Review Essay: We Have Never Been Postwar: Limning the Long Half-Life of the Military-Industrial-Environmental Complex

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Shiloh Krupar, *Hot Spotter's Report: Military Fables of Toxic Waste* (University of Minnesota Press, 2013), 365 pp.

Jacob Darwin Hamblin, *Arming Mother Nature: The Birth of Catastrophic Environmentalism* (Oxford University Press, 2013), 298 pp.

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Shiloh Krupar's *Hot Spotter's Report* and Jacob Darwin Hamblin's *Arming Mother Nature* make important new contributions to the growing body of literature on war, environment, and the military-industrial complex. They do so, however, in ways that could not be more different.

Krupar, a geographer and Associate Professor of Culture and Politics at Georgetown University, employs an innovative, interdisciplinary methodology—drawing on "relational aesthetics, such as theatrical collage, and combin[ing] satirical performance with empirical and theoretical writing" (16) to indict what she calls "green war": the material, ideological, and epistemological practices through which the United States military uses the environment and science to prop itself up. A work of art as much as academic scholarship, *Hot Spotter's Report* offers ideas and approaches relevant to myriad areas, including queer ecology, radical geography, performance studies, environmental justice, disability studies, and animal studies, in addition to environmental history and military history.

Hamblin, Associate Professor of History at Oregon State University, takes a more traditional disciplinary approach to his topic: the Cold-War era collaboration of U.S. scientists and military on environmental warfare research and implementation—a period of constant preparation for "total war." Revealing the fonts of contemporary environmental knowledge through this tale of collaboration, Hamblin's book will be of interest to environmental historians, military historians, and historians of science.

Green War: Krupar's *Hot Spotter's Report*

Developed through Quadrant—the joint initiative of the University of Minnesota and the Institute for Advanced Study that "provides tools for scholars to pursue interdisciplinary work and offers a new, more collaborative model of scholarly research

and publication" (http://quadrant.umn.edu)—Shiloh Krupar's *Hot Spotter's Report* is breathtakingly creative, generative, and truly interdisciplinary: easily the most exciting piece of scholarship I have encountered in years. I can only hope that its dissemination is truly interdisciplinary as well, as scholars across the humanities and sciences, as well as artists and activists, can benefit immensely from its provocations.

The book characterizes our contemporary moment as that of "green war": of U.S. machinations to "preserv[e] research, weapons infrastructures, and contracts by redirecting military capacities toward sustainable development, alternative energy, and other long-standing environmental goals, *excepting* the end of the military or war" (5; my emphasis). But Krupar goes beyond whistle-blowing or cataloguing work with a intricately-staged consideration of green war's cultural-conceptual operations: how it functions by exploiting spectacle and uncertainty, and how it is quintessentially biopolitical, arranging relationships among humans and nature, creating and destroying life as it sees fit, and shaping conceptions of what counts as waste and what has value. "Not only do residues of war persist, as environmental threats and inhabited or embodied risks," Krupar tells us, "but green war insistently remain*ders:* it detaches remainders of the living, such as 'othered' populations, […] exposed and cancer-ridden communities, as well as contaminated land, nuclear and hazardous wastes, abandoned facilities" (8). While certainly grim on the one hand, her work also seeks to show how those remaindered populations and entities live on, in ways that are often wonderfully perverse, obscene, and darkly funny. For example, the book tracks artist James Acord's decades-long struggle to secure an artist-in-residence position with the U.S. Department of Energy and gain the necessary permits to create art out of nuclear waste. His "transmutation follies" (256), Krupar argues, "shed light on the bureaucracy, secrecy, and security still cloaking the nuclear industry and the huge social disparities and knowledge gaps between art and nuclear science" (251).

The book contains four rich chapters: three case studies and a pair of textual readings. Chapter 1 takes us to the Rocky Mountain Arsenal National Wildlife refuge, a former U.S. Department of Defense arsenal near Denver, Colorado that now triumphantly boasts of the reappearance of bald eagles (the national symbol of the U.S.) and the reintroduction of bison in the area. The second chapter considers the transformation of a former nuclear site, Colorado's Rocky Flats plutonium factory, cleaned up and likewise transformed into a nature refuge. The third investigates U.S. nuclear workers' Kafka-esque attempts to secure government compensation for their illnesses. And Chapter 4 develops Krupar's concept of "transnatural ethics" through an extensive reading of the life and art of Acord and the performances of Colorado drag performer "Nuclia Waste." Presented in a straightforward manner, the materials found in these chapters would have been fascinating on their own. But Krupar's innovative methodologies spark further fascination and, more importantly, deepen her revelations. One of her main techniques is to place "faux documents that 'tell the truth'" alongside "official documents that are barely credible" in order "to reveal truth as a practice… [and] to direct attention to *knowledge as doing, making, and arranging*" (16). As she

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explains, "[In] using absurdist documentary methods, [the book] attempts to show how many of the rationalities at work are in fact absurd" (17).

For example, Chapter 1 places theoretical writing about the Rocky Mountain Arsenal's "social fantasy" of "nature's resilience and the redemption of a military wasteland" (42) literally side-by-side with a fictional investigative report filed by a fictional government subcontractor called the E.A.G.L.E. Collective (Environmental Artist Garbage Landscape Engineers); the two sets of documents run on alternate pages of the book. True to Krupar's promise, the fictional aspects of this chapter are often the most spot-on. For instance, the E.A.G.L.E. report tells us in a droll, deadpan tone that "[t]he following limited-edition print and commemorative copy of Colorado State poem 'Prairie Companion' were acquired in the Arsenal gift shop, accompanying the sale of a memorial birdbath" (67). As anyone who has been to, say, the gift shop at Dachau could tell you, this imagined scenario is entirely believable. The theoretical and fictional sections eventually blend together near the end of Chapter 1, with the former imagining a future in which "[t]he bald eagle has had enough and quits as national bird, granting a final interview to *The Onion*" (94); the latter reproduces the bird's letter of resignation. Why would the bald eagle quit? Krupar offers a stunning, counterintuitive reading of the material existence of the Arsenal-dwelling eagle, noting how its instrumentalization in the service of military public relations relegates it to a grotesque enforced-flourishing that reveals green war's status as biopolitical machine. As Krupar asks,

> What is worse, being made to flourish or put to death to rescue purity? What [...] is the difference between preservation and extermination in light of the Arsenal's recent history? And how do we understand the bald eagle's existence, as a figure of flight from the Arsenal's past, or as the crypt keeper that secures the Arsenal's deathly grip?" (91; my emphasis)

The bald eagle thus becomes the Terri Schiavo of the military-industrial-environmental complex; a creature always-already taxidermied for the "greater good." Chapter 1 thus offers a searing critique of green war's ability to colonize every vector of life, as well as an important caution to those engaged with optimistic narratives of environmental resilience.

Krupar's innovative approaches emerge not just from an interest in aesthetic play, or a commitment to pushing the boundaries of academic discourse, but from a sensitive attunement to the ethical issues raised by each of her sites. For example, Chapter 3 offers up a fictional activist group known as the "Hole in the Head Gang," inspired by deceased nuclear worker Charlie Wolf's description of his brain cancer as "a big hole in my head." The Hole in the Head Gang "interrupts" Krupar's analysis of government compensation programs to testify to their experiences of illness and repression. In another brilliant, counterintuitive move, Chapter 3 stages an exposé of government compensation programs aimed at workers like Wolf—a development that, to the untrained eye, looks like progress to be celebrated. As Krupar details, these programs employ techniques such as dose reconstruction and probability of causation that are designed to assume no liability, which put the burden of proof on claimants, and which are arduous and lengthy, chugging along slowly while claimants suffer and, often,

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die. "Workers, then, are *doubly remaindered*," Krupar declares, "as the remains of the Cold War and as the remains of compensation; unpaid, allowed to die under the sign of benevolence and government accountability" (164). The life-in-death of the sick nuclear worker, then, is not much different from the death-in-life of the bald eagle: both are events to be managed within an inch of their life (or death).

Krupar links the colloquial notion of a "hole in the head" to "elisions of information and lacunae in the data from state-scientific-bureaucratic histories of mismanagement" (173); both are holes that kill, but the latter turns out to be more lucrative. As she explains, "dose reconstruction, *as an industry*, involves layers of contracts. Essentially, profits are generated through obscurantist subcontracting, blurring state functions with private enterprise and demonstrating the extent to which holes of data can function as 'cash machines'" (175; my emphasis). In other words, the very uncertainties about causation that justify the government's withholding compensation from sick workers are used to justify the creation of new contracts and programs, which compensate *other* workers. This is not the only sickening absurdity Chapter 3 lays out. We also learn that the National Library of Medicine's Occupational Exposure to Hazardous Agents database, or "Haz-Map," "a database that has *not* itself undergone peer review[,] can delegitimate claims of exposure-disease linkages – that which is not in the database – as that which has 'no known peer review'" (185). And Krupar reminds us, more broadly, of the bleak irony of a government that attends to its aging arsenal with tender care and resourcefulness but extends no such effort to its human remainders.

Hot Spotter's Report is not without its flaws, though these feel quite minor in light of its profound revelations and innovations. At times the book becomes rather repetitive—as when the conclusion repeats the insights of previous chapters, to which the introduction has already alluded, almost verbatim. Chapter 4 theorizes Krupar's concept of transnatural ethics for 18 pages before we hear anything about her primary texts. (I found myself writing in the margin, "Just get to the drag queen already!") And certain conceptual overlaps, such as those between the "real" and "fake" documents in Chapter 1, can make the reader feel as if she is reading two different versions of the same thing. Perhaps Krupar is concerned that her cutting-edge, counterintuitive work needs more justification and explanation than other academic works might. But for readers like me, who have been on board since the first page of the preface—designed as a memo addressed to the reader and cc'ed to the fictional "Office of Academia Accountability" (ix)—these moments can induce fatigue.

Hot Spotter's Report is thus perhaps best taken as separate set-pieces – as opposed to *Arming Mother Nature*, which offers a relatively seamless, if not entirely chronological, narrative. Indeed, the two reading experiences are notably different. Krupar explicitly engages with other thinkers, from philosophers to activists, and painstakingly documents her research—thus "showing her work" but also making for a dense, rhizomatic read. In contrast, Hamblin spends much less time indicating how he's

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building on other scholars—making it sometimes difficult to tell which of his insights are new, but also making for a more broadly accessible read.

Total War: Hamblin's *Arming Mother Nature*

While Krupar focuses on a present day saturated, often literally, by the events of World War II and the Cold War, Hamblin focuses on the Cold-War era with an eye toward how it informs the present day. Though this era has often been mythologized as one of prosperity and hope, at least in the U.S. (as Krupar shows, even the ugly aspects of that period get sublimated today into "atomic tourism and Cold War kitsch" [24]), Hamblin tells a different, transnationally-conscious story. We hear of a time rife with anxiety, speculation, and intrigue, not just over time-honored problems such as disease, or the more recent specter of nuclear warfare, but over extensions of existing technology and the creation of entirely new technologies. Hamblin details, for example, how U.S. Congressman Albert Gore, Sr. (father of Al Gore) urged President Truman to create an "Atomic Death Belt" (48) during the Korean War by dropping plutonium materials on enemy soil—in effect killing two birds with one stone: weakening the enemy and disposing of leftover nuclear waste. Another parallel with Krupar emerges here: part of the business of the military, we see, is disposing of its own waste.

Over ten chapters, Hamblin tracks the varied life of postwar environmental warfare, both imagined and actual—ranging from debate to hysteria; experimentation to implementation; on-the-ground logistics to broader implications for foreign policy, domestic public relations, and scientific ethics. Having spent the majority of his time tracking the rise of environmental warfare, Hamblin turns near the book's end to its ostensible fall starting in the 1970s, with Richard Nixon's ratification of the 1925 Geneva Protocol (full name, if you weren't paying attention in history class: Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare) and the U.S. signing of the Environmental Modification Convention (ENMOD) treaty. But, as *Arming Mother Nature* notes, many of those measures were toothless and symbolic; just as Krupar refuses "the rhetorical cleanup operations of the 'post-' in 'post-Cold War' and 'postnuclear'" (xii), so does Hamblin indicate that Cold War-era thinking, particularly around the environment, has never truly dissipated.

Hamblin explains that many environmental truths that we now take for granted are unique products of Cold War planning. For example, as he reports,

> Earth scientists around the world in the 1950s found themselves unable to define contamination because they had no idea what the normal levels of radioactivity were. By the time they thought to measure them, bomb tests had already changed them. […] That Americans could conduct a major series of thermonuclear tests in the Pacific without knowing this might seem strange. But it was consistent with how scientists thought about radiation. […] [While previous studies focused on humans, scientists] ignored questions about the long-term changes bombs made to the natural environment. (95)

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Thus, thinking in the long-term and in terms of whole ecosystems were innovations of this "total war" era, per Hamblin—just as the image of the whole earth as seen from space ("Earthrise") emerged out of the era's impulse toward global environmental monitoring, a development tracked in depth in the book.

At times, the revelations of *Arming Mother Nature* read as absurdist fables, not unlike one of Krupar's fabricated documents. We hear, for example, about 1953's "Operation Big Itch," which tested the dissemination of fleas over Dugway Proving Ground in Utah. In a section on concerns over U.S. food supply security, specifically the vulnerability of livestock, Hamblin asks with due wryness, "Who could guarantee the integrity of any semen bank during a nuclear war? [Who, indeed?!] [...] Should the government keep a certain number of bulls underground at all times? Should semen be stored in the Arctic?" (80). We even learn that two contributors to *Unless Peace Comes*, a 1968 collection of propositions and prophesies from scientists and military planners, worried about the prospect of an enemy "'spraying LSD [...] over large areas'" (159).

But some of the book's most shocking revelations are the most realistic. We learn, for example, that the U.S. military considered both its own capacity and that of its enemies for melting the polar ice caps: "The Soviets might be considering it, so the rumor went, to drown cities in the United States and Western Europe" (131)—and, maybe, ruin all the bull semen. Indeed, the connections Hamblin draws between earlier periods and contemporary times are eerie. As he declares in the Introduction, "Perhaps one of the surprises of this book is not how little was known about environmental change, but rather how much" (12). For example, scientists argued as early as 1930 that the use of fossil fuels was adding undue amounts of CO2 to the atmosphere; much of the big data employed by climate scientists today, *Arming Mother Nature* claims, emerges from military-scientific collaborations over the following four decades.

And that is the book's central contribution: Hamblin's locating of "the roots of today's concerns about environmental catastrophe"—and, specifically, *anthropogenic* environmental catastrophe—"in the geopolitics of the Cold War" (9). But it's here that the book feels the most flawed. Putting aside the fact that Hamblin never tells us what it means that one can be concerned about environmental catastrophe without having deep knowledge of Cold War geopolitics (that was my experience, and, presumably, that of many other readers), the big "So what?" question looms large over the majority of the book. Indeed, Hamblin only briefly explores the implications of his central contribution, primarily in the book's last four pages. He points out, for example, how Al Gore has engaged with a doomsday approach in his political maneuvering and in texts such as *An Inconvenient Truth*. Otherwise, he leaves it up to the reader to work out implications and draw conclusions on their own. For example, he refers to Rachel Carson's surprising embrace by the President's Science Advisory Committee on the grounds of her work's implications for national security—an embrace that, to me, echoes recent attempts to position alternative energies as conservative-friendly: as sensible moves toward economic independence.

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Hamblin's evasion of his argument's implications feels all the more problematic considering that this argument is one many readers will be unprepared or even unwilling to hear. Consider this point from *Arming Mother Nature*:

> Understanding [ecological] vulnerability soon became an anxiety of writers and commentators from various quarters, which fed into a nascent environmental movement. *However, governments also concerned themselves with the issue, not in order to curb development, save wildlife, or prevent cancer, but rather to understand how to protect national or imperial interests, and to fight and survive wars.* (73; my emphasis)

Again, it's certainly provocative to link environmentalism, frequently associated with the political Left, to militarism and anti-Communism, frequently associated with the Right. But if the ultimate, and current, goals of these factions are diametrically opposed, as Hamblin admits above, what exactly is the point of identifying their shared origins? (Or *are* they so opposed?, one might ask.) In presenting us with such dots but tending not to connect them, *Arming Mother Nature* thus prompts other big questions, such as, Why do contemporary environmentalists such as Gore get pilloried for doomsaying that doesn't come to pass, when the entire postwar history of the U.S. is characterized by doomsaying that didn't come to pass?

But *Arming Mother Nature* is not a work of political science, nor of cultural or rhetorical studies. And Hamblin admits that the purpose of the book has not been to, say, "demonstrate that catastrophic rhetoric […] undermine[s] the credibility of climate science or environmentalists' goals," but rather to pursue "a less polemical notion, that if we wish to understand how humans came to believe they were capable of changing the natural environment on a vast scale, with catastrophic results, we first should look at those people who tried to accomplish it" (251). But the question remains: *why*? One might wish that, like Krupar, Hamblin would be more polemical and theoretical, on this issue and others. Indeed, if "[m]ilitary activities do not just destroy nature but actively produce it" (Krupar 28), then I want to know what "arming Mother Nature"—a problematic turn of phrase in many senses—has done for our conception of nature; alternately imagined by different factions as hardy, hostile, or fragile.

Perhaps my reactions prove part of *Arming Mother Nature*'s point: that the true origins of catastrophic environmental thinking have, until now, gone so unrecognized that bleeding-heart lefty environmentalists cannot fathom having anything in common with hawkish warmongers. While *Arming Mother Nature* doesn't tell us how we got there or what exactly it means, it does effectively offer us the same larger picture that Krupar does, though of course through different methods: that of a world thoroughly militarized, scientized, and surveilled, all the way from the macrolevel of EarthRise and Google Earth images to the microlevel of "warrior" plants, beetles, and soil. Both authors show us that the postnuclear age is anything but, and that we have never been postwar.

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