

**Petryna, A. 2022. *Horizon work: At the edges of knowledge in an age of runaway climate change*. Princeton University Press. ISBN 9780691211664.**

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In her book, *Horizon work: At the edges of knowledge in an age of runaway climate change*, Adriana Petryna provides an ethnographic account of communities organized around wildfire in order to understand how people create operational knowledge within unprecedented environmental conditions. This task, which Petryna calls "horizoning", involves an imperative to expand boundaries of possibility beyond apocalyptic thinking. Interviewing fire practitioners in a range of communities – wildland firefighters, fire scientists, forest managers, and Indigenous fire users – across the American West, Petryna illuminates how "these experts, rather than resigning themselves to either hopelessness or despair, are creatively looking for new options, transformations, and outcomes" (p. 2). Throughout her book, Petryna grounds concepts of climate change, fire management, struggle, and hope in the voices of her interlocutors, distilling a complex and shifting terrain into narrative that is at once poetic and precise.

In the Prologue and Chapter 1, Petryna sets up the major questions, theoretical frameworks, and scope of the book. For Petryna, the accelerating uncertainties of climate-changed conditions are condensed in the work of fire practitioners, who must constantly "reckon with breakaway ecological processes that deny a coherent vision of control, leaving them staring at the edge of what we can see..." (p. 2). Chapters 2 and 3 reinforce the premise of socio-environmental instability and uncertainty. Readers engaged with climate change will be familiar with her examples of dead fish, emaciated seals, birds falling from heated skies, and melting glaciers represented by neat graphs which "hide magnitudes of peril that climate science cannot anticipate"—tipping points, feedback loops, and nonlinear accelerations of ecological instability (p. 34).

After establishing the dizzying destabilization of the material foundations of existence, Petryna uses Chapters 4 and 5 to interrogate the challenge of "horizoning", while grounding this concept in detailed ethnographic examples. She begins with defining literal horizons, writing that, "Across time, people have used horizons as points of reference in navigating physically incoherent worlds" (p. 47). Horizons have been way-markers, navigational signposts, and baselines for plotting course, but, when horizons shift or are obscured, people must form new means of prediction. In the words of one wildland firefighter, this involves the need to "throw away your mental slides", or the patterns recognized from past fires, to navigate new conditions (p. 63). These conditions do not just manifest in violent explosions of flame, but are insidious, often undermining the capacity to prevent infernos in the first place. One fire manager, after spending months planning an ecologically appropriate controlled burn that would reduce the possibility of future destruction, was forced to abandon the project due to unprecedented heat and drought that made the operation untenable. "I've never seen anything like this", the manager said, "Nobody has ever seen this" (p. 70). Yet, even faced with "starkly compromised forest ecosystems", Petryna noticed that fire practitioners refused to "surrender the capacity to think", a stance that allows them to consider multispecies lifeworlds made ecologically compatible by political design (p. 72; Haraway, 2016).

In Chapter 6 Petryna turns to Indigenous scholars and fire practitioners whose narratives stand against the hegemonic horizons of dystopia. From Indigenous perspectives, the megafires of climate change do not represent a rupture from history; rather, climate change is making visible the ongoing processes of extraction, exclusion, homogenization, and genocide of settler-colonial capitalism that primed the land for new scales of destruction. Much of the land now vulnerable to megafires evolved to thrive with fires of a different kind, which Indigenous people fostered. "The fire stick was like a paint-brush on the landscape", wrote Robin Wall Kimmerer. "Touch it here in a small dab and you've made a green meadow for elk; light scatter there burns off the brush so the oaks make more acorns" (Kimmerer, 2013; quoted in Petryna, 2022, p. 86). During the 20<sup>th</sup> century (and before), institutionalized fire suppression emerged in tandem with broader processes of violence towards Indigenous communities. The exclusion of fire was tied to the exclusion of the people, knowledge, and more-than-human relationships that had long reciprocated with flames to produce socio-ecological stability. To call fires "unprecedented, or apocalyptic", writes Petryna, "obscures how fire exclusion becomes a euphemism

for far-reaching settler colonial occupations that erase Indigenous histories and limit circumstances for future adaptation" (p. 80). Kyle Powys Whyte (2017) rejects the idea of urgent climate horizons on the grounds that "in settler time, 'saving what for many of our people is a dystopia is not a very good strategy for allyship...'" (quoted in Petryna, 2022, p. 81).

In Chapters 7 and 8 Petryna explores the opposite side of the idea of horizoning as laid out in Chapters 4 and 5, focusing on what she calls "horizon deprivation", which she defines as "being cut off from an ability to meet conditions where they are; or being at a loss for knowing how to even recognize the scope of loss" (p. 94). In Chapter 7, she focuses on "witnessing professionals", the firefighters, scientists, and managers operating within the fire suppression paradigm, to demonstrate that they are not simply mindless perpetrators of a destructive system, but rather, in quotidian acts, "contest a malignancy that is presented as normal, even inevitable..." (p. 95). In Chapter 8, Petryna examines the domain of wildfire science that props up this system. She finds that wildfire science formed after fire suppression was already an established practice, and largely served to make wildfires seem uniform, legible, and manageable.

In Chapter 9, the clean scientific picture of wildfire laid out in chapters 7 and 8 collide with the messy reality on the ground, where "everyone sees fire differently" (p. 129). These subjectivities are often the difference between life and death, as the systems of exclusion and extraction that created megafires burn against the bodies of the people who inhabit their edges. Chapter 10 takes the reader "beneath the airshow", under the swarm of aircraft spewing retardant in a futile act of ecological war, to question where and how lines are drawn—the firelines that contain infernos, as well as lines of safety for people on the edge.

In her conclusion, Petryna clarifies that wildfires are an analogue for increasingly destabilized conditions emerging across the planet. The people who navigate and manage these wildfires provide insight into how communities create new horizons of possibility within unknowable worlds. Their example is poignant, for "even as they confront catastrophe, they withstand catastrophic thinking" (p. 150).

Overall, the power of this book lies in Petryna's ability to build her argument while always grounding her analysis in the voices of her interlocutors. In the process, it becomes clear that this project is not an intellectual projection, but a glimpse into the lives, struggles, frustrations, and hopes of people whose lives are intimately tethered to the violence of climate change, and the deeply rooted social systems that give catastrophes form. The theoretical frameworks and ethnographic details will interest any scholar working to understand the social and cultural layers of climate change, while also contributing directly to the emerging social science of wildfires.

Despite the clarity of her arguments, the horizons Petryna draws throughout the book occasionally blur, at times hinting at contradictions. In Chapter 2, before warning against dystopic thinking, she seems to experiment with a species view of extinction, asking if there is a place and time in which human fates might converge with those of other species, passing a threshold of impending extinction without even noticing (p. 18). The species approach to climate change often flattens unequal distributions of suffering, while also providing footing for fossil fuel profiteers to claim victory if human extinction can be avoided by preserving the lives of a privileged few. Similarly, climate change cannot and should not be taken as a "foregone conclusion", or "done deal", because the magnitude of destruction that unfolds will be tied to the pace and scale of our collective political ability, or failure, to decarbonize (pp. 109, 151). The actors complicit in this accelerating destruction often blur within the pages, from fossil fuel corporations to private contractors profiting from fire hazards, to the public "obligation to stop doing ordinary things that amplify the threats..." (pp. 104, 154). Chapter by chapter, these points of critique soften as the nuance unfolds, but this occurs when the book is taken in its entirety and may be lost in selective readings.

We are entering a time in which any horizon that doesn't shimmer is an illusion. In this time, the voices of people who contend with the raw material of shifting horizons are those equipped to illuminate the perspectives, practices, and paths towards pluralistic and habitable futures. These are the voices that Petryna elevates with unparalleled nuance and skill. As a chorus, fire practitioners tell us that, "when destruction obliges us to revise knowledge calibrated to conditions that no longer exist, our marking of horizons beyond which the world as we know it disappears is itself an exercise in delimiting the knowable, and thus habitable, world" (p.

156). Through the smoke and flames, Petryna encourages us to push our horizons to envision, and create, such a world.

## References

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