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Disturbed Landscape/Disturbing Processes: Environmental History for the Twenty-First Century

VERA NORWOOD

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On the first weekend of May 2000, the opening act of the nation's most impressive environmental drama of the summer was staged in Los Alamos, New Mexico. News releases covered a massive forest fire, named the Cerro Grande, exploding through forest stands, consuming over 40,000 acres of homes, recreation areas, and wildlands, burning perilously close to nuclear facilities, and threatening religious sites of Santa Clara pueblo. The fire, generated from a Park Service prescribed burn set in Bandolier National Monument and feeding on heavy fuel loads in the Santa Fe National Forest, raged out of control for days. Los Alamos and its neighboring bedroom community, White Rock, were evacuated. Local television news stations provided daily updates of the hundreds of homes lost.¹

My husband grew up in Los Alamos. On Father's Day we drove his parents back "up the hill" to see what was left of the city and its forest setting, to check on their old homes, and to visit some friends who had been through the ordeal. Our con-

1. The most comprehensive coverage of the fire appeared in the *Albuquerque Journal*. *High Country News*, a biweekly regional publication, also carried serial coverage. Stories also appeared in national and international papers and on the major television news programs.

versation turned on one of the key issues Richard White raised fifteen years ago in his review of environmental history—how we understand the “reciprocal influences operating between human society and the natural world,” particularly when the land yields “unforeseen consequences for the society that altered it.”² Since White’s essay, this specific issue has developed in increasingly complex and meaningful ways and holds promise for future work as well. A recent essay by fire historian Stephen Pyne helped me grasp what was so profoundly upsetting about the Los Alamos fire. Pyne worries about a West in which urban life has infiltrated wildlands, with increasingly scarce rural buffers between the two domains. When it comes to fire, he predicts: “The gradient between the wild and the urban steepens, building like an electric charge. Eventually it will arc.”³ The Cerro Grande fire represents that arc, the moment when two landscapes we view as fundamentally different spaces surprise us with a spark. Such landscapes pose management problems that require thinking across boundaries in ways we are just beginning to understand. These boundaries are not only material. The arcs of the late twentieth and early twenty-first century are complicating our most fundamental definitions of nature and culture as well as the relationship between them—concepts informing all the work we do as environmental historians.

White’s survey of environmental history appeared three years before the 1988 Yellowstone fires. Those fires burned under a relatively new scientific management paradigm, adopted in 1972, which attempted to restore the park to precontact conditions by allowing lightning-caused fires to burn within certain limits. In thinking about how the Yellowstone fires represent an arc that sparked between two worlds, the dominant narrative is a generalized story of nature embedded in culture. We thought of Yellowstone as pure nature, separate from the landscapes that humans create; the spark taught us how much culture wilderness contained.⁴ There are, however, more complicated ways

2. Richard White, “American Environmental History: The Development of a New Field,” *Pacific Historical Review*, 54 (1985), 323.

3. Stephen J. Pyne, “Pyre on the Mountain,” in Hal K. Rothman, ed., *Reopening the American West* (Tucson, 1998), 50.

4. See Alston Chase, *Playing God in Yellowstone: The Destruction of America’s First National Park* (Boston, 1986), for the most influential critique along these lines.

to read the lessons of such fires. Think of Yellowstone as the cultural pole of the arc—a managed landscape, one in which predictions rely on the relatively short history of European American experience in the place. Scientists who included fire in their management plan did so because they were learning that the precontact landscape had been shaped by both natural fires and those set by indigenous people. They used the tools of restoration ecology to recreate a specific historical moment—“the condition that prevailed when the area was first visited by the white man.”⁵

In the two decades prior to the 1988 burn, their historical narrative about the place had meshed reasonably well with their fire management regime. But 1988 witnessed a severe drought unprecedented in their experience, fueling fires on an unimagined scale. Scientists involved in this project have since acknowledged that their fire plan was too narrowly based in recent history—they failed to think in long enough time spans to account for Yellowstone’s natural history.⁶ Missing was an attention-grabbing experience of chaos in natural processes. If Yellowstone was the pole of culture in this arc, then weather was the pole of nature.

While natural resource management schemes acknowledged the importance of disturbances like fire in ecosystems, the regime for Yellowstone apparently did not anticipate critical features of chance and uncertainty now routinely understood to be at play in nature. Ecologists who study randomness are also pushing changes in environmental history. Daniel Botkin’s *Discordant Harmonies: A New Ecology for the Twenty-First Century*

5. The quote is from the A. Starker Leopold report on wildlife management in the national parks that appeared in 1963 and is reprinted in Robert B. Keiter and Mark Boyce, eds., *The Greater Yellowstone Ecosystem: Redefining America’s Wilderness Heritage* (New Haven, Conn., 1991), 289. This interdisciplinary collection is a comprehensive survey of the lessons of the Yellowstone fires. For an indication of the limited extent to which knowledge of fire management practices by American Indians was filtering into park and forest management conversations during the 1970s, see Henry T. Lewis, “Patterns of Indian Burning in California: Ecology and Ethnohistory,” and “In Retrospect,” in Thomas C. Blackburn and Kat Anderson, eds., *Before the Wilderness: Environmental Management by Native Californians* (Menlo Park, Calif., 1993), 55–116, 389–400.

6. See Paul D. Varley and Paul Schullery, “Reality and Opportunity in the Yellowstone Fires of 1988,” in Keiter and Boyce, eds., *The Greater Yellowstone Ecosystem*, 109.

brought to an interdisciplinary audience revised understandings of natural history informed by chaos theory. More recently Botkin has relied on the journals of Lewis and Clark to consider the historical role of randomness. *Our Natural History* argues that “The Missouri River, the easiest way west for Lewis and Clark, was not easy at all: It was treacherous and challenging, fickle and unpredictable.” Botkin suggests that exploration narratives have been misread as unique accounts of heroic individuals when they instead report ordinary encounters with natural processes. When we read in the journals about Lewis and Clark meeting with hardship or surprise, “We mistake chance for adventure and unpredictability for accident.”⁷ Adventures and accidents—events that seem to represent human intrusions into an otherwise stable nature—are then ignored as we attempt to manage a nature we have cast as predictable.

As White commented in 1985, environmental history has a normative streak, springing as much of it does from the concerns of the environmental movement. Near the end of his review, he called for environmental historians “lamenting environmental deterioration” to “offer some definition of what healthy ecosystems are and what constitutes their decline.”⁸ But precision about health and decline, or even about what constitutes an ecosystem, has been difficult to achieve in the age of new ecology. Compounding the issue is the continued development of our understanding of science itself as imbricated in social and cultural narratives. Uncertainty in both realms is, however, spawning important dialogues between ecologists and historians on the humbling lessons of nature’s dynamic qualities. Since the Yellowstone fires, such talk has been increasingly important in revising popular understandings of that arc between managed lands and natural processes. Too often unpredictability continues to be cast as accident in news reports. Initial coverage of the Cerro Grande fire blamed only targeted individuals or agencies who set the prescribed burn. The post-Yellowstone media acceptance of managed fire as the most environmentally sound method for

7. Daniel B. Botkin, *Our Natural History: The Lessons of Lewis and Clark* (New York, 1995), 21, 28. See also Botkin, *Discordant Harmonies: A New Ecology for the Twenty-First Century* (New York, 1990).

8. White, “American Environmental History,” 335.

clearing the mess resulting from overgrazing, logging, and decades of fire suppression received a direct hit during the burn. But public debates over what to do in its wake quickly degenerated into sparring matches between resource interests, who renewed the case for increased road-building, logging, and grazing, and environmentalists, who fiercely defended current approaches to prescribed burns. These dialogues assumed that an accident occurred in a landscape that we can predict and control. Ecologists and environmental historians helped shift the narrative away from dualistic debates through appeals to complications raised by the qualities of fire itself. Thomas Swetnam, an ecologist who has studied fire history in the Jemez mountains, and environmental historian William DeBuys, among others, published timely newspaper pieces that pondered how fire inherently embodies uncertainty—even when part of management regimes. They reminded the public of the shifting history of “solutions” to fire management that first took matches out of the hands of Smokey Bear, and then gave them back, concluding that we should “approach every land treatment as an experiment . . . expect to be surprised . . . {and} become compulsive learners.”⁹

One of the most unsettling aspects of the Cerro Grande fire was that arc between wildlands and urban spaces; as Pyne points out, disturbance and randomness in isolated terrain is one thing, in our yards and neighborhoods, another. The past fifteen years have witnessed increased understanding of the extent to which the West now faces these sorts of conflagrations. Cerro Grande was just a warm-up; by late July 2000, the second act in the nation’s environmental media moment arrived. The intermountain West experienced its worst fire season in fifty years on terrain so dry and loaded with fuels that it was reported that a grasshopper incinerated on an electric wire triggered a wildfire, and a western governor suggested the only hope lay in prayer.¹⁰ Fire reigned throughout the region—burning millions

9. The quote is from William DeBuys, “Los Alamos Fire Offers a Lesson in Humility,” *High Country News*, 32 (July 3, 2000), 17. Thomas W. Swetnam, “Humility Appropriate Amid Ashes of Cerro Grande,” *Albuquerque Journal*, June 4, 2000.

10. The grasshopper story was carried on the ABC evening news, August 8, 2000; the governor of Montana was reported calling for prayer on the ABC evening news, August 10. Throughout late July and August, stories of the epidemic of wildfires in the West were a nightly feature in the national news media.

of acres, killing firefighters, threatening homes and rural communities, and laying thick smoke over urban areas. One new version of nature ignited by such disturbance arises from attempts to bridge natural resource management history and new ecology. Another equally critical conversation is developing among scholars of landscape and place, particularly as they shift the emphasis from the forest to the homes that have sprawled in its midst.

In “The Trouble with Wilderness,” William Cronon argues that the wilderness came to be valued as the most authentic American landscape because we view it as “the one place on earth that stands apart from humanity,” offering an antidote to “the polluted sea of urban-industrial modernity.” Cronon counters that the idea of wilderness is a cultural construct and wilderness itself is a “human creation.” Wilderness alienates us from the very nature we seek to preserve, and “We thereby leave ourselves little hope of discovering what an ethical, sustainable, *honorable* human place in nature might actually look like.”¹¹

Cronon offers the garden as the solution to such trouble. Although his critique of wilderness has engendered heated commentary, the garden proposition merits a good deal more critical engagement than it has received to date.¹² Cronon wants to preserve the lessons of wilderness—the autonomy of non-human nature—while rendering that nature our “home.” Gardens may become revered places for Americans, he argues, because they contain aspects of the wild. They might be seen as the place in which the wild and tame spark. Cronon also suggests that understanding the wild in the garden leads to valuing the garden in the wild—thus opening wilderness to human history. I thought of Cronon during media coverage of the property losses of Los Alamos fire victims. Another way to think of the arc of that fire was from wildland to home, since the trail of burning ponderosa pine led to family residences. Yet, the vic-

11. William Cronon, “The Trouble with Wilderness; or, Getting Back to the Wrong Nature,” in Cronon, ed., *Uncommon Ground: Rethinking the Human Place in Nature* (New York, 1995), 69, 81.

12. Donald Worster offers one of the most literate and engaged responses to the wilderness critique in “The Wilderness of History,” *Wild Earth*, 7 (Fall 1997), 9–13. See also Michael Soule and Gary Lease, *Reinventing Nature? Responses to Post-modern Deconstruction* (Washington, D. C., 1995).

tims failed to see the wild place in which they lived, mostly because they had come to regard the forests that snuggled down to their yards as home. During a local newscast, one woman stood in front of her burned house and lamented the loss of her yard—the pine forest in which her children had played. There are no guarantees that wilderness subsumed in the garden will not succumb to cultural ideas of home as a protected, secluded, safe place. Trouble lurks in the social construction of the garden as well as in the ideology of wilderness.

A particular garden representing his new paradigm is Cronon's own neighborhood. Positioning himself as a contemplative figure gazing on the landscape, he regards a classic American tableau in which the sun "cast(s) an otherworldly golden light on the misty farms and woodlands below."¹³ Such harmony and passivity suggest neither the dynamism of wildness nor work in the garden. Gardening is very much about *doing* something with the land. Cronon notes that his discovery of this domestically wild (or wildly domestic) landscape owes something to the garden writer, Michael Pollan. Pollan's *Second Nature: A Gardener's Education* offers a somewhat clearer sense of the struggle that is gardening: "The refusal of this land to conform to my ideas of it—even just to *sit still* for awhile—frequently drives me crazy."¹⁴ His labor sparks the arc between wildness and home and leads him to some valuable distinctions between gardeners and naturalists. Richard White has recently written provocatively on the need to reconnect our work with work in nature, but his critique of another gentleman garden writer, Wendell Berry, suggests that there remain class-based problems with equating the keeping of hobby farms and gardens with all work on the land. White's critique of the romance of primitivism embedded in Berry's and others' celebration of the old-fashioned farm (and its conflation with the suburban kitchen garden) demonstrates how easily gardens may slide into a narrative of nature alienated from culture.¹⁵

13. Cronon, *Uncommon Ground*, 86.

14. Michael Pollan, *Second Nature: A Gardener's Education* (New York, 1991), 133.

15. Richard White, "Are You an Environmentalist or Do You Work for a Living?": Work and Nature," in Cronon, ed., *Uncommon Ground*, 171–185. Another key source Cronon cites for his critique of wilderness is J. B. Jackson, "Beyond Wilder-

Pollan's slip into such terrain has to do with how he genders nature and culture. The nature that drives him crazy is female and bears all the cultural baggage of feminine stereotypes. Culture is masculine—in the form of Pollan the gardener. Pollan's attempts to use such gendered concepts to make his case for the blurred boundary between nature and culture are unsuccessful: "Are we, finally, speaking of nature or culture when we speak of a rose (nature) that has been bred (culture) so that its blossoms (nature) make men imagine (culture) the sex of women (nature)? It may be just this sort of confusion that we need more of."¹⁶ Such a narrative effectively erases at least twenty-five years of feminist scholarship, beginning with Annette Kolodny's *The Lay of the Land*, aimed at bringing to light the dangers (social and environmental) of envisioning nature a virgin to be tamed and exploring the historical erasures of women as active agents themselves engaged with nature.¹⁷ Pollan remains comfortably embedded in just the sort of romantic narrative about nature and culture that Cronon defines as a key problem.

Environmental history is just beginning to integrate gender analyses into mainstream work.¹⁸ The effort is really about in-

ness," in John Brinckerhoff Jackson, *A Sense of Place, A Sense of Time* (New Haven, Conn., 1994), 73–91. Jackson probably would be surprised by the sorts of romantic, suburban, middle-class landscapes Cronon elevates to replace wilderness; Jackson's concern is much more urban and working-class—particularly how to improve the small, green spaces available to the working classes for recreation.

16. Pollan, *Second Nature*, 97.

17. Annette Kolodny, *The Lay of the Land: Metaphor as Experience and History in American Life and Letters* (Chapel Hill, N.C., 1975) and Kolodny, *The Land Before Her: Fantasy and Experience of the American Frontiers, 1630–1860* (Chapel Hill, N.C., 1984). Among others, see also Carolyn Merchant, *The Death of Nature: Women, Ecology, and the Scientific Revolution* (San Francisco, 1980); Lewis L. Gould, *Lady Bird Johnson and the Environment* (Lawrence, Kans., 1988); Donna Haraway, *Primate Visions: Gender, Race, and Nature in the World of Modern Science* (New York, 1989); Marcia Myers Bonta, *Women in the Field: America's Pioneering Women Naturalists* (College Station, Texas, 1991); Barbara T. Gates and Ann B. Shteir, eds., *Natural Eloquence: Women Reinscribe Science* (Madison, Wisc., 1997); and Vera Norwood, *Made From This Earth: American Women and Nature* (Chapel Hill, N.C., 1993).

18. The fragmentation in effort here is surprising since one of the key works in our field thirty years ago recognized the importance of women, Peter Schmitt, *Back to Nature: The Arcadian Myth in Urban America* (New York, 1969). Environmental philosophy carries on spirited dialogues around such issues that might serve as models for more synergism among historians. See, in particular, Michael Zimmerman, *Contesting Earth's Future: Radical Ecology and Postmodernism* (Berkeley, 1994).

corporating all sorts of diversity into the discourse of landscape values and the meanings of place—whether garden or wilderness. The garden may well be a critical space in which to think about the future of our green landscapes. But just as we must understand the cultural baggage in wilderness, so too must we see it in the garden. My suggestion for a future foundational text in this effort is Jamaica Kincaid's *My Garden (Book)*.¹⁹ Kincaid, of Caribbean heritage, settled in Vermont and took up ornamental gardening. She uses garden literature to spark issues of gender, class, ethnicity, and immigrant history within a genre she understands as controlled by white male elites. Kincaid is not likely to neglect the presence of the wild in her garden as long as she aligns herself with the colonized plants from around the world that make up the valued gardens of America. Her garden history burns with the desire to keep the moment of the arc between different domains in the foreground.

Kincaid addresses one of Cronon's key critiques of the wilderness ideal—that it evades human history, particularly the less heroic aspects of that history. Both are interested in how we have constructed a nature that hides our worst secrets. Viewing Los Alamos through the lens of either its surrounding wildlands or its home gardens masks its place in America's nuclear landscapes. The great fear about the Cerro Grande fire was that it would race through the laboratories themselves. When that risk was averted, concern turned to the fire's path through canyons that have served as waste dumps for the hazardous byproducts of the atomic age. The arc here is between toxic nature and humans, but it is more than that. New Mexico is a poor and ethnically diverse state; the supposedly isolated weapons laboratory looms large in the lives of surrounding Pueblo Indian communities. Cerro Grande threatened sacred sites of Santa Clara, and the smoke (which many feared was polluted with radioactive waste) blew over the pueblo, igniting traditional environmental concerns about pollution with issues of social and environmental justice.

Understanding traditional environmentalism's weaknesses in addressing the connections between pollution and class and

19. Jamaica Kincaid, *My Garden (Book)* (New York, 1999).

race bias and suggesting remedies for addressing the situation continue to be critical initiatives in environmental history.²⁰ Valerie Kuletz's *The Tainted Desert*, for example, argues that, in addition to searching for secure, invisible places, the siting of nuclear facilities was reinforced by ecological narratives of deserts as biologically unproductive, and thus as fitting candidates for sacrifice to contamination. Most nuclear facilities are built in or near Indian lands, whose communities are also rendered invisible—their reliance on the land and the health effects of its pollution receive as little credence as the biological productivity of the desert.

Kuletz's remedy is to make both sites visible by offering traditional Indian narratives of an intersubjective nature as an equally credible countertext to scientific visions of "deterritorialized" or "disembodied" wastelands.²¹ But *The Tainted Desert* also reflects one of the vexing problems of the classic environmental movement in its location of a paradigm-shifting solution in the pastoral—here the original homelands of desert tribes. Lawrence Buell argues that the arc between toxic nature and humans has, for both eco-justice activists and traditional environmentalists, shifted the discussion of solutions from such pastoral intersubjectivity to discourse on "what is most troublesome about that interdependence." While he too critiques the way the science of regulatory debates and risk assessments leads to "parsimony and procedural conservatism," he offers toxic discourse and its rhetoric of allegation, contestation, and apocalypse as an antidote to such thinking.²²

Buell locates a literary history of shared concern over a polluted landscape in such diverse texts as the 1991 manifesto of the First National People of Color Leadership Summit, Rachel Carson's *Silent Spring*, and an A. R. Ammons poem on garbage, culminating in a contemporary environmental movement that views "humanity in relation to environment . . . as collectivities with no alternative but to cooperate in acknowledgement of

20. The most comprehensive exploration of this issue to date has been Robert Gottlieb, *Forcing the Spring: The Transformation of the American Environmental Movement* (Washington, D.C., 1993).

21. Valerie Kuletz, *The Tainted Desert: Environmental and Social Ruin in the American West* (New York, 1998), 7.

22. Lawrence Buell, "Toxic Discourse," *Critical Inquiry*, 24 (1998), 658, 655.

their necessary, like-it-or-not interdependence.”²³ It remains to be seen how the story of the Los Alamos fire of the summer of 2000 will play out in such an environmental history. The protests over the nuclear landscape created by the push to create the bomb brought together a diverse group of local Indians, Los Alamos and Santa Fe peace and justice proponents, and a state citizenry fearful of a toxic wasteland that might flow out of the canyons with the late summer rains. The question of where to dump the waste generated in cleaning up the grounds of hundreds of burned homes, however, created friction as the small community of Wagon Mound, New Mexico, resisted the use of a nearby landfill. The highest profile narrative to come out of the fire ignored such controversy, finding a brighter side to the fire-blackened landscape. Pete Domenici, our senior Republican senator, cast Cerro Grande as an opportunity for the infusion of a new federal works project in economically strapped northern New Mexico.²⁴

At the turn of a new century, disturbed and disturbing environments shift in and out of sight as the smoke from the flames obscures vision. The integrative capacities of environmental history are critical to understanding these complicated landscapes. Mike Davis’s *The Ecology of Fear: Los Angeles and the Imagination of Disaster* offers a promising example in its complex weave of the natural history of catastrophe, the ways that economics and politics amplify natural hazards, and the literal and imaginative links between social disruption and natural disturbance. He outlines the distinctive natural history of Southern California, emphasizing how earthquakes, fires, and extreme weather constitute a landscape in the grip of the “messy, fractal, chaotic part of nature.”²⁵ On this terrain, developers, aided by politicians, have constructed a city that places its citizens at ever-increasing risk of just these hazards. In such a narrative, con-

23. *Ibid.*, 665.

24 “I think this is a rural jobs opportunity just waiting to be realized,” Domenici stated in the *Albuquerque Journal*, May 21, 2000. The second act of this tale, in which the intermountain West burned, pushed the irony further—the problem became the lack of manpower to fight so many fires taking place over such a large region.

25. Mike Davis, *The Ecology of Fear: Los Angeles and the Imagination of Disaster* (New York, 1998), 179.

cepts of intersubjectivity become threats rather than promises.

Buell argues that the toxic landscape brings diverse groups together by placing us all at risk, but Davis chronicles a landscape of unequal risk. Malibu homeowners benefit from heroic fire suppression efforts and serial influxes of federal disaster relief funds that stimulate economic development. Meanwhile, tenement fires in poor, ethnically diverse sections of downtown Los Angeles are accepted as inevitable. Malibu fires, however, are endemic to the Santa Monica Mountains, while downtown fires could be prevented through enforced building codes. This perverse reversal continues as Los Angeles elites rely on racial stereotypes to explain the arc from natural catastrophe to social unrest. Malibu residents blamed the 1993 fires on arsonists—specifically black, inner city gangs who had supposedly vowed to burn wealthy white enclaves.

Davis finds literature and films about Los Angeles pandering to such tendencies, spinning lucrative narratives that imagine a city threatened by conflated natural disasters and naturalized uprisings of nonwhite hordes. Having established a critical difference between natural disturbances and their amplification through economic development and social fragmentation, he concludes with a self-conscious attempt to reshape the metaphoric spark between natural and social disturbance. Los Angeles magnifies the chaotic natural disturbances of its terrain through irresponsible and socially inequitable growth; such growth simultaneously amplifies social fragmentation. Buell argues that “shrill apocalypticism” will be required to force change; this is what Davis provides in concluding with a satellite image of Los Angeles experiencing in April 1992 “an exceptionally large thermal anomaly” about the size of the Mount Pinatubo volcanic eruption but resulting from the conflagrations during the Rodney King disturbances.²⁶ Ironically, the future of Los Angeles may be a meltdown at the hands of nature and the socially disenfranchised, but such disaster will not have been inevitable.

Davis’s history of the troubling reciprocity between nature and culture in Southern California takes a global turn in J. R. McNeill’s recent *Something New Under the Sun: An Environmental*

26. Buell, “Toxic Discourse,” 662; Davis, *The Ecology of Fear*, 422.

History of the Twentieth-Century World. McNeill makes the case that humans more deeply impacted the planet during the twentieth century than in all previous human history combined. We took a planet whose future was inherently uncertain and made change even more volatile, primarily through economic and technological imperatives, creating a “total system of global society and environment . . . more uncertain, more chaotic than ever.”²⁷ The most pressing global issue at the turn of the new century, McNeill argues, is our environmental future. Negotiations with the constraints we face will best be forged in synergy between the ecological sciences and history.

In each of the readings I have done of the Los Alamos fires, I have suggested how environmental historians are increasingly using (both literally and metaphorically) the new ecology of the late twentieth century to reframe our understanding of nature while simultaneously grappling with the play of ecological science in the realm of ideology. Environmental history has arrived as a key tool in shaping policy to address the formidable social and ecological problems of the future. The most critical task our field faces is developing our expertise in sparking the arc between the social and the ecological—and in never losing sight of the dynamic quality to that act.

27. J. R. McNeill, *Something New Under the Sun: An Environmental History of the Twentieth-Century World* (New York, 2000), 359.