental humanists. A recent survey, for example,

suggests that climate fiction can effectively generate an awareness of environmental injustice, but that it can also backfire and encourage support for ecofascism.[10] Another line of research has found that literary stories can improve social attitudes toward animals, and that this impact is dependent on empathic concern[11] and other factors, including perceived evolutionary distance of the animal protagonist from the human species and whether a narrative depicts animal suffering.[12] Surprisingly, studies have also shown that the impact of animal stories does not depend on whether they are perceived as fictional or nonfictional, nor on the personality profile of the reader.[13] This research provides solid evidence for the moral power of animal literature—something posited by scholars, activists, and writers for decades—but it also generates new questions.

These examples demonstrate what can be gained from combining ecocritical analysis with social scientific methods. The primary reason why empirical ecocriticism employs methods such as experiments, surveys, and interviews is pragmatic. They are currently considered the best tool for a specific job: providing reliable claims about the psychological, social, and political impact of narratives on their audiences. These methods are hardly perfect, but when they are practiced well they acknowledge and are transparent about their limitations. Indeed, they are the same methods that we generally rely on for basic information about the world around us, such as evidence about climate change, declining biodiversity, and environmental injustice, among other phenomena.

We are aware that some humanists see the social sciences as a threat, especially in the context of the neoliberal academy. By no means are we asserting that all ecocritics should immediately enroll in social science boot camp. Social scientific methods are not only suboptimal but potentially useless for other jobs, such as historical or aesthetic analysis, or exploring the meaning of a given text or genre. We are arguing that ecocritics ought to rely on (if not conduct) social scientific research for causal claims related to reception, yet we are not suggesting that ecocritics should *only* study the impact of environmental narratives on their audiences, or that empirical approaches are more important than other forms of investigation. The kind of interdisciplinary collaborations we are calling for can be beneficial to all the fields involved: they allow ecocriticism to adopt methods and concepts from the social sciences and also facilitate the transfer of knowledge, ideas, and approaches in the other direction.

More importantly, interdisciplinary synergy can be beneficial to the world beyond academia. Combining ecocritical and social scientific perspectives allows us to better

understand not only how cultural texts shape beliefs and attitudes toward the environment and nonhuman others, but also how they can help us tackle the existential socio-ecological challenges we currently face. We hope that these insights can be of use to authors, artists, filmmakers, and other cultural producers, as well as environmental communicators, activists, and teachers, giving us a better sense of how narratives can aid in the ongoing struggle to hasten and execute a rapid and just transition to a more habitable and hospitable future.

Endnotes

[1] See, for example, Scott Slovic, *Seeking Awareness in American Nature Writing: Henry Thoreau, Annie Dillard, Edward Abbey, Wendell Berry, Barry Lopez* (Salt Lake City: University of Utah Press, 1992); Nancy Easterlin, *A Biocultural Approach to Literary Theory and Interpretation* (Baltimore: Johns Hopkins University Press, 2012); Erin James, *The Storyworld Accord: Econarratology and Postcolonial Narratives* (Lincoln: University of Nebraska Press, 2015); Alexa Weik von Mossner, *Affective Ecologies: Empathy, Emotion, and Environmental Narrative* (Columbus: Ohio State University Press, 2017).

[2] On the connections between ecocriticism and environmental communication, see Scott Slovic, Swarnalatha Rangarajan, and Vidya Sarveswaran, "Introduction," in *Routledge Handbook of Ecocriticism and Environmental Communication*, eds., Scott Slovic, Swarnalatha Rangarajan, and Vidya Sarveswaran (Abingdon: Routledge, 2019).

[3] Suzannah Evans Comfort and Young Eun Park, "On the Field of Environmental Communication: A Systematic Review of the Peer-Reviewed Literature," *Environmental Communication* 12, no. 7 (2018): 862–875, 868. **https://doi.org/10.4000/communication.10559**.

[4] See, for example, Anthony A. Leiserowitz, "Day after Tomorrow: Study of Climate Change Risk Perception," *Environment: Science and Policy for Sustainable Development* 46, no. 9 (2004): 22–39; Daniel A. Chapman, Adam Corner, Robin Webster, and Ezra M. Markowitz, "Climate Visuals: A Mixed Methods Investigation of Public Perceptions of Climate Images in Three Countries," *Global Environmental Change* 41 (2016): 172–182.

[5] See, for example, Susanne C. Moser, "Reflections on Climate Change Communication Research and Practice in the Second Decade of the 21st Century: What More Is There to Say?" *WIRES Climate Change* 7, no. 3 (2016): 345–369.

[6] See, for example, Maxwell T. Boykoff, *Creative (Climate) Communications: Productive Pathways for Science, Policy and Society* (Cambridge: Cambridge University Press, 2019).

[7] Exceptions include Scott Slovic, Swarnalatha Rangarajan, and Vidya Sarveswaran, eds., *Routledge Handbook of Ecocriticism and Environmental Communication* (Abingdon: Routledge, 2019), and existing work in empirical ecocriticism, such as Matthew Schneider-Mayerson, Alexa Weik von Mossner, and W. P. Małecki, "Empirical Ecocriticism: Environmental Texts and Empirical Methods," *ISLE: Interdisciplinary Studies in Literature and Environment* 27, no. 2 (2020): 327–336; and W.P. Małecki, Alexa Weik von Mossner, and Małgorzata Dobrowolska, "Narrating Human and Animal Oppression: Strategic Empathy and Intersectionalism in Alice Walker's 'Am I Blue?'" *ISLE: Interdisciplinary Studies in Literature and Environment*27, no. 2 (2020): 365–384.

[8] Matthew Schneider-Mayerson, "The Influence of Climate Fiction: An Empirical Survey of Readers," *Environmental Humanities* 10, no. 2 (2018): 473–500. **https://doi.org/10.1215/22011919-7156848**.

[9] Matthew Schneider-Mayerson, Abel Gustafson, Anthony Leiserowitz, Matthew H. Goldberg, Seth A. Rosenthal, and Matthew Ballew, "Environmental Literature as Persuasion: An Experimental Test of the Effects of Reading Climate Fiction," *Environmental Communication* (2020): 1–16. **https://doi.org/10.1080/17524032.2020.1814377**.

[10] Matthew Schneider-Mayerson, "'Just as in the Book'? The Influence of Literature on Readers' Awareness of Climate Injustice and Perception of Climate Migrants," *ISLE: Interdisciplinary Studies in Literature and Environment* 27, no. 2 (2020): 337–364. **https://doi.org/10.1093/isle/isaa020**.

[11] Wojciech Małecki, Bogusław Pawłowski, Piotr Sorokowski, Anna Oleszkiewicz, "Feeling for Textual Animals: Narrative Empathy across Species Lines," *Poetics* 74 (2019): 101334 [1-8]. **https://doi.org/10.1016/j.poetic.2018.11.003**.

[12] Wojciech Małecki, Piotr Sorokowski, Bogusław Pawłowski, Marcin Cieński, *Human Minds and Animal Stories: How Narratives Make Us Care About Other Species* (Abingdon: Routledge, 2019).

[13] Wojciech Małecki, Bogusław Pawłowski, Marcin Cieński, Piotr Sorokowski, “Can Fiction Make Us Kinder to Other Species? The Impact of Fiction on Pro-animal Attitudes and Behavior,” Poetics 66 (2018): 54–63. **https://doi.org/10.1016/j.poetic.2018.02.004**.

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