



LIVING LEXICON FOR THE ENVIRONMENTAL HUMANITIES

Weird

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[T]he longer I stared at it, the less comprehensible the creature became. The more it became something alien to me, and the more I had a sense that I knew nothing at all—about nature, about ecosystems.

—The biologist in *Annihilation* by Jeff VanderMeer, 175

The Anthropocene is the era of “global *weirding*.”¹ The actions of certain humans have become a planet-changing force that threatens future existences. Recent scientific discoveries are changing how we envision ourselves in relation to the environment, making visible interconnections between humans and nonhumans across micro and macro scales.² Such revelations are often accompanied by a simultaneous sense of estrangement and fascination,³ which are often associated with the *weird*. The weird is unearthly, gesturing towards and veering away from Earth.⁴ It is constituted by a presence “of that *which does not belong*,”⁵ and as such, is concerned with boundary crossings and blurrings, interruption and change. In the Anthropocene, the weird involves (un)earthly belonging.

My fieldwork is spent considering where life belongs and reflecting on its flourishing in weird places. I hang out with radio-ecologists/biologists in the Chernobyl Exclusion Zone making sense of how nature is affected by radioactive fallout from the

1. Friedman, “Global Weirding.” The term was coined by Hunter Lovins.
2. Bradić, “Weird Sciences and the Sciences of the Weird.”
3. Noys and Murphy, “Introduction: Old and New Weird”; Fisher, *Weird and the Eerie*.
4. Luckhurst, “The Weird.”
5. Fisher, *Weird and the Eerie*, 10 (emphasis in the original).

Figure 1. Collecting wild plant seeds in Chernobyl during fieldwork. Reproduced courtesy of Laetitia Carrive.



world's worst nuclear disaster.⁶ Recently, I accompanied NASA-funded scientists studying wild plant seeds, like wild carrots, in the zone (fig. 1). The seeds we collected are being used to develop radiation-resistant crops that can survive the voyage to, and terraforming of, Mars. For NASA, Chernobyl's ecology is unearthly, an appropriate proxy for the Martian landscape and irradiated interplanetary journey. Unearthly, on Earth: weird.

Etymologically, *weird* derives from the Old Norse, *urth*—twisted, in a loop. Weird loops are systems that wrap back on themselves, where all parts are interrelated and embedded in an emergent whole. For Timothy Morton, the ecological is weird and the weird is ecological, as “to exist at all is to assume the form of a loop.”⁷ Weird ecological loops stitch together apparently distinct spatialities and temporalities, like a montage,⁸

6. The disaster occurred on April 26, 1986, at 1:23 a.m. Chernobyl is transliterated from the Russian, Чернобыль. In Ukraine, Chornobyl is used, transliterated from the Ukrainian Чорнобиль.

7. Morton, *Dark Ecology*, 6.

8. Fisher, *Weird and the Eerie*.

from the microbiome to the planetary ecosystem to infinite cosmic space.⁹ The Anthropocene is an epoch of accelerated weirding, punctuated by events that reveal these weird ecological loops.

While walking through the Red Forest searching for and collecting a number of plants specified by NASA, a botanist visiting Chernobyl for the first time suddenly stopped to remark how *weird* it felt to “do science” in the zone.¹⁰ The thought their work was welding together a (more-than-)human tragedy, the potential evolutionary futures of wild plants, and interplanetary colonization was absurd. This crashing together of disparate spatialities—molecular/species/cosmic—and temporalities—past/present/future—is exemplary of the Anthropocene’s weird ecological loopy-ness, which is invoked by NASA’s enrollment of the (un)earthliness of Chernobyl’s ecological milieu.

The more we learn about Chernobyl’s ecologies through scientific advances, the weirder they become. Inside the sarcophagus—the dome covering the exploded nuclear reactor, the most radioactive place on Earth—a radiotrophic fungus (*Cladosporium sphaerospermum*) performs radiosynthesis,¹¹ using melanin to convert gamma radiation into chemical energy for growth.¹² Scientists have taken specimens from the sarcophagus to the International Space Station.¹³ There, they are using them to develop a “sun block” that can protect astronauts from harmful cosmic radiation.¹⁴ The presence of this “black fungus” in Chernobyl crosses boundaries, challenging assumptions of where life belongs, or indeed, can flourish. There is a sense of *wrongness* in its existence here, which exposes our concepts, methods, and ontologies as inadequate,¹⁵ forcing a generative reengagement with ecology’s inherent weirdness.

Science fiction can help make sense of weird ecological loops like those at Chernobyl. In particular, New Weird fiction captures the affects experienced by many Chernobyl visitors:¹⁶ a blend of “fascination” and “trepidation.”¹⁷ Contra its precursor, the Weird,¹⁸ whose monsters induce terror, the New Weird tends towards more open and sympathetic worldviews,¹⁹ embracing and “entertaining monsters while not always seeing them as monstrous.”²⁰ It is curiously orientated to the present, the hybrid, the

9. Bradić, “Weird Sciences and the Sciences of the Weird.”

10. The Red Forest is an area of forest near the Chernobyl Nuclear Power Plant, and is the most contaminated part of the zone.

11. Skunk et al., “Self-Replicating Radiation-Shield.”

12. Dadachova et al., “Ionizing Radiation.”

13. Skunk et al. “Self-Replicating Radiation-Shield.”

14. Love, “What Radiation-Resistant Space Fungus Can Do for Drug Discovery.”

15. Fisher, *Weird and the Eerie*.

16. New Weird authors include China Miéville, K. J. Bishop, M. John Harrison, and Steph Swainston among others.

17. Fisher, *Weird and the Eerie*, 17.

18. H. P. Lovecraft’s pulp fiction is emblematic of Weird fiction.

19. Robertson, *None of This Is Normal*.

20. VanderMeer and VanderMeer, “Introduction,” xv.

novel, and is attentive to the corporeal, the ecological, space, and place. What better lens for the messily entangled techno-natures of the Anthropocene?

Jeff VanderMeer's *The Southern Reach Trilogy (SRT)*²¹ tells the story of a secret agency that organizes expeditions into Area X—the purported site of an ecological disaster that nature has begun to reclaim, inadvertently emulating Chernobyl. The bodies and minds of those who cross its invisible border are assimilated into its ecology via a process involving memory loss and mutation among other things.²² The tone of the series is ambivalent towards, or wholly accepting of, ecological flourishing without humans, and as such it advocates the inevitability of change. Yet VanderMeer relentlessly ekes a different kind of hope from “broken places.”²³ His *New Weird* is speculative, admitting its unsurety towards “how bodies, worlds and things will play out” and doesn't proffer the affirmative as something ready-made.²⁴ His nature is impure, hybrid, and inhuman, often involving chimeras like those depicted by Maria Prymachenko in the pre-disaster Chernobyl region that has a long (often forgotten) history of radioactive contamination (fig. 2).²⁵ His (human) characters strive “for a kind of understanding even when something cannot be understood,”²⁶ and they ardently resist the Nature/Society binary.

To conclude the first book of the SRT, the narrator (a biologist) reflects on the inhumanity of Area X: “the thought I cannot dislodge after all I have seen, is that I can no longer say with conviction that this is a bad thing.”²⁷ As certain worlds collapse, the “weird” remains open to “other forms of existence,”²⁸ created and sustained by other-than-human agencies, without necessarily offering hope for humanity. It emphasizes the *potentialities* of life with and without humans but, through its looping, always brings terraformers back to Earth.²⁹ Despite often being inhuman, weird ecologies implicate humanity by inviting an ethics not governed by obligation, “but energized by the incompleteness of speculation.”³⁰ The weird opens the *possibility*—not necessity—of hope.

Nature was weird already, but in the aftermath of catastrophes like the Chernobyl nuclear disaster, new weirds flourish, demanding of the environmental humanities new kinds of weirded empiricisms and inquiry.³¹ Perhaps someday Martians will feast on carrots grown from descendants of the wild seeds we collected at Chernobyl.

21. VanderMeer, *Annihilation; Authority; Acceptance*.

22. Sperling, “Queer Ingestions.”

23. Farrar, Straus, and Giroux, “Life in the Broken Places with Jeff VanderMeer.”

24. Gerlach, “Brief Word on Ethics,” 200.

25. Brown, “Learning to Read the Great Chernobyl Acceleration.”

26. VanderMeer and VanderMeer, “Introduction,” xv.

27. VanderMeer, *Annihilation*, 192.

28. Povinelli, *Geontologies*, 28.

29. Terraforming, originating in science fiction, refers to the process of engineering other planets, moons, or other non-Earth bodies so they are habitable for life as it is on Earth. “Terraformers” is used here to refer to those involved in the terraforming process.

30. Gerlach, “Brief Word on Ethics,” 202.

31. de Freitas and Truman, “New Empiricisms in the Anthropocene.”



Figure 2. Maria Prymachenko, *Eared Beast Grasped a Crustacean* (1983). Reproduced courtesy of the Maria Prymachenko Family Foundation.

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