

The Ecologies of Postwar Hard Science Fiction and Where to Find Them

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Hard science fiction (sf) is not usually associated with ecological concerns, especially before the 1960s. Most of the histories that look at hard sf from this period have ignored ecology, or else pushed it aside as something impractical for use in the building of worlds. David Samuelson's *Modes of Extrapolation: The Formulas of Hard SF* (1993), which provides a detailed examination of how certain scientific principles are taken into account in the creation of fictional worlds, ranked ecological world building as the most difficult task next to anthropology and "culture-building" (p. 212). In *Close Encounters: Science and Science Fiction*, Lambourne et al. (1990) simply explained that ecology was too broad to be of much use in hard sf, which required simple, teachable principles for readers to learn. Samuelson's and Lambourne's criticisms can both be attributed to a sense that ecology is too much of a "soft" science to be used in hard sf (which is usually described as science fiction that focuses on the "hard" sciences like physics, chemistry, and mathematics). However, there was a time when ecology was not so securely categorized as "soft," and it is in this moment that a careful study can reveal a wealth of ecological hard-sf stories that have previously been overlooked. Briefly, I will illustrate how we can locate these lost works of ecological hard sf in the postwar period, as well as how they can help us to create a more complex history of ecological science in American cultural thought.

One reason why postwar ecological hard sf is overlooked is because it is simply hard to find. A notable exception to this difficulty is Jeff and Ann VanderMeer's anthology, *The Big Book of Science Fiction*, which is carefully positioned as a collection of ecologically minded sf stories with an impressive historical range. This anthology is an excellent resource for scholars interested in exploring the pulp-side of ecological sf. Here you will find works like James Schmidt's 1955 "Grandpa," a fascinating example of a scientific problem narrative (that narratological hallmark of hard sf) wherein the alien ecosystem is the problem to be

solved by the characters.¹ Schmidt's story is easier to find as an example of ecological hard sf because his work would become increasingly ecological in focus throughout his career, with stories like "Balanced Ecology" in 1965. And so, this is the first technique to find overlooked ecological sf—work backwards from authors who would continue to develop their ecological thinking as the science itself was developed and popularized into mainstream American culture.

Perhaps the greatest difficulty in finding works of ecological hard sf is that terms like "ecology" weren't widely known or used until the 1960s. The discipline of ecology was less popular than it is today before famous environmentalists like Rachel Carson and James Lovelock helped to bring it to the forefront of public attention through environmentalist causes. When subgenres like hard sf were first described by authors and critics in the 1950s, "ecology was near the bottom of the scientific disciplines in prestige and support," and as E.O. Wilson explains, "few Americans even knew what the word meant" (2002, p.357).² Studying postwar ecological hard sf involves looking for ecology in stories that often don't use the term. This requires a reconsideration of search terminology. Instead of "ecosystems" and "biospheres," "Exobiology," "food webs," and even complex world-building emerge as the ecological terms of the postwar period. Using this language, you can find stories like Schmidt's "Grandpa," which was anthologized in Arthur C. Clarke's 1967 *Time Probe* for its use of "exobiology."³ You might also find Poul Anderson's novel, *War Of the Wing Men* (1958), where community dynamics between species groups is crucial to the world building process, or Clifford D. Simak's "The World that Couldn't Be" (1958), where life cycle analysis provides the solution to the problem narrative.

So now we have the means to find postwar ecological hard sf, but the question of why we might want to explore these messy worlds remains. Why do we care to find these works and their ecologies? For

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one, it deepens the history of ecology in the genre and extends our conception of ecological sf to include the pulp stories of the 1950s. This extension also presents a different conception of ecological science. These stories present us with an example of an ecology that is distinctly not environmentalist. Here, ecology is a “hard” science, used in these stories as a way to increase human control and mastery over the environment. The “solutions” to the environmental problems presented in these texts are not rooted in conservationist or preservationist ideas. Instead, they are focused on gaining a better understanding of living systems for their manipulation. While their use of science to control and exploit the natural world can be recognized today as a product of wasteful Western ideas of resource ownership, these early texts attempt to position ecology—by another name—in a world that might otherwise overlook it altogether. Authors like Anderson, Schmidt, and Simak were early interpreters of a science that, in the next few years, would develop into an integral part of the U.S. environmentalist movement. By paying attention to the ecological problem narratives that these postwar sf authors present in their texts, we can better understand the history of ecology and its transition into a science whose public persona as well as much of its research, aligned with the social goals of environmentalist work.

Notes

¹See Gary Westfahl (1993) for a detailed examination of this narrative, and in particular, Brian Stableford (2005), for one of the only examinations of ecology and hard sf, which he explains modifies this tradition to use the ecological problem narrative.

² It is unclear whether this use of “world” instead of “word” on Wilson’s part was accidental, but it is striking nonetheless.

³ Exobiology, as Clarke describes it, studies the possibilities of alien life with a view to anticipating and solving the future problems of humanity’s exploration of space (p. 89). Specifically he cites NASA’s growing

interest in a manned mission to Mars as the real-world relevance of the story, to the point that fictional engagement with exobiology will help humanity deal with the future threats of space-travel.

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