Modernism's History of the Earth

Megan A. Miller

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Reading Committee:

Brian Reed, Chair

Jessica Burstein

Herbert Blau

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Department of English

University of Washington

Abstract

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Megan A. Miller

Chair of the Supervisory Committee:
Professor Brian Reed
Department of English

This dissertation explores how a handful of modernist poets and novelists responded creatively to developments in geology, evolutionary biology, and astronomy between the 1920s and the 1960s. Critical accounts of modernism often treat early twentieth-century depictions of nature as quaint expressions of writers' personal interests, or belated rehearsals of romanticism or naturalism. Reading modernist literature alongside early twentieth-century scientific nonfiction, I argue that nature was implicated at every level of these writers' aesthetic responses to modern experience. William Carlos Williams' poetics of things grew out of his understanding of natural history. James Agee's documentary ethics drew on the timescale of evolution and the enormity of the universe. Lorine Niedecker and Kenneth Rexroth revised their poetics and their conceptions of place after learning about local geology. Aldous Huxley, Elizabeth Bishop, and Robert Smithson used the figure of islands to channel midcentury anxieties about the fate of an expanding human population and the ambivalence of progress.

Scientific paradigms were changing in these years: Darwinian evolution returned to the forefront of biological thought between the 1920s and the 1940s, and its reception was matched by widespread public interest in the origins and prehuman history of the earth. In the 1950s and 1960s, the exploration of outer space brought new awareness of our isolation in the cosmos. Nineteenth-century writers may have weathered the initial shock of our simian ancestry and the ungodly timescale of geology, but twentieth-century writers encountered a much fuller picture of what existed before humanity, and outside the bubble of our small planet. The writers I discuss here embraced that picture. The way they imagined the earth's history not only shaped their sense of what it meant to be modern; it shaped their sense of what it meant to be human, and conscious, and alive at any juncture of time and space.

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Introduction

It is essential to prove that beauty
may be in small, dry things.
—T. E. Hulme[1]

You know, one pebble moving one
foot in two million years is enough
action to keep me really excited.
—Robert Smithson[2]

When English critic T. E. Hulme praised the small and the dry in "Romanticism and Classicism" (1911), he was advocating a return to the art of earlier times. Enough gushing emotion, enough with the perfectibility of man, enough "flying up into the eternal gases" and "the word infinite in every other line."[3] Back to the days of human limitation, dust to dust. Hulme believed that the history of civilizations had been a series of alternations back and forth between two different artistic styles—wet and dry. The romantics, for example, were sopping; the ancient Egyptians, parched. Hulme preferred the latter. The dryness of Robert Smithson's comment, on the other hand, stems from his transfer of emotion to a non-human timescale. Smithson's essays and earthworks from the late 1960s and early 1970s were concerned with geological history, where time moves in one direction. We can no more swing back to an earlier era than resurrect the dinosaurs. The drama of flying through the cosmos, or straining through the material world for a glimpse of eternity, is nowhere to be found. This is the drama of watching slow geological change, which, from a human perspective, means no change at all: a pebble. Hulme and Smithson each arrived at a small, dry thing, but their things existed in utterly different realities.

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[1] Hulme, *Speculations*, 131.
[2] Smithson, *The Collected Writings*, 251.
[3] Hulme, *Speculations*, 120.

By juxtaposing Hulme's and Smithson's conceptions of history, I want to frame the literary and artistic era of modernism between two very different ways of thinking about time and the natural world. The cyclical conception of history that Hulme shared with many Anglo-American modernists was a reaction against nineteenth-century evolutionary theory and its attendant narratives of progress. "Romanticism and Classicism" lumps together Rousseau's revolutionary philosophy and Darwin's evolutionary theory as equally obsessed with human progress. The "root of all romanticism," according to Hulme, is the idea "that man, the individual, is an infinite reservoir of possibilities."[4] The classical view, on the other hand, is shaped by the notion that "man is an extraordinarily fixed and limited animal whose nature is absolutely constant" and "it is only by tradition and organisation that anything decent can be got out of him."[5] Hulme interpreted Darwin's "particular hypothesis, that new species came into existence by the cumulative effect of small variations," as a threat to classicism because it "*seemed* to admit the possibility of progress."[6] In its place he supported Hugo DeVries's "mutation theory, that each new species comes into existence, not gradually by the accumulation of small steps, but suddenly in a jump, a kind of sport." He explained, "this enables me to keep the classical view with an appearance of scientific backing."[7] Although Hulme did little to recommend himself as an arbiter of sound opinion, his disdain for natural selection coincided with a decline in scientific support for Darwin's theory beginning in the 1890s. "Evolution itself remained unquestioned," writes Peter Bowler, "but an increasing number of biologists preferred mechanisms other than selection to explain *how* it occurred."[8] DeVries's mutation theory was widely supported as an alternative mechanism, partly because it seemed to be rooted "firmly in

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[4] Ibid., 116.
[5] Ibid.
[6] Ibid., 116–117.
[7] Ibid., 117.
[8] Bowler, *Evolution: The History of an Idea*, 246.

the tradition of the new biology" and "based on hard experimental evidence."[9] Between 1909 and 1914, Hulme and other modernists in his London circle engaged a version of scientific discourse that supported their emphasis on tradition as the source of formal innovation.

The scientific worldview that Smithson engaged at midcentury was very different. By the early 1940s the modern evolutionary synthesis had reaffirmed the importance of Darwinian natural selection, but the twentieth-century picture of evolution wasn't the same as the one popularized in the nineteenth century. Instead of focusing on steady upward progress though competition or mastery of the environment, it suggested a world governed by haphazard, open-ended change. The scientific worldview at midcentury did not cast humans as the epitome of the evolutionary process, but as a random variation on mammalian life that managed to thrive during the most recent geological epoch. Between 1910 and 1950, field studies in geology and paleontology filled in a detailed picture of life on earth before the appearance of humans, and the earth itself before the appearance of life. Smithson grew up collecting fossils and visiting the American Museum of Natural History, where "dinosaurs made a tremendous impression" on him.[10] His worldview was shaped by the way he imagined prehuman history.

What explains the differences between Hulme's and Smithson's conceptions of history? Although the environmental movement of the 1960s initiated a major shift in public awareness of nature, Smithson's engagement with natural history began as an interest in science and he was openly disdainful toward the politics of environmentalism. Nor can his timescale be attributed to postmodernism. Smithson had clear modernist and late modernist predecessors, including William Carlos Williams, James Agee, Lorine Niedecker, Kenneth Rexroth, Aldous Huxley, and Elizabeth Bishop. The way these writers thought about the timescale and material history of the

[9] Ibid., 276.
[10] Smithson, *The Collected Writings*, 271, 279.

earth shaped their sense of what it means to be modern, and influenced their aesthetics, their ethics, their senses of place, their visions of the future, and the way they engaged literature and art from the past. "Modernism's History of the Earth" explores how these writers dealt with the idea that the planet has existed much longer than humanity. The idea has big implications; it's the kind of idea that necessarily alters one's view of the world, the passage of time, and the scope of human experience. It did exactly that for many writers who came of age in the first several decades of the twentieth century, and its influence on the cultural history of modernism has yet to be considered.

Most writers in the first generation of modernists, born in the 1870s and 1880s, would have been exposed to the landmark texts of nineteenth-century natural history during the course of their educations. Whether or not they were interested in deep time and earth history often hinged on their acceptance of the theory of natural selection. Those who responded favorably to Darwin tended to come from secular backgrounds. Those who responded unfavorably tended to be religious or devoted to a worldview focused on human achievements. Poets like Robert Frost and Marianne Moore, for example, wrote about animals and natural landscapes throughout their careers, but their poems express admiration for natural *designs*, not natural processes. They aligned themselves with an idealist biological outlook that collapsed the timescale of nature through its attention to form and its underlying assumption of intelligent or goal-driven creation. For them the Devonian period had no purchase. Thus, the presence of natural imagery or scientific themes does not necessarily indicate that a writer thought about the timescale of earth history in the way I have been describing. Pound and Eliot dredged the ancient past, borrowed scientific rhetoric, and filled their poems with as many natural objects as did Williams, for example, but they never mulled over the prehuman history of the earth. Williams did, and it

influenced his poetics in significant ways. For the modernists who accepted Darwin's open-ended, material universe, the timescale of earth history offered a frame of reference that expanded their sense of reality.

High modernist aesthetics were informed by science, but primarily through the rhetoric of the scientific method. Pound begins his *ABC of Reading* (1934) emphasizing the value of direct observation: "The proper METHOD for studying poetry and good letters is the method of contemporary biologists, that is careful first-hand examination of the matter, and continual COMPARISON of one 'slide' or specimen with another."[11] The method Pound describes is indebted to Louis Agassiz, the Swiss-born disciple of Georges Cuvier who was "easily the most famous American scientist" of the late nineteenth century.[12] Agassiz was an early advocate of laboratory experience in science education, but his insistence on direct observation was more than a pedagogy: "his entire system was tied to the belief that all observable order in nature is prima facie evidence of a supernatural intention."[13] He wrote in 1842 that "the history of the earth proclaims its Creator. It tells us that the object and term of creation is man. He is announced in nature from the first appearance of organized beings; and each important modification in the whole series of these beings is a step toward the definitive term of the development of organic life."[14] In his view "the Creator was a rational, almost artistic, being whose main concern was the overall structure of the plan of nature, not the adaptation of individual species to their environment."[15] The method of visually observing and comparing fossil specimens in the laboratory necessarily abstracts the organisms from their environment,

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[11] Pound, *ABC of Reading*, 17.
[12] Hass, *Going by Contraries*, 50.
[13] Menand, *The Metaphysical Club*, 127.
[14] Quoted in Bowler, *Evolution: The History of an Idea*, 127. The quotation comes from an 1842 article entitled, "On the Succession and Development of Organized Beings at the Surface of the Terrestrial Globe," *Edinburgh New Phil. J* 33: 388-399; 399.
[15] Ibid., 128.

and lends itself to the discovery of formal patterns. The method of precise, scientific observation that Pound incorporated into modernist aesthetics implied a view of nature organized by coherent design.

Agassiz's scientific theories were closely related to Emerson's transcendentalist philosophy. He arrived at Harvard in 1846 amid a growing interest in Platonist and romantic writers and in time to join a nascent Boston social circle that included Emerson, Nathaniel Hawthorne, James Lowell, and Oliver Wendell Holmes.[16] Ian Bell writes that Agassiz's and Emerson's views of nature fit within "the larger ideology of biological idealism, which characterized so much of nineteenth-century American thought" and included "those theories of biology that viewed their material in essentially transcendentalist or quasi-mystical terms, seeing nature, for example, as the intelligent expression of divine composition or as the single manifestation, in a variety of forms, of one idea."[17] Agassiz was a vocal opponent of Darwinian natural selection and instead explained evolutionary changes through the theory of recapitulation, which came out of the German tradition of *Naturphilosophie*. The theory of recapitulation was based on the idea that the development of the whole species parallels the individual organism's development, or, "in more cosmic terms: the process by which the universe becomes itself is replicated in the life history of the individual."[18] Recapitulation makes the past contemporaneous with the present. Agassiz believed that "the developmental pattern of each 'type' was immanent embryologically within each of its members, waiting to be unfurled as development progressed."

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[16] Nartonis, "Louis Agassiz and the Platonist Story of Creation at Harvard, 1795-1846"; Menand, *The Metaphysical Club*, 99. The Romantics included Friedrich Schelling and Samuel Coleridge, and the writers who espoused a Platonist view of creation included Ralph Cudworth, John Norris, and Walter Raleigh, among others. Nartonis writes, "In 1835, recent Harvard graduate Ralph Waldo Emerson was reading Cudworth at home in Concord and 'admiring its strong Platonism.' At the same time, Emerson was reading Norris who 'fights the battles and affirms the facts I had proposed to myself to do.' In 1840, Harvard graduate Henry David Thoreau was reading Cudworth's *Intellectual System*—probably one of Emerson's copies—along with Raleigh's *History of the World*" (446).

[17] Bell, *Critic as Scientist*, 108–109.

[18] Menand, *The Metaphysical Club*, 108.

Bell locates this idea "at the fulcrum of the idealist science that was so attractive for Romanticism in general, for American transcendentalism in particular," and—he argues—for Pound, "via not only Agassiz but the Emersonian leanings of Ernest Fenollosa."[19] Under this view of the natural world, history is governed by "a law 'controlling development and keeping types within appointed cycles of growth, which revolve forever upon themselves, returning at appointed intervals to the same starting-point and repeating through a succession of phases the same course.'"[20] Agassiz believed that the history of the earth was a record of intentional design, which had preordained the development of distinct species and reserved a special place for humanity. Although Pound's discussions of Agassiz avoid commenting on the scientist's larger view of nature, his conception of human history is consistent with Agassiz's conception of natural history, and both are rooted in the science and philosophy of idealism.

The modernist writers I focus on, who embraced a materialist history of the earth against Pound's and others' idealism, were influenced by a worldview that coalesced in the popular scientific discourse of the 1920s and 1930s. The primary attribute of this modern scientific worldview was that it was not human-centered. It emphasized the vast dimensions of outer space and the vast timescale of geological and evolutionary history. It was materialist in as much as it didn't insist that nature is organized by a divinely-ordained hierarchy or permeated by a transcendental spirit. It was *not* materialist, however, in the rough sense that term acquired in the nineteenth-century, the sense that implied a strict separation between mind and matter, and reflected a fear that the value of human experience would shrivel to nothing without the protective shell of a universe created especially for us. In other words, the modern scientific

[19] Bell, *Critic as Scientist*, 187.
[20] Ibid., 189.

worldview embraced the material origins of human consciousness without reducing consciousness to crude mechanics.

Although biology was moving back toward Darwin's evolutionary theory in the 1920s and 1930s, a number of American and British intellectuals held fast to more traditional cosmologies. H. G. Wells's *The Outline of History* (1920) became a focal point of their ire in the mid-1920s. Wells' global history begins, not with the Greeks, but with the formation of the earth, before proceeding to the first living things, the age of reptiles, and so on. Hilaire Belloc wrote a series of articles attacking the book for its affirmation of Darwinian natural selection and its negative portrayal of Catholicism, and Wells responded in kind.[21] According to Bowler, their debate rehashed nineteenth-century arguments without making much headway. Wells "went through the routine responses to Belloc's equally routine arguments against natural selection, most of which, Wells believed, had come half-digested from Samuel Butler. Wells certainly felt the strain of the controversy, and there were many literary figures who thought that Belloc was the outright winner"—among them T. S. Eliot, who warned that "there never was a time more dangerous than now for the humble man of letters to paddle in the tides of science."[22] "Yet," Bowler writes, "*The Outline of History* sold in vast numbers and was regularly updated through its many editions. If the literary world thought that Belloc's evaluation of Darwinism reflected the best modern science, there were many ordinary readers who got the opposite impression from Wells. Anyone in touch with science knew that Darwinism was being transformed and was

[21] Fluet, "Modernism and Disciplinary History: On H. G. Wells and T. S. Eliot." Fluet summarizes Belloc's perspective: "The 'provincial' author, like the 'provincial' audience for which this book was written, has, fairly recently, lost 'Faith' in the authority of English Protestantism and is antipathetic toward 'Classical Antiquity' and anything else 'outside' his own limited knowledge. Against this 'particular religion' Belloc will hold up Roman Catholic letters and the long tradition of European learning with which they are associated as a mode of understanding universal human history that can withstand 'the vast modern extension of physical and historical science'" (305).

[22] Quoted in Ibid., 301. Eliot's partiality to Belloc was also an indication of his own traditionalism; the debate occurred just a year before he converted to Catholicism (305).

coming to dominate biological thinking."[23] The tide was changing. By the early 1940s, the "modern evolutionary synthesis" of genetics and natural selection would solidify the importance of Darwinian theory.

Wells' incorporation of earth history into *The Outline of History* played to a growing interest in science in the United States and Britain. Major developments in physics and biology during the first three decades of the twentieth century led to widespread public interest in the natural sciences. "In the late 1920s and early 1930s," Gillian Beer points out, "science—particularly physics—fascinated non-scientists, and the writings of Arthur Eddington and James Jeans were best-sellers."[24] Anglo-American interest in science in those years can be partly attributed to the confirmation of Albert Einstein's theory of relativity in 1919, and mid-1920s developments in quantum mechanics by Werner Heisenberg, Niels Bohr, and others. Philosopher Alfred North Whitehead published his influential *Science and the Modern World* in 1925. Astrophysicists Eddington and Jeans both published numerous books for general readers explaining modern physics and cosmology, the most famous being Eddington's *The Nature of the Physical World* (1928) and Jeans' *The Mysterious Universe* (1930). The astronomical time scale they described amplified the geological and evolutionary time scale, and the popular rage for science extended to other books that synthesized astronomy, geology, biology, and human history. H. G. Wells, Julian Huxley, and G. P. Wells, for example, refer to Eddington and Jeans throughout their *Science of Life* (1930), the sequel to Wells's *Outline of History*. All of these books reached wide audiences on both sides of the Atlantic. The widespread availability of scientific nonfiction written for general audiences contributed to late modernist writers'

[23] Bowler, *Evolution: The History of an Idea*, 359.
[24] Beer, *Virginia Woolf: The Common Ground*.

understandings of geology, evolutionary theory, astronomy, and other fields that put human history into perspective.

Situating these writers' ideas about natural history in relation to contemporary scientific discourse is especially important because modernist depictions of nature are so often read as belated rehearsals of romanticism. Modernist writers' interests in natural history are frequently seen as disconnected from their immediate cultural milieus and their modernist aesthetics. The blind spot has persisted because critical conceptions of Anglo-American modernism are still shaped by the fundamental ideas about history inherent in its two dominant traditions, high modernism and the modernist avant-gardes. Each of these traditions grew out of a rejection of a certain kind of nineteenth-century natural history, and each grew into a historiography focused exclusively on the span of human cultures. Together they defined Anglo-American modernism as an approach that either rejected the past as such or treated time as cyclical, picking and choosing among the aesthetics of earlier eras. Within this framework a literature that engages natural history appears at best idiosyncratic, and at worst anachronistic or in poor taste.

In fact, Pound and other high modernists had more in common with nineteenth-century romanticism and transcendentalism than did Williams, Agee, Niedecker, Rexroth, Huxley, Bishop, or Smithson. The latter writers' ideas about natural history were shaped by the scientific worldview that emerged in the twentieth century. They read Darwin's books and journals and letters, but through the lens of their own cultural moment. They read Whitehead on the history and philosophy of science, Wells's scientific nonfiction, and other surveys of physics, geology, evolution, and astronomy published in the 1920s and 1930s. They read books about ecology in the 1940s, continental drift in the 1950s, and island biogeography in the 1960s. They read travel guides that incorporated geology and paleontology. They read essays by Loren Eiseley, the

American anthropologist whose midcentury nature writing typifies the late modernist response to the modern scientific worldview, in the sense that its acceptance of the physical and temporal dimensions of the universe feeds—rather than hinders—its emotional and imaginative engagement with nature.

Because modernist literature bears the imprint of many different attitudes toward the natural sciences, and many scientific paradigms were in flux between the 1920s and the 1960s, I have tried as much as possible to correlate writers' depictions of natural history with the scientific texts they read and thought about. To this end I have relied on their letters, essays, notes, and interviews, and, when available, indexes of their libraries. Some of the writers I discuss left behind clear records of their scientific reading and intellectual development, and in other cases I have had to piece together more isolated references to establish a context for the writer's understanding of natural history. In those instances I have tried to illustrate the scientific and cultural atmospheres that may have informed the writing of particular texts, in keeping with N. Katherine Hayles's field model of cultural history, which situates "parallel developments" within "a 'climate of opinion' that makes some questions interesting to pursue and renders others uninteresting or irrelevant."[25]

Chapter One, "William Carlos Williams' Slow Evolution," examines two versions of nineteenth-century natural history that filtered into modernist aesthetics—via avant-garde manifestos and Pound's transcendentalism—in order to contextualize Williams' early articulations of his scientific worldview and his later poetics of things. The chapter begins by tracing the language of natural catastrophe from French-Revolution-era geology, to Thomas Carlyle's and Karl Marx's mid-nineteenth-century accounts of political revolution, to F. T. Marinetti's early-twentieth-century Futurist rhetoric, and finally to Anglo-American avant-garde

[25] Hayles, *The Cosmic Web*, 22.

movements. In this context I read Williams' *Kora in Hell* (1920) and *Spring and All* (1923) as intervening in the historiography implied by avant-garde rhetoric, and proposing an alternate conception of history modeled on the gradual change of Darwinian evolution and uniformitarian geology. The chapter then explores Williams' reading of Whitehead's *Science and the Modern World* in the late 1920s. In *The Embodiment of Knowledge* (1928-1930), Williams draws on Whitehead's critique of simple location in order to counter a transcendentalist philosophy of language and nature with an approach to place that he would continue to develop throughout his career. I argue that the materialist poetics of *Paterson* (1946-1958) would not be possible without Williams' gradual conception of earth history.

Chapter Two, "Animal Kinship in James Agee's *Let Us Now Praise Famous Men*," explores the influence of popular scientific nonfiction on Agee's Depression-era documentary text. Agee's interest in modern science emerged from the same context in which Williams first started to articulate his scientific worldview: a rethinking of evolutionary history and human beings' status in relation to other animals in the aftermath of World War I. The chapter begins by discussing Robinson Jeffers's and Edna St. Vincent Millay's rejections of an anthropocentric worldview in the 1920s, and illustrates parallel attitudes about animals and evolutionary history in *Scientific Monthly* magazine. The new interest in evolutionary history in the 1920s elicited a backlash from writers and literary critics committed to a more traditional humanism. Agee defined his literary and scientific interests in opposition to the humanist argument of his undergraduate mentor, I. A. Richards. The chapter focuses on Agee's mid-1930s engagement with general-interest scientific texts, especially Wells, Huxley, and Wells's *Science of Life* (1930). I argue that the worldview implied by these texts, which emphasizes the scope of

evolutionary history and the interconnectedness of human and animal life, is integral to Agee's aesthetic and ethical approach to social documentary.

Chapter Three, "Local Geology and Late Modernist Poetics of Place," examines the aftereffects of Kenneth Rexroth's and Lorine Niedecker's research into local geological history while working on state guides for the Works Progress Administration (WPA) in the mid- to late-1930s. The chapter begins by discussing the approach to natural history adopted by the WPA's American Guide Series, Rexroth's and Niedecker's involvement in their respective state guides, and evidence of their continued interests in local geological and evolutionary history. My discussion of Rexroth's poetry from the 1940s, especially "The Phoenix and the Tortoise" (1946) and "Lyell's Hypothesis Again" (1949), illustrates his uptake of local geology and clarifies his opposition to Pound's ideogrammic method and Louis Zukofsky's objectivist poetics. The second half of the chapter examines Niedecker's late poetics in relation to her geological tourism around the upper Midwest in the mid-1960s. At the end of her career she departed from her sparse, objectivist style and developed a more expansive poetic approach that reflected her interest in the timescale of geological history. I show how Niedecker's long poems in *North Central* (1969), especially "Lake Superior" and "Wintergreen Ridge," incorporate the materialism and the geological timescale of her scientific reading. My discussion of "Wintergreen Ridge" also highlights Niedecker's divergence from the attitudes of nature writers like Thoreau and Aldo Leopold, who focused on the value of experiencing nature or the importance of protecting certain landscapes or animals. In contrast, Niedecker and Rexroth refer to geological history to think beyond their immediate experience and cultural traditions, by emphasizing their material connection to the whole planet and its past. This chapter argues that

both poets' attitudes toward nature and place are best understood in terms of their scientific worldviews and, in particular, their interests in the timescale of earth history.

Chapter Four, "Islands," explores the scientific and cultural consequences of isolation in Huxley's novel *Island* (1962), Bishop's poem "Crusoe in England" (1971), and Smithson's island earthworks, especially *Island of Broken Glass* (1969) and *Spiral Jetty* (1970). Their depictions of islands reflect a new awareness of the earth's isolation in the universe, and a new understanding of the role islands play in the evolutionary process. The chapter draws on Huxley's essays about scientific cosmology, Bishop's response to Darwin, and Smithson's extensive scientific reading. I argue that Huxley's, Bishop's, and Smithson's renderings of islands in the 1960s highlight several larger patterns in the way modernist writers responded, over time, to the worldview that coalesced in the popular scientific discourse of the 1920s and 1930s. An awareness of humanity's role in space and time caused each of them to reconsider romantic and transcendentalist philosophies, but to varying degrees. Whereas Smithson rejects romanticism and transcendentalism wholeheartedly, Huxley holds on to the romantic view of nature as a redemptive psychological experience. Later modernist writers found it much easier to embrace the implications of modern geology, evolution, and astronomy than did earlier modernists like Huxley.

The fact that I came across more modernist poets than novelists who engaged earth history is, I believe, largely a matter of form. Nineteenth-century novelists like George Eliot and Emile Zola experimented with scientific ideas through the shape (and the scope) of their narratives. "Because of its preoccupation with time and with change," Beer writes, "evolutionary theory has inherent affinities with the problems and processes of narrative."[26] Literary writers' approach to narrative changed in the twentieth century. Virginia Woolf writes

[26] Beer, *Darwin's Plots*, 7.

of Eliot that the "flood of memory and humour which she pours so spontaneously into one figure, one scene after another, until the whole fabric of ancient rural England is revived, has so much in common with a natural process that it leaves us with little consciousness that there is anything to criticize."[27] Eliot's emulation of natural processes is a marker of talent, but too forced for Woolf's taste, in the end. Where nineteenth-century novelists enacted growth and transformation, or the slow discovery of natural laws, according to Woolf the modern novelist should "record the atoms as they fall upon the mind in the order in which they fall" and "trace the pattern, however disconnected and incoherent in appearance, which each sight or incident scores upon the consciousness."[28] Woolf incorporates the scale of earth history by way of her characters' passing thoughts. Agee's nonfictional *Let Us Now Praise Famous Men* (1941) gets around the dilemma of omniscience with a writer-narrator given to vast stretches of speculation and reverie. He frames the tenant farmers' lives by referencing a Darwinian view of earth history and a spatial sense of the planet, but they apply as much to his own life. Beyond that, the inward turn and the shorter chronologies of modern novels tend to preclude substantial engagement with deep time. Huxley's *Island* works differently; as a utopian novel it offers a model of earth history informed by the science of islands and their role in evolution.

Although most of the literary writers I discuss are American, my argument speaks to the broader cultural and aesthetic history of Anglo-American modernism. The most obvious difference between cultural reactions to evolutionary theory in the United States and Britain—the fact that the British public came to terms with Darwin's theory of natural selection in the 1860s and 1870s, while the American response was more protracted and less favorable—did not shape modernist writers' views of natural history in uniform ways. The geography of influence is

[27] Woolf, *The Common Reader*, 166–167.
[28] Ibid., 150.

complicated. Williams, who was the only poet among the first generation of Anglo-American modernists to accept Darwinian evolution, had an English father who encouraged him to read Darwin at a young age. Pound may have gone to London while Williams stayed in New Jersey, but their views of nature came from opposite sides of the Atlantic. The high modernist sensibility that emerged from Pound's London vortex drew much of its historical sense from the idealist biology of nineteenth-century America. Although many of the late modernist poets I discuss inherited something from Williams, so did their entire generation. Modernist writers' interests in earth history generally developed out of their own scientific reading. Huxley, who had been living in California for several decades by the time he wrote *Island*, constitutes a special case, given that his grandfather was perhaps singularly responsible for defending Darwin's theory to the British public at the end of the nineteenth century and his brother was a major player twentieth-century evolutionary biology.

One of the guiding assumptions of this project is that modernist writers' ideas about nature were central to their experience of modernity. The history of the earth points to one of the primary philosophical dilemmas of modern life, by pushing knowledge beyond the realm of human subjectivity. Mid-nineteenth-century romantic and idealist thinkers like Agassiz looked into the record of prehuman history and saw divine intelligence: "in answering the problem that persistently worried the scientist during the nineteenth century—the problem of whether his accounts actually expressed the world or whether they were simply useful fictions—Agassiz argued for nature itself as 'the work of thought, the production of intelligence' and for the scientist's work as a deciphering of this 'thought.'"[29] Late-nineteenth- and early-twentieth-century thinkers like William James, Henri Bergson, and Hulme responded to scientific materialism and its attendant philosophy of positivism by turning inward, claiming "that

[29] Bell, *Critic as Scientist*, 125.

humans' conceptual systems were limited, subjective constructs of mind that helped them negotiate a reality they could never know with rational certainty."[30] Bergson's sense of reality in flux led him to the conclusion that "scientific knowledge is not an accurate representation of immutable physical law but rather a set of imposed constructs that quantify, categorize, and reduce matter to discrete units and deterministic progressions."[31] So much of the late-nineteenth-century rejection of scientific materialism was based on a crude reduction of Darwinian natural selection. However, as twentieth-century scientists developed a more open-ended picture of evolution, many writers responded with an attitude like that expressed by Wells, Huxley, and Wells, when they ask, "if those fishy ancestors could be transformed into our present selves in three hundred million years, without the aid of conscious purpose in any of the prehuman forbears, who shall prophesy what our race may yet not achieve and into what it may not transform itself before another such period in the history of life on earth has passed?"[32]

In *Science and the Modern World*, Whitehead explains that an awareness of earth history is one of the things that makes him doubt the "subjectivist" view—the idea that everything we know of nature is a projection of the human mind.

> Our historical knowledge tells us of ages in the past when, so far as we can see, no living being existed on earth. Again it tells us of countless star-systems, whose detailed history remains beyond our ken. Consider the moon and the earth. What is going on in the interior of the earth, and on the far side of the moon! Our perceptions lead us to believe there is something happening in the stars, something happening within the earth, and something happening on the far side of the moon. Also they tell us that in remote ages there were things happening. But all these things which it appears certainly happened,

[30] Hass, *Going by Contraries*, 5.
[31] Ibid., 7.
[32] Wells, Huxley, and Wells, *The Science of Life*, 423–424.

> are either unknown in detail, or else are reconstructed by inferential evidence. In the face of this content of our personal experience, it is difficult to believe that the experienced world is an attribute of our own personality.[33]

The thinkers in Whitehead's time who abided the "subjectivist" view believed that nineteenth-century materialists shaped the natural world into the mold of competitive efficiency and instrumentalism. In many ways they did. However, the methods of investigation and reasoning upon which earlier scientists based their ideas of a deterministic universe also gave rise to observations with no practical value or easy ideological valence. They gave rise to observations at odds with the assumption that humans had gained mastery over nature. They gave rise to observations that implied temporal and spatial scales so large they put all of humanity in a very small boat—ancients and moderns, rag-pickers and scientists, Americans, Brits, and Papua New Guineans alike. The particular content of experience, as Whitehead put it, suggested a reality independent of human consciousness. The modernist writers compelled by the history of the earth knew it was a reality they could only imagine, but they did imagine it, and that altered their everyday experiences and observations of the world.

[33] Whitehead, *Science and the Modern World*, 130.

Chapter 1: William Carlos Williams' Slow Evolution

1. Introduction

Nature is a difficult subject to broach in relation to modernism. (And despite the trappings of the term itself, there is no good replacement.[34]) The stuff of the natural world can appear rather outdated in the context of modernist literature, because we assume that "nature" in its pure form existed only before humans entered the picture, and we tend to see modernity as a picture fully dominated by the cultural and technological productions of human societies. Any hint of the natural sounds nostalgic in this context. In her perceptive study of landscape in modern American poetry, for example, Bonnie Costello carefully guards against the suggestion that she might be talking about nature in an unadulterated, original sense: "For the poets in this study, all we know is landscape, that second nature of human collaboration and intervention. Nature as a place of origin and authenticity, or as an essence we can comprehend, dissolves in this entanglement."[35] The recent trend in literary and cultural studies of the environment has been to reveal how our ideas about the natural world are shot through with culture, shaped by human interventions from the beginning. I would like to proceed in the opposite direction, and suggest that modernist literature and art have been shaped by our ideas about nature from the beginning, in largely invisible ways.

Modernism has registered a particular conception of the natural world through its sense of history. Since the beginning of the nineteenth century our conceptions of modernity have been shaped by the way we imagine natural history, despite the fact that modernization is almost

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[34] "Environment" is background; "ecology" is non-historical. Throughout this dissertation, I use "nature" and "the natural world" relatively interchangeably. I like "natural world" because it suggests a large-scale system, though I do not want to imply that nature exists apart from humanity. Following the inclinations of the writers I discuss, I assume that the human "world" is subsumed within the natural.

[35] Costello, *Shifting Ground*, 8.

always understood as a movement away from the rural, the pastoral, or any other vision of nature. This chapter tracks the lineage of modern conceptions of history through the language of natural catastrophe. The genealogy winds backward, from the Anglo-American avant-garde and the Italian futurists, to Karl Marx and Thomas Carlyle, and finally to France at the turn of the nineteenth century, the chaotic scene wherein ideas about geological history and social change first mingled then married under the term "revolution." American and British modernists inherited a very specific conception of historical change—based on natural catastrophe—through the tradition of the avant-garde.[36] Their fever pitch, their insistence on completely breaking with the past, and their manifestos' central metaphors come straight out of a geological debate that reached its peak in the 1830s, a debate over whether past changes in the earth's surface were caused by gradual forces or sudden catastrophic events. At issue was not just the nature of geological change, but the scale of earth history and the plausibility of the Mosaic account of creation. The avant-garde inherited the rhetoric of the catastrophic argument, and the language of earth-shattering revolution, denuded of its origins and implications, was built into modern conceptions of cultural and aesthetic history.

As the modern scientific understanding of natural history became more prominent in the 1920s and 1930s, its disparity with modernist approaches to history must have become increasingly obvious to writers whose worldviews accommodated the timescales of geology and evolution. Williams started to incorporate his scientific worldview into his accounts of literary history and aesthetics in the early 1920s. *Spring and All* (1923) satirizes the catastrophic language of the avant-garde in order to suggest a different conception of literary history, based

[36] My discussion of the avant-garde relies on Martin Puchner's *Poetry of the Revolution: Marx, Manifestos, and the Avant-Gardes*. This chapter's argument deals specifically with the historical avant-gardes—especially the influence of Marxian political manifestos on Futurism, then Vorticism and Dada—rather than a more general, or later, interest in breaking down the barriers between art and life.

on slow and steady change, in keeping with the natural histories of Charles Lyell's uniformitarian geology and Darwinian evolution. Although this early critique is muddled by sarcasm, Williams continued to integrate his scientific materialism into his poetry and critical writings. Later in the 1920s he used Whitehead's *Science and the Modern World* to argue against the transcendentalist philosophy of language that influenced Pound. Williams' emphasis on deep time and slow change carries significant implications for the way literary critics imagine twentieth-century aesthetics, not least because his work was so influential for second-generation modernist poets. His views of history and the material world were shaped by the timescales of geology and evolution. His famous embedding of ideas in things in *Paterson* is more than poetic dictum. Williams' worldview was fundamentally historical, encompassing in one frame the history of human civilizations, the pre-human history of life on earth, and the history of the earth itself. By extension, his things are neither iterations of ideal forms nor empty arrangements of matter; they are the material embodiments of history.

2. The Origins of Avant-Garde Historiography

To understand Williams' interventions into avant-garde rhetoric and Poundian aesthetics, we first need to understand how modern—and modernist—ideas about history developed in relation to specific philosophies of nature. To be modern requires a past. As he traces the concept of modernity through the "Quarrel Between the Ancients and the Moderns," Matei Calinescu usefully reminds us that "the idea of modernity could be conceived only within the framework of a specific time awareness, namely, that of *historical time*, linear and irreversible, flowing irresistibly onwards."[37] The rise of that kind of time awareness coincided with a new awareness of natural history; as natural history gained intellectual ground, however, it began to

[37] Calinescu, *Five Faces of Modernity*, 13.

conflict with the dominant cosmology. By the eighteenth century, mainstream Europe had long since abandoned the classical Greek notion of a timeless earth in favor of the Judeo-Christian creation story. The historical science of chronology was the most extreme manifestation of this religious worldview: seventeenth-century chronologists concluded, from their study of the Bible and other textual records, that the earth was created around 4004 B.C., making the planet roughly 6,000 years old.[38] As the Enlightenment sent more and more Europeans out to investigate volcanoes and fossils, the timescale suggested by biblical chronologists began to look less and less plausible.[39] "By the middle of the eighteenth century," according to Martin Rudwick, "the yawning 'abyss' of a far longer history was opening up, largely pre-historic and prehuman."[40] In the wake of these much larger timescales, European savants started to study the planet differently. Theories of the earth gave way to histories that documented events in the earth's past based on geological and fossil evidence. According to Rudwick, the historical approach had been practiced here and there before the 1790s, but over the course of that decade it would come to define geology.

Revolutions were a key feature of the earth histories that emerged around the turn of the nineteenth century. Faced with the task of explaining why, for example, seashells could be found on mountaintops, many naturalists speculated that the earth's past had been filled with catastrophic events that drastically changed the terrain in relatively short periods of time. One advantage of this approach was that it meshed well with the familiar Christian cosmology,

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[38] Rudwick, *Bursting the Limits of Time*, 116.

[39] In 1773, for example, Englishman Patrick Brydone noted in a book about his travels through Sicily and Malta, that a recently-dug well near Mount Etna revealed no fewer than seven distinct lava-layers. Brydone knew that it took more than 2,000 years before soil would begin to form on the surface of lava, according to Martin Rudwick, so that well alone "implied an antiquity of at least 14,000 years, more than enough to knock the bottom out of the traditional short timescale for the whole world" (121). French naturalist Jean-Louis Giraud-Soulavie came to similar conclusions in 1784, by estimating how long it would take for volcanic rocks to be worn into smooth river stones. Other savants, like Horace-Bénédict de Saussure and Compte George Louis Leclerc de Buffon, estimated timescales between tens of thousands and millions of years (123).

[40] Rudwick, *Bursting the Limits of Time*, 186.

because Noah's flood could be posited as the most recent revolutionary event in geological history.[41] A history that turned on earth-changing catastrophes must also have resonated with current events for the many naturalists who waited out the political turmoil and violence of the French Revolution from elsewhere in Europe.[42]

The way we think about histories natural and human coalesced in the decades surrounding the Revolution. There are different ways to understand the direction of influence between the science and the politics of this era. Rudwick asserts that savants "imported into the natural world the methods and the imagery of historians and antiquarians."[43] Michel Foucault argues that the nineteenth-century impulse to historicize grew from the realization that nature had its own history, independent of the human past.[44] Both are most likely true.[45] At any rate, a new trope emerged in politics as well as science. Hannah Arendt reminds us that "revolution" meant something very different in centuries past. In the classical age it denoted the regular movement of stars and planets; the orderly revolution of the stars led Plato and Aristotle to think of nature as timeless. Until the turn of the nineteenth century, a political "revolution" implied a

[41] As Rudwick notes, many who advocated the geohistorical approach relied on the idea of a former and present world, divided in time by a major geological catastrophe. Jean-André de Luc, a Genevan who was appointed as "reader" to Queen Charlotte in the court of King George III, argued that the continents, as we know them, are not ancient. The present world was ushered in by a "sudden Revolution" which he believed to be "the same event as Noah's Flood" (154). In a highly-publicized essay published in 1789, François-Xavier Burtin, a francophone Catholic from the Netherlands, used his study of fossils to claim that "a major revolution had turned former seabeds into the present continents" (297). Johann Friedrich Blumenbach, a professor at Göttingen, likewise treated fossils as "documents in nature's archive" and in 1790 posited a "total revolution" that killed off many fossil species before the present world came into being (298-99).

[42] Although European men of letters were invariably cosmopolitan, French was their official language and Paris was their capital.

[43] Rudwick, *Bursting the Limits of Time*, 296.

[44] Foucault, *The Order of Things: An Archeology of the Human Sciences*, 368.

[45] W. J. T. Mitchell makes a similar point when he writes, "We could debate endlessly whether Cuvier's theory of the fossil as a trace of a life-form wiped out by geological revolutions was an echo of the French Revolution or whether the understanding of that revolution is itself a product of the new sense of natural history. In any event, the new meaning of fossils quickly becomes a metaphor for human as well as natural history and specifically for the human relics left behind by the French Revolution" (Mitchell, "Romanticism and the Life of Things," 175-76).

return or restoration, "swinging back into a preordained order."[46] The instigators of the French Revolution went in thinking they were restoring an older order, according to Arendt, but mid-circle something changed. Following the general ethos of modernity we might be tempted to think they rejected the old authority of nature and vied to replace it with the self-determining force of human history. On the contrary, they simply adopted a different natural metaphor. History became a rising tide and the movement of the stars gave way to floods and tempests:

> Suddenly an entirely new imagery begins to cluster around the old metaphor and an entirely new vocabulary is introduced into political language. When we think of revolution, we almost automatically still think in terms of this imagery, born in these years—in terms of Desmoulins' *torrent révolutionnaire* on whose rushing waves the actors of the revolution were borne and carried away until its undertow sucked them from the surface and they perished together with their foes, the agents of the counter-revolution.[47]

The revolutionary torrent describes a fluid and uncontrollable "stream of 'progressing violence.'"[48] Coincidentally, one of the only earth-historians who remained in France during the turmoil and took an active role in politics also focused on watery revolutions; he speculated that huge "mega-tsunamis" had "swept occasionally over the earth's surface," altering everything in their paths.[49] Although the catastrophic imagery often included earthquakes and volcanoes along with floods and storms, images of "stream and torrent and current" became the most

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[46] Arendt, *On Revolution*, 33.
[47] Ibid., 39.
[48] Ibid.
[49] Rudwick, *Bursting the Limits of Time*, 319. Dieudonné de Gratet de Dolomieu based his findings on the study of certain limestone formations, which, he argued, "could not have been deposited quietly layer by layer, as other naturalists supposed; instead, 'these floods of scarcely fluid mud' were formed 'at one time, as it were at a single throw,' by seawater 'in a most violent state of agitation'" (319).

common.[50] Geological disaster implied totalizing and permanent change, and the metaphor allowed the French Revolution to be seen "not as the work of men but as an irresistible process."[51]

Metaphors of natural catastrophe continued to shape the way people talked about the French Revolution in the first several decades of the nineteenth century, just as geology continued to garner widespread public interest. Thomas Carlyle's *The French Revolution* (1837) is a prime example of both trends. Throughout the book, Carlyle presents the Revolution as the culmination of disembodied natural forces. The passions of the masses, once released by circumstance, take on lives of their own as storms and floods, swells and outbursts. In Carlyle's account of the storming of the Bastille, the volunteers come "rolling in long wide flood" and they subsume everything in their path, themselves included: "Patriotism rushes in, tumultuous, from grunsel up to ridge-tile, through all rooms and passages; rummaging distractedly for arms."[52] The flood pushes on to Paris, where "at every street-barricade, there whirls simmering a minor whirlpool" (162). In Carlyle's narrative the "living deluge" literally assumes the force of water or storm-cloud, moving independently ahead of the crowds (165). The crowd itself "is a genuine outburst of Nature; issuing from, or communicating with, the deepest deep of Nature." Revolutionary frenzy sweeps the mob into "a Complex of human Forces and Individualities hurled forth" (211). Each of the central political actors—Saint-Just, Robespierre, Amar, Vadier, Collot and Billaud—becomes the locus of his own natural disaster: "Each man, enveloped in his ambient-atmosphere of revolutionary fanatic Madness, rushes on, impelled and impelling; and has become a blind brute Force; no rest for him but in the grave! Darkness and the mystery of horrid cruelty cover it for us, in History; as they did in Nature" (714). Carlyle's *French*

[50] Arendt, *On Revolution*, 40.
[51] Ibid., 39–40.
[52] Carlyle, *The French Revolution: A History*, 159. Further references will be cited in the text.

Revolution consistently uses the watery language of "stream and torrent and current" to describe revolutionary crowds.

The conflation of revolutionary crowds with catastrophic natural forces was so endemic to the Victorian mindset that one critic observes the pattern in the writing of Charles Dickens, Elizabeth Gaskell, and Charles Kingsley.[53] Unlike those writers, Carlyle had the benefit of formal training in geology. According to historian John Burrow, his catastrophic language "is the result of a direct, conscious, and quite specific borrowing from the geological ideas current in the Edinburgh of the early nineteenth century in which he received his education."[54] Beginning in that era theories of the earth were often lumped into two opposing camps: catastrophism and uniformitarianism. Behind the two camps were alternate explanations of the forces that shaped rocks in the past—in particular, sedimentary rocks, which were known to have formed in watery environments yet could be found at the tops of mountains. "Only two possible solutions had emerged," writes Peter Bowler, "one relying on an absolute decrease in ocean levels, the other on elevation of land by earthquakes."[55] Proponents of catastrophism believed that "all sedimentary rocks were deposited on the floor of a vast ancient ocean that has since disappeared," and that this and other changes in geological strata were caused by discrete, catastrophic events.[56] In contrast, uniformitarianism emphasized ongoing processes; it held that geological strata were formed by regular, slow-acting forces like water, wind, and heat—forces that could still be observed in present time. According to uniformitarian geology, rivers and erosion carry soil and rock detritus to the ocean floor, where it is hardened and transformed by the earth's central heat,

[53] Stott, "Thomas Carlyle and the Crowd," 3.
[54] Burrow, "Images of Time," 207.
[55] Bowler, *Evolution: The History of an Idea*, 40.
[56] Ibid.

and then gradually elevated by earthquakes until it again forms dry land.[57] Although geologists on both sides acknowledged that sudden events and ongoing processes had each played a role in forming the earth's crust, they disagreed on the primary force behind geological history, and because of that, they believed in very different timescales.[58] Things happened relatively quickly in the catastrophic history of the earth. On the other hand, uniformitarian geologist James Hutton famously wrote that the processes he observed showed "no vestige of a beginning,—no prospect of an end," implying a virtually limitless scale for earth history.[59] Carlyle was familiar with both schools of thought. At the University of Edinburgh he studied under Robert Jameson, a catastrophist, and John Playfair, a well-known promoter of uniformitarianism.[60]

The catastrophic and uniformitarian schools carried distinct political valences immediately after the French Revolution. The uniformitarian approach was shunned as atheist, and catastrophism was generally favored by conservative geologists who wanted to accommodate the biblical deluge. As the nineteenth century wore on, the rhetoric first launched to describe the French Revolution evolved alongside political and scientific developments. Outside the realm of science, catastrophism touched a nerve among political reactionaries—or rather, the idea of sudden, violent change touched a nerve among those who feared political revolution, and the geological language they used to describe it inadvertently followed the assumptions of catastrophic histories of the earth.

The catastrophe feared most in 1830s England was not a flood but an earthquake. After living through one on the Chilean coast, Charles Darwin reflected in the diary of his Beagle

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[57] Ibid., 45.

[58] It would be a mistake to assume that uniformitarian accounts of geological history leave out earthquakes, floods, and volcanoes altogether. Those events count as small blips in the gradual and ongoing geological process. Although a writer like Carlyle describes the French Revolution as an onslaught of flood, storm, volcano, and earthquake, a geological "revolution" of the catastrophic variety would actually need to be much larger than that—something along the lines of a sudden and immediate Ice Age, or a flood covering the entire surface of the earth.

[59] Quoted in Gould, *Time's Arrow, Time's Cycle*, 63.

[60] Burrow, "Images of Time," 207.

voyage that "a bad earthquake at once destroys our oldest associations: the earth, the very emblem of solidity, has moved beneath our feet like a thin crust over a fluid;—one second of time has created in the mind a strange idea of insecurity, which hours of reflection would not have produced."[61] Darwin goes on to declare, "Earthquakes alone are sufficient to destroy the prosperity of any country. If beneath England now the inert subterranean forces should exert those powers, which most assuredly in former geological ages they have exerted, how completely would the entire condition of the country be changed! What would become of the lofty houses, thickly packed cities, great manufactories, the beautiful public and private edifices?" He concludes that "England would at once be bankrupt; all papers, records, and accounts would from that moment be lost" and the government would be "unable to collect the taxes"—thus "the hand of violence and rapine would remain uncontrolled" and "in every large town famine would go forth, pestilence and death following in its train."[62] Darwin's ominous vision has more to do with a disturbance of the English class structure than a shuffling of its geological strata. Beer rightly connects his account of the Chilean earthquake to the political climate back home, in particular, "the fears of social upheaval that were already in the 1830s gripping the English middle classes."[63]

It should come as no surprise that Carlyle was right in the thick of it, whipping up fears of a working-class upheaval in the same language he had used to characterize the French Revolution. His essay *Chartism* (1839) describes an ocean of liquid matter seething beneath the "strong silent people" of Saxon Britain: "Deep-hidden it lies, far down in the centre, like genial central-fire, with stratum after stratum of arrangement, traditionary method, composed productiveness, all built above it, vivified and rendered fertile by it." The fire is "deep-hidden,"

[61] Darwin, *The Voyage of the Beagle*, 270.
[62] Ibid., 273.
[63] Beer, "Writing Darwin's Islands," 136.

he warns, "but awakenable, but immeasurable;—let no man awaken it!"[64] Above all he fears another revolution like the one in France, a revolution in which "the fountains of the great deep boil forth; fire-fountains, enveloping, engulfing." In that kind of revolution, "your 'Earth-rind' is shattered, swallowed up; instead of a green flowery world there is a waste wild-weltering chaos; —which has again, with tumult and struggle, to *make* itself into a world" (33). Carlyle would no doubt have preferred a political system modeled on uniformitarian geology, in which the old structures are gradually worn down and just as gradually built up, but he used catastrophic metaphors to dramatize what he feared: the earthquake ruptures the established order, unleashes subterranean forces, and lets loose a revolutionary torrent.

The next major intervention into the nineteenth-century revolution was staged by Karl Marx, who took up the same catastrophic language and used it against those who feared political revolution. Marx's poetics gather their strength from the catastrophic events of earth history; his floods, tempests, and earthquakes wielded the rhetorical power to kill off entire species and inaugurate others. In a speech given on the anniversary of the *People's Paper* (1856), he imagined the coming revolution as a massive geological upheaval: "The so-called Revolutions of 1848 were but poor incidents—small fractures and fissures in the dry crust of European society. However, they denounced the abyss. Beneath the apparently solid surface, they betrayed oceans of liquid matter, only needing expansion to rend into fragments continents of hard rock."[65] Elsewhere he calls the class struggles in France between 1848 and 1850, "moments of revolutionary earthquakes" (587). Marshall Berman attributes Marx's geological language to a general fervor, saying that one of his "most urgent aims is to make people 'feel it'; this is why his ideas are expressed in such intense and extravagant images—abysses, earthquakes, volcanic

[64] Carlyle, *Critical and Miscellaneous Essays*, 6:129.

[65] Marx and Engels, *The Marx-Engels Reader*, 577. Further references to Marx are to this edition, and will be cited in the text.

eruptions, crushing gravitational force—images that will continue to resonate in our own century's modernist art and thought."[66] There are many ways "to make people 'feel it,'" and the images Marx used to do so emerged from a specific context of historical feeling.

Marx wanted the middle classes to feel the earth tremble under their feet. The most famous passage of the *Communist Manifesto* relies on the assumption of solidity, and it blurs the two central catastrophes of early-nineteenth-century geology, earthquakes and floods: "All fixed, fast-frozen relations, with their train of ancient and venerable prejudices and opinions, are swept away, all new-formed ones become antiquated before they can ossify. All that is solid melts into air, all that is holy is profaned, and man is at last compelled to face with sober senses, his real conditions of life, and his relations with his kind" (476). Remember that solids in a frozen state usually melt into liquids, before they evaporate into air. However, if "all that is solid" were to melt into liquid, it would have to join the veritable flood that has just swept away the foundations of society. And if solids were just swept up in the flood— if the "lofty houses" and the "beautiful public and private edifices" that Darwin worried over were merely deposited downstream—they would break down slowly, leaving here a water-logged bedroom and there a pile of bricks. Marx had no time for slow change, and no tolerance for relics and fossils. All remnants of the past simply dissipate.

Marx's view of natural history shaped the way early twentieth-century British and American writers came to think about the passage of time. The revolution figured as environmental catastrophe—with all its inherent assumptions about histories natural and human—emerged from a nineteenth-century literary culture with close ties to geology and other natural sciences. Writers and artists who came of age around the turn of the twentieth century lost much of the earlier generation's interest in geology, as the growth of professional and

[66] Berman, *All That Is Solid Melts Into Air*, 19.

academic disciplines established separate spheres for science and literature. But the literary types did retain connections to Marxian politics. Hannah Arendt identifies the "professional revolutionists" of that era as "the true heirs of the *hommes de letters* in the seventeenth and eighteenth centuries": "The artists and writers joined the revolutionists because 'the very word bourgeois came to have a hated significance no less aesthetic than political'; together they established Bohemia, that island of blessed leisure in the midst of the busy and overbusy century of the Industrial Revolution."[67] Aside from the general influence of Marxian thought, then, at least some modernists inherited his ideas through their associations with political movements.

In the more general sense, Marx's revolutionary and catastrophic language changed the way people thought about the modern era itself. Since the turn of the twentieth century it has become common to characterize modernity in the same language that was used to liken the French Revolution to a natural disaster. Modernity, in this view, is a never-ending cataclysm of social, political, and technological forces hurled about in chaos. In 1931, John Maynard Keynes described a movement beginning in the sixteenth century, "with a cumulative crescendo after the eighteenth, [when] the great age of science and technical inventions began, which since the beginning of the nineteenth century has been in full flood – coal, steam, electricity, petrol, steel, rubber, cotton, the chemical industries, automatic machinery and the methods of mass production, wireless, printing, Newton, Darwin, and Einstein, and thousands of other things and men too famous and familiar to catalogue."[68] It is neither obvious nor intuitive to conceive of those thousands of things as a flood. Newton would sooner imagine modern developments as the logical products of scientific thought, the rungs on a ladder, or the steps up from the base of a pyramid. Darwin would treat them as adaptations developed over the long haul, changes

[67] Arendt, *On Revolution*, 251.
[68] Quoted in Schleifer, *Modernism and Time*, 29–30.

reinforced by success. The flood metaphor betrays its own origin in the cultural and political rhetoric surrounding the French Revolution, and suggests how powerfully that event shaped the way Europeans and Americans thought about time for at least the next two hundred years. To understand history as continual revolution is to see modernity as a technological storm: a veritable hurricane of steel, rubber, cotton, electric wires, print ads, radio signals, accelerating cars, and in the midst of all that, the confused and seething masses. Berman calls it the "maelstrom of modern life."[69]

More significantly, Marx's conceptions of revolution and natural history bore a direct influence over modernist literature through the tradition of the avant-garde, in particular, through the genre of the manifesto. As a form, the manifesto is designed to enact the revolutionary change it announces. According to Martin Puchner, Marx and Engels' *Manifesto of the Communist Party* (1848) created the modern genre and held sway over several generations of artistic manifestos in the late nineteenth and early twentieth centuries. Many of the writers of those manifestos had been involved in various socialist or anarchist movements, but the lasting influence of the Marxian manifesto was not so much political as it was temporal. The manifesto implies a particular intervention into history, and, Puchner writes, it

> anticipates the way in which the sphere of art would be organized in the twentieth century, when hundreds of movements and schools would rely on manifestos to denounce their predecessors and competitors for the purpose of rewriting the history of art. Even if many of the projects outlined in manifestoes were never realized, what became firmly established was the act of declaring a new departure, of setting one ism against the next, and of laying claim to the future at the expense of the past. What

[69] Berman, *All That Is Solid Melts Into Air*, 16.

> succeeded, in other words, was the revolutionary historiography dictated by the form of the manifesto.[70]

Beginning in the 1910s, the way for Anglo-American artists and writers to enter the public sphere of culture was to reject the recent history of their art form. Moreover, the tendency to understand literary or artistic history as a series of revolutionary breaks has also carried over into the critical practice of periodization—the desire, for example, to mark a dramatic rupture between modernism and postmodernism, however imprecise the dates and however muddy the boundaries turn out to be. The metaphor of natural catastrophe is built into the structure of cultural histories since the turn of the twentieth century, inasmuch as those histories have taken their cue from the tradition of the avant-garde.

It is no coincidence that the first avant-garde manifesto of the twentieth century was written by a poet thoroughly versed in the language of nineteenth-century political revolutions. Before he inaugurated Italian futurism, F. T. Marinetti came of age as a writer in Paris in the 1890s, where, in addition to studying at the Sorbonne, he involved himself in various political movements—anarchist, libertarian, and socialist. Günter Berghaus writes that "many artists and writers with a 'revolutionary' mentality were active in these circles. Marinetti was one of them, and he continued to declaim his poetry in their meeting halls and give lectures on art and politics right up until the mid-1910s."[71] His intellectual influences ranged widely; "he was an admirer of Nietzsche's radical individualism and Bergson's dynamic concept of the universe, but he also studied Marx and Engels, Bakunin and Sorel."[72] In short, Marinetti was exposed to revolutionary thinking on all sides. His aesthetics were formed amid the rhetoric of social, political, and artistic revolution. French symbolism, Marinetti's first literary school, functioned

[70] Puchner, *Poetry of the Revolution*, 70–71.
[71] Berghaus, *The Genesis of Futurism*, 8.
[72] Ibid.

as a proto-avant-garde, according to Puchner. Jean Moréas's "Symbolist Manifesto" (1886) mixes old and new revolutionary tropes, combining the revolutionary imperative of the Marxian manifesto with the notion of predetermined cyclical change, and—to add to the confusion—the language of biological evolution. Moréas wrote, "like all the arts, literature evolves: in a cycle with its returns strictly determined, complicated by various shifts over time and in the changing climates."[73] As Marinetti set out on his own he experimented with the more violent rhetoric of political revolution: "For the launching of the review *Poesia*" in 1905, "Marinetti wrote a manifesto in which he paraphrased Marx: 'Idealists, workers of the mind, unite to show how inspiration and genius go hand in hand with the progress of the machine, the hot air balloon, industry, commerce, the sciences, and electricity.'"[74] The literary movement that he would launch several years later pushed the rhetoric and the form of the revolutionary manifesto to an extreme. His stance toward history was much starker than that of the symbolists. Giovanni Lista writes that "unlike so many theoretical texts on art that strive banally to define a poetics of creation, the Futurist manifesto was a revolutionary call, armed with a true rhetoric of aggression toward bourgeois tastes and of war against the past."[75] According to Puchner, "Where 'The Symbolism' and even the [Communist] *Manifesto* had been engaged in complicated negotiations with the past, Marinetti denounces not a particular past, be it naturalism or utopian socialism, but the past as such. And against this past, now labeled as *passéisme* or *passatismo*, he sets not a particular future but the future as such: futurism."[76]

Not surprisingly, the act of hurling oneself into the future looks a lot like the revolutionary torrent of the nineteenth century, plus automobiles. "The Founding and Manifesto

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[73] Caws, *Manifesto: A Century of Isms*, 50.
[74] Lista, "The Activist Model; or, the Avant-Garde as Italian Invention," 17.
[75] Ibid.
[76] Puchner, *Poetry of the Revolution*, 75.

of Futurism" (1909) mixes metaphors left and right, but the influence of earlier revolutionary writing is unmistakable. Marinetti's prose exudes revolutionary torrent. He makes direct reference to the French Revolution when he calls his car's steering wheel "a guillotine blade that threatened my stomach."[77] Instead of giving him pause, the threat of the guillotine only adds momentum: "The raging broom of madness swept us out of ourselves and drove us through streets as rough and deep as the beds of torrents." He and his futurist comrades "throw" themselves "into the wide contorted mouth of the wind!" (48). In the manifesto itself, Marinetti declares, "we will sing of the multicolored, polyphonic tides of revolution in the modern capitals; we will sing of the vibrant nightly fervor of arsenals and shipyards blazing with violent electric moons; . . . and the sleek flight of planes whose propellers chatter in the wind like banners and seem to cheer like an enthusiastic crowd" (50). Not only has the landscape been filled with an arsenal of machinery, the machines have taken the place of the "human flood"—they now act like a crowd of people, themselves acting like floods and tides.

In bringing together metaphors of natural disaster and industrial machinery, Marinetti's early futurist writings fuse two of the strongest motifs in Marxian rhetoric. Marx said in 1850 that "Revolutions are the locomotives of history" (586). Not one to be left behind, Marinetti narrates the creation of "the great Futurist Railroad" in "Let's Murder the Moonshine!" (1909). Here, again, he describes his gathering forces in the familiar language of the revolutionary crowd. They "poured out by the thousands from the open doors, in torrents," "a mighty discharge from an enormous sluice gate"; and then "From plain to plain the army of madness advanced, poured down the valleys, swiftly climbed the peaks, with the easy fatal rush of a liquid" (56-57). All this is prefatory. Without any technological means for travel, the "army of madness" has to rely on its own foaming passion to reach the construction site. Once they get

[77] Marinetti, *Let's Murder the Moonshine: Selected Writings*, 48. Further references will be cited in the text.

there, the final act before the railroad's completion literalizes the transfer of power from nature to technology. Marinetti turns his revolutionary floods into electricity: "gigantic wheels were raised, and turbines transformed the rushing waters into magnetic pulses that rushed up wires, up high poles, up to shining, humming globes" (59). Now, we might infer, the army can work through the night—"And the military Railroad was built. An extravagant Railroad, following the chain of the highest mountains on which our vehement locomotives soon set out, plumed with loud cries, down one peak and up another, casting themselves into every gulf and climbing everywhere in search of hungry abysses, ridiculous turns, and impossible zigzags" (59). At the outset of "The Founding and Manifesto of Futurism," the sound of a train is the first thing that calls Marinetti and his friends to action: "Suddenly we jumped, hearing the mighty noise of the huge double-decker trams that rumbled by outside, . . . like villages on holiday suddenly struck and uprooted by the flooding Po and dragged over falls and through gorges to the sea" (47). This train bears comparison to overflowing river, but the "Great Futurist Railroad" carries the metaphor further, moving with the fluidity and the inhuman volition—with the "easy fatal rush"—of a revolutionary torrent (57). The hydroelectric turbines explicitly link Marinetti's railroad to the revolutionary tradition. Futurism's celebration of technology, in other words, has its metaphoric source in the natural catastrophes of late eighteenth- and early nineteenth-century geology.

Marinetti's futurism set the pattern for the modernist avant-gardes, however much contention it drew from the early generation of London modernists. T. E. Hulme, Wyndham Lewis and Ezra Pound "converged on the need to combat Futurism" and "rejected the cult of technology, speed and machinery."[78] According to Michael Levenson, "much of English

[78] Levenson, *A Genealogy of Modernism*, 77.

modernist doctrine was defined in opposition to its principles."[79] The London modernists did agree with one very important aspect of futurism, however—"the need for decisive literary rupture."[80] Following the publicity campaign surrounding Marinetti's visit to London in March 1912, Pound made his own attempt to found an avant-garde sect: "As for the future, *Les Imagistes*, the descendents of the forgotten school of 1909, have that in their keeping."[81] Lawrence Rainey points out that this first mention of imagism clearly references futurism, with its use of French (Marinetti's language of choice in England), and its allusions to the future and the "forgotten school of 1909."[82] The appearance of "BLAST!" two years later offered a more direct rebuttal of Marinetti. Among other things, Wyndham Lewis declares that the "futurist is a sensational and sentimental mixture of the aesthete of 1890 and the realist of 1870."[83] However much the aesthetic principles of imagism and vorticism differed from those of futurism, both movements followed the newly-codified structure of the avant-garde, denouncing all existing art and literature as passé in order to introduce a new, totalizing alternative.

Even when Anglo-American modernists backed away from revolutionary newness and modeled their aesthetics on the art of the past, they still bypassed the historical view of nature that emerged in the nineteenth century. Louise Blakeney-Williams argues that Hulme, Pound, W. B. Yeats, Ford Madox Ford, and D. H. Lawrence all developed cyclical conceptions of time, based on myth, the belief in a changeless universal order, or a fixed set of rotating traditions.[84] Like many works of high modernism, the *Cantos* shows an obvious interest in the long durée of history. However, that interest only encompasses the history of civilizations—in Pound's case,

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[79] Ibid.
[80] Ibid.
[81] Quoted in Rainey, *Institutions of Modernism*, 29.
[82] Ibid., 29.
[83] Lewis, *Blast 1*, 12..
[84] Williams, *Modernism and the Ideology of History*, 161.

ancient Greece and thirteenth-century Provence, among others. Pound's grab-bag approach to history was matched by an aesthetic approach that was heavily influenced by Emerson's transcendentalism, by way of Ernest Fenollosa's account of the Chinese ideogram.[85] According to Haun Saussy, "Pound took from the 'Chinese Written Character' the idea of an 'ideogrammic' way of writing and thinking: a logic of juxtaposed particulars, 'luminous details' that speak for themselves when revealed by the poet."[86] Edited by Pound and published in the *Little Review* in 1919, "The Chinese Written Character as a Medium for Poetry" clarifies the philosophy of nature underlying the transcendentalist view of language:

> The whole delicate substance of speech is built upon the substrata of metaphor . . . But the primitive metaphors do not spring from arbitrary *subjective* processes. They are possible only because they follow objective lines of relations in nature herself. . . . This is more than analogy, it is identity of structure. Nature furnishes her own clues. Had the world not been full of homologies, sympathies, and identities, thought would have been starved and language chained to the obvious. There would have been no bridge whereby to cross from the minor truth of the seen to the major truth of the unseen. Not more than a few hundred roots out of our large vocabularies could have dealt directly with physical processes. These we can fairly well identify in primitive Sanskrit. They are, almost without exception, vivid verbs. The wealth of European speech grew, following slowly the intricate maze of nature's suggestions and affinities. Metaphor was piled upon metaphor in quasi-geological strata.[87]

Fenollosa's description of language *sounds* solidly anchored in the material world of nature;

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[85] Bell, *Critic as Scientist*, 122–125.
[86] Fenollosa, *The Chinese Written Character as a Medium for Poetry*, 4.
[87] Ibid., 54.

he emphasizes objectivity over subjectivity, and uses metaphors of substance, substrata, and geological strata. However, his and Emerson's philosophy of language rests on the belief that nature is the timeless expression of a spiritual being. His contention that linguistic structures mirror structural relations in nature assumes a natural world that has been intentionally designed, a natural world ordered by resemblances ("homologies, sympathies, and identities") that relate each part to the whole. One consequence of Pound's adaptation of transcendentalism is that his modernist poetics seem to have nothing to do with the natural world; the implied creator is replaced by the all-knowing poet, whose highly-developed aesthetic sense reveals what sounds good and what doesn't. Although Pound never announces an idealist philosophy of nature, his modernism leaves no room for other ways of engaging the natural world.

3. The Prehistory of *Spring and All*

Williams admired Darwin. Like many of his contemporaries he soured to generic notions of progress and Victorian determinism, but his response to Darwin was more favorable. He describes the scene of his original reading in his *Autobiography* (1948). "Pop," he writes, "once offered me a dollar apiece if I would read *The Origin of Species* and *The Descent of Man*. I took him up. It was well-earned cash."[88] The same childhood broker shows up earlier in *The Great American Novel* (1923)—"I'll give you a dollar my son for each of these books you read: *Descent of Man* and *Origin of Species*, reprinted by Dombie and Sons, Noodle Lane, Ken. W. London, England 1890."[89] Although Darwin seems to fare badly in this novel, there is strong evidence that Williams thought seriously about evolutionary theory from very early in his life to

[88] Williams, *The Autobiography of William Carlos Williams*, 15.

[89] Williams, *Imaginations*, 215. Further references to this edition (hereafter abbreviated as *I*) will be cited in the text.

very late.[90] He mentioned Darwin in a letter to Viola Baxter on 23 January 1910, apologizing "for his 'gross ungentlemanliness' when he'd last seen her, and for arguing then so heatedly in favor of Darwin's position on evolution in *The Descent of Man*."[91] Despite his profuse apology, he offers no hint of compromise—"I am in Germany; 'how peculiar,' you say . . . 'how unusual,' but it remains a fact, even if you don't agree with Darwin's *Descent of Man*."[92] In his final book, *Yes, Mrs. Williams* (1959), he again mentions Darwin's two major works, which—he says this time—he "read avidly and could never forget."[93] Although Darwin's influence on Williams remained relatively veiled in his early work, the evolutionary themes of emergence, variation, and slow change were central to his writing from the 1920s on.

Williams was familiar with Poundian modernism and the language of avant-garde manifestos in the vein of futurism and vorticism, but at the turning point of his literary career, he distanced himself from both. He was tired of being stuck in Rutherford, New Jersey while his contemporaries pursued a different kind of literature in New York and London. That feeling reaches its pitch in the prologue to *Kora in Hell* (1920). Written in 1918, the prologue gathers all of Williams' resentments into a unified rant. He resents the recent success of Eliot's "Love Song of J. Alfred Prufrock" and he resents Prufrock himself, that "nibbler at sophistication" (*I*, 24). He resents H. D., Wallace Stevens, and Ezra Pound for their criticism of his work. He excerpts letters from all of them, and disagrees with all of their suggestions. He gives his father the last word against Pound, rejects H.D.'s Hellenism as too austere, and likens Stevens to "*a Pennsylvania Dutchman who has suddenly become aware of his habits and taken to 'society' in*

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[90] Williams' narrator declares, at one point, "The fad of evolution is swept aside. It was only mildly interesting at best" (215).

[91] Mariani, *William Carlos Williams: A New World Naked*, 83.

[92] Williams, *Selected Letters*, 20. To wrap up his apology, Williams echoes a line from Marx: "From henceforth let the dead past bury its dead" (20). He complains, in the same letter, that Germans "have the spontaneity of a freight train" (21).

[93] Williams, *Yes, Mrs. Williams*, 8.

self-defense" (15). To them he says, "I'll write whatever I damn please, whenever I damn please and as I damn please and it'll be good if the authentic spirit of change is on it" (13). Williams objects most of all to his contemporaries' strict adherence to styles derived from the past. Eliot gets under his skin not just for Prufrock's cosmopolitan ennui, but because his "more exquisite work is rehash, repetition in another way of Verlaine, Baudelaire, Maeterlinck—conscious or unconscious—just as there were Pound's early paraphrases from Yeats and his constant later cribbing from the Renaissance, Provence and the modern French: Men content with the connotations of their masters" (24). The prologue to *Kora in Hell* harps on the importance of authentic change, and it becomes a manifesto of sorts for Williams. He would later write that he knew Eliot's Prufrock "would influence all subsequent American poets and take them out of my sphere. I had envisaged a new form of poetic composition, a form for the future. . . . It forced me to be successful."[94]

Yet Williams' admiration for novelty and his "form for the future" do not lead him to a strategy anything like Marinetti's. The prologue rails against the pretenses of the avant-garde. Williams was inspired by the techniques of avant-garde painting, but here he critiques two central figures in the New York Dada scene—Marcel Duchamp and Walter Arensberg—because their sense of novelty strikes him as superficial.[95] The prologue recalls a conversation in which Arensberg proffered that "the only way man differed from every other creature was in his ability to improvise novelty," and thus "anything in paint that is truly new, truly a fresh creation, is good art" (*I*, 8). Then during a visit to Arensberg's studio, he sees "what appeared to be the original of Duchamp's famous 'Nude Descending a Staircase.' But this, [Arensberg] went on to say, is a full-sized photographic print of the first picture with many new touches by Duchamp himself and

[94] Williams, *I Wanted to Write a Poem*, 30.

[95] See, for example, Halter, *The Revolution in the Visual Arts and the Poetry of William Carlos Williams*; Schmidt, *William Carlos Williams, the Arts, and Literary Tradition*.

so by the technique of its manufacture as by other means it is a novelty!" (8-9). When everything starting with yesterday becomes passé, the distinctions tend to turn quibbling. Williams proposes "photographs of prehistoric rock paintings and etchings on horn" (9). He gestures to the avant-garde model toward the end of the prologue, when he says "I wish that I might here set down my 'Vortex' after the fashion of London, 1913, stating how little it means to me whether I live here, there or elsewhere or succeed in this, that or the other so long as I can keep my mind free from the trammels of literature, beating down every attack of its *retiarii* with my *mirmillones*. But the time is past" (16). Presumably he means both the time of the gladiators and the time for writing manifestos. Instead of trying to turn his aesthetics into a new wave—some kind of scrappy, suburban avant-garde—Williams abandons the revolutionary impulse: "the time is past." Although the prologue to *Kora in Hell* is flippant and even reactionary at times, it stands as an clear indication of how Williams positioned himself in relation to contemporary attitudes toward literary history.

The poem most commonly associated with Williams' avant-garde flirtation of the late 1910s and early 1920s, reveals an attitude toward the future that is at odds with avant-garde movements like futurism and Dadaism. Williams first read "Overture to a Dance of Locomotives" at the Independents' Exhibition of the Society of American Artists in New York in 1917, and later included it in *Sour Grapes* (1921).[96] Peter Schmidt writes that "one obvious source of inspiration for 'Overture' was Apollinaire, who often treated modern technology as miraculous and who also used a Cubist polyphony of voices to describe the experience of waiting for a train in 'Lundi Rue Christine.'"[97] Peter Halter writes that both "Overture" and "The Great Figure," the final poem in *Sour Grapes*, are "clearly related to the fascination that the

[96] Schmidt, *William Carlos Williams, the Arts, and Literary Tradition*, 64–65.
[97] Ibid., 69.

metropolis held for the Futurists, the epitomy [*sic*] of a teeming life force with myriad nodes of energy."[98] "Overture" does celebrate modern technology and it certainly teems with energy. However, both energy and technology are regulated by the slow movement of time.

> Covertly the hands of a great clock
> go round and round! Were they to
> move quickly and at once the whole
> secret would be out and the shuffling
> of all ants be done forever.[99]

That steady movement of the clock is covert because everything else in the station seems to act quickly, and all of a sudden. The poem's "dashes, frequent stanza breaks, eruptive rhythms, and new voices" exaggerate the effect of suddenness.[100] Although the scene appears chaotic, filled with hurried movement and multifarious noises, those interruptions are bracketed by regularity. In the fourth stanza, when the "inevitable postures infinitely / repeated—" are broken by a dash, they give way to a count, "two—twofour—twoeight!" (ll. 19-21). The "dingy cylinders" of the locomotive "pull against the hour" when motionless,

> But brakes can
> hold a fixed posture till—
> The whistle!
>
> Not twoeight. Not twofour. Two!
> (ll. 31-34)

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[98] Halter, *The Revolution in the Visual Arts and the Poetry of William Carlos Williams*, 97.

[99] Williams, *The Collected Poems, Volume 1*, 146. Further quotations from the poem will be referenced by line number in the text.

[100] Schmidt, *William Carlos Williams, the Arts, and Literary Tradition*, 68.

The whistle follows a precise schedule, as does the train when it begins to move: "In time: twofour! / In time: twoeight!" (ll. 37-38). Whereas Marinetti's train advanced like a flooded river and carried people off to the sea, Williams' train passes through a landscape where "rivers are tunneled" and "trestles / cross oozy swampland" (ll. 39-40). The final stanza ends with a clear statement about the workings of time: "wheels repeating / the same gesture remain relatively / stationary: rails forever parallel / return on themselves infinitely" (ll. 40-43). The "deep rumbling" in the poem's first stanza suggests that if technology inherited the revolutionary potential of the nineteenth century, it now follows a very different geological metaphor. Instead of catastrophe (Carlyle's "genial central fire," ready to break open the earth's crust), Williams' "Overture to a Dance of Locomotives" is modeled on uniformity. The sudden noises and movements are little blips against a background that is slow, steady and contained.

In that sense Williams' poem shares something with the philosophy of uniformitarian geology. British geologist Charles Lyell opened his *Principles of Geology* (1830-1833) with an epigraph from John Playfair's *Illustrations of the Huttonian Theory* (1802): "Amid all the revolutions of the globe the economy of Nature has been uniform, and her laws are the only things that have resisted the general movement. The rivers and the rocks, the seas and the continents have been changed in all their parts; but the laws which direct those changes, and the rules to which they are subject, have remained invariably the same."[101] Lyell argues vehemently against those geologists who followed a "catastrophic" view of the earth's history, and who imagined stark differences between a "former world" and the present. He accuses them of being led astray by their desire to validate the Mosaic account and the Christian worldview in general.

Lyell's uniformitarianism offered no easy correspondences with Christian cosmology, but it did offer something that quite a few Anglo-American modernists would later find just as

[101] Lyell, *Principles of Geology*, 3.

oppressive: the steady continuity of natural laws. Those modernists may never have read Lyell's *Principles*, of course, but they would have gathered something of his ideas through their reading of Victorian-era fiction. Beer's *Darwin's Plots* elegantly describes the mutual influence between mid-nineteenth-century British literature and evolutionary theory, and points out that the continuity of natural law was one of the chief legacies of Lyell's uniformitarianism: "This belief in the presence of permanent yet hidden laws of nature provides the drive towards discovery in the work of George Eliot, and Zola. . . . At the same time, their vehement fascination with individuality makes for a painful play of energies between the scrupulous disclosures of law and the passionate unanswerable needs of human beings."[102] In the main, modernist writers' backward glances at the naturalist fiction of the nineteenth century tended to highlight more determinism than play. However, those modernists who engaged Darwin without the lens of nineteenth-century naturalism encountered a very different version of evolutionary theory.

Both uniformitarianism and evolutionary theory opened up new ways of thinking about the earth. The other side to Lyell's law-bound geology is its "insistence on the power of man's imagination, which allows him to recuperate the staggeringly extended time-scale of the physical world."[103] Accordingly, Beer writes, the "world of forms which the geologist inhabits, the slow phantasmagoria of oceans and continents interchanging, rising and falling as if earth were waves, makes for a tranquil elemental view of the universe, in which time implies an extended scale of existence beyond the span of our minds."[104] That way of imagining the earth enables a kind of omniscience without control; it's a perspective that offered Williams an unsentimental reprieve from the stress of modern existence.

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[102] Beer, *Darwin's Plots*, 161.
[103] Ibid., 44.
[104] Ibid., 45.

The imagination also plays a major role in evolutionary theory, though that aspect of Darwin's thought would become clearer in the twentieth century. Darwinian evolution, Beer argues, opened up a new relationship between the imagination and the material world: "Evolutionary theory suggested that fixed laws no longer implied a fixed universe of matter. Instead everything was subject to irreversible change."[105] Contrary to Hulme's assumption, progress is by no means the inevitable result of irreversible change; the "optimistic 'progressive' reading of development can never expunge that other insistence that extinction is more probable than progress."[106] Between the opposite poles of extinction and adaptation, Darwin described an earth characterized by openness, contingency, and creative potential. Williams later wrote that the naturalist "opened our eyes / to the gardens of the world."[107]

In the early 1920s Williams experimented with an avant-garde rhetoric that reflected his scientific and historical worldview. Although the poems of *Spring and All* have been thoroughly assimilated into modernist literary history, there is little consensus on the prose sections. According to Williams, the prose is "a mixture of philosophy and nonsense."[108] He said in 1957, "It made sense to me, at least to my disturbed mind—because it *was* disturbed at that time—but I doubt if it made sense to anyone else."[109] Most critics since have lighted on the mixture's nonsense, not its philosophy, and have understood his "disturbed mind" to be under the influence of Dadaism. Many aspects of the prose run parallel to avant-garde experimentation; it employs collage techniques, juxtaposing disparate statements and topics. When Williams announces his "secret project" as "the annihilation of every human creature on the face of the earth," it certainly

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[105] Ibid., 42.
[106] Ibid., 9.
[107] Williams, *The Collected Poems, Volume 2*, 323. The line is from "Asphodel, that Greeny Flower" (*Journey to Love*, 1955).
[108] Williams, *I Wanted to Write a Poem*, 37.
[109] Ibid.

comes across as absurd. That particular episode in the early prose sections also echoes the final chapter of Marsden Hartley's *Adventures in the Arts* (1921), to which Williams refers at the end of *Spring and All* (*I* 150). In "The Importance of Being 'Dada'," Hartley wrote, "Dada-ism is the latest phase of modernism in painting as well as in literature, and carries with it all the passion for freedom of expression which Marinetti sponsored so loudly in his futuristic manifestoes. It adds likewise an exhilarating quality of nihilism, imbibed, as is said, directly from the author of Zarathustra."[110] In line with Hartley's suggestion, most critics have read *Spring and All* as Williams' most avant-garde text, tracing his poetic techniques to the inspiration of Dadaism and Cubism and other avant-garde movements in the visual arts. The overall project, however, is only avant-garde in the general sense of being experimental. As the prologue to *Kora in Hell* suggests, Williams was not interested in joining or founding any movements.

Several critics have discussed the historical and social resonance of the prose sections of *Spring and All.* Schmidt writes that Williams "bitterly parodies the language the American press used when the United States entered 'the war to end all wars' and astutely connects the self-righteous idealism surrounding our entry into the war with the passage of the Prohibition amendment in 1920."[111] Bruce Comens argues that Williams engages in a larger critique of apocalyptic thinking, that he parodies the Christian apocalypse in order to warn against the disaster of World War I, among other things: "Williams' real target is not nature but the strategies that bind humanity, strategies that had most recently led to the Great War, and which are here subsumed in that ultimate strategy, the Christian apocalypse."[112] *Spring and All*'s apocalyptic parody, Comens writes, implies that if "we truly believe that life's rewards are

[110] Hartley, *Adventures in the Arts*, 247.
[111] Schmidt, *William Carlos Williams, the Arts, and Literary Tradition*, 97.
[112] Comens, *Apocalypse and After*, 96–97.

deferred to the millennium" then "we should act now to hasten its arrival."[113] But Williams' pseudo-apocalypse proceeds backward in time—not full speed ahead to the rapture. (Amid happy chaos in the cities Williams' speaker watches a mythological bird of life "disappear in the distance over the pre-Columbian acres of floating weed" [*I* 92].) Neither of these critical explanations acknowledges the biological overtones of the prose. Williams' irony goes beyond the destruction of World War I, beyond the moralizing influence of Christianity, beyond even the cave drawings he admires in the prologue to *Kora in Hell*: the annihilation only stops at "the lower vertebrates, the mollusks, insects and plants" (91). World War I never threatened to destroy the world's entire population of mammals. So why the mollusks?

For one thing, they overpopulate our visions of evolutionary prehistory, since "mollusk shells in great variety" have been "the most common fossils of all."[114] The great pseudo-catastrophe in the early pages of *Spring and All* is couched in plainly Darwinian terms, more mass-extinction than apocalypse. The text hypothetically jumps back to an earlier phase in evolution, echoing what Beer calls evolutionary theory's "new myth of the past," where "instead of the garden at the beginning, there was the sea and the swamp. Instead of man, emptiness—or the empire of mollusks."[115] Williams' vision of the earth with only plants, insects and the lower vertebrates (fish, amphibians and reptiles) is decidedly peaceful:

> Then at last will the world be made anew. Houses crumble to ruin, cities disappear giving place to mounds of soil blown thither by the winds, small bushes and grass give way to trees which grow old and are succeeded by other trees for countless generations. A marvelous serenity broken only by bird and wild beast calls reigns over the entire sphere. Order and peace abound. (91)

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[113] Ibid., 97.
[114] Rudwick, *Bursting the Limits of Time*, 246.
[115] Beer, *Darwin's Plots*, 127.

The passage emphasizes the slow passage of time, and successions from one generation to the next. This ultimate novelty ("at last will the world be made anew") is precipitated by an initial phase of violence, when "children laughingly fling themselves under the wheels of the street cars, airplanes crash gaily to the earth" (92). However, the new world has to be created over "countless generations," or, in the more precise estimate Williams offers later, "ten million, billion years" (91, 93).

Williams ironically superimposes the cyclical time of mythology and revolution onto the slow, unidirectional process of evolution. The catalyst for a second evolution is more mythological than biological. The bird of life—part phoenix, part albatross, and part quetzal—"has turned into a stone within whose heart an egg, unlaid, remained hidden." Somehow the hidden egg precipitates a repetition of the whole process of evolution: "Every step once taken in the first advance of the human race, from the amoeba to the highest type of intelligence, has been duplicated, every step exactly paralleling the one that had preceded in the dead ages gone by." Here Williams ramps up the irony. The realization that "EVOLUTION HAS REPEATED ITSELF FROM THE BEGINNING"—("Good God!")—is attended by much profusion and over-the-top frenzy. Williams highlights the improbability even as he celebrates: "miracle of miracles a miraculous miracle has gradually taken place during these seemingly wasted eons" (93). But the imagination, ever-present hero of *Spring and All*, acts as a check to all the excitement and reminds us that this *second* evolution is not real. "Only the imagination is undeceived," Williams tells us twice (93, 94).

On the face of it, these sections seem to attack the concept of evolution. Joshua Schuster links Williams with "the avant-garde agenda to intervene in the Darwinian dynamics of

evolution in order to divert human existence to a different state of being."[116] Joseph Riddel, too, argues that Williams "tried to distinguish the 'constantly repeated permanence' of art from the evolutionary repetitions of nature."[117] However, if Williams meant to attack the theory of evolution itself, it stands to reason that he would represent it accurately. He understood the mechanism of Darwinian evolution, which isn't what he describes in *Spring and All*. Evolution by natural selection is contingent on time and place, and the conditions that change with each; it could never repeat itself. Williams' prose account strays from the scientific theory with the appearance of the mythological egg and the speaker's sudden frenzy for violence. The poetry of *Spring and All* only begins after the false, second evolutionary process has ended. The passage in question is easy to overlook, but it changes the meaning of Williams' evolutionary talk:

> In that colossal surge toward the finite and the capable life has now arrived for the second time at that exact moment when in the ages past the destruction of the species *Homo sapiens* occurred.
>
> Now at last that process of miraculous verisimilitude, that great copying which evolution has followed, repeating move for move every move that it made in the past—is approaching the end.
>
> Suddenly it is at an end. THE WORLD IS NEW. (94-95)

The idea that evolution jumped back and started over—"repeating move for move every move that it made in the past"—has been a ruse. Williams is not talking about natural history. He does not critique evolution itself. Rather, he critiques the idea that evolution can be repeated—that we can stage a great historical cycle whereby the gradual unfolding of new life forms is halted, turned back, and done over. Only when the "great copying" of this thought-experiment

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[116] Schuster, "William Carlos Williams, Spring and All, and the Anthropological Imaginary," 121.
[117] Riddel, *The Inverted Bell*, 173.

has ended can life and art move on unfettered, as they might have done in the first place, if left alone.

The prose of *Spring and All* suggests, under multiple layers of irony, that total rupture is not the only means toward a new aesthetics. Williams derisively echoes the violence of futurism ("Kill! kill! the English, the Irish, the French, the Germans, the Italians and the rest" [90]). His language implies that these attempts to make the world anew are ultimately false. In the midst of the recreated world, supposedly new, "men look about in amazement at each other with a full realization of the meaning of 'art'" (93). Williams is being sarcastic. After the second evolution of humanity has been surpassed and the life can go on evolving as usual, he announces that the imagination "is freed from the handcuffs of 'art'" and "the prismatically plumed bird of life has escaped from its cage" (97). Williams satirizes the idea that history follows a series of alternating or repeating phases. The early prose sections of *Spring and All*, with their frenzied rhetoric and non-sequitur chapters, present a finely-negotiated conception of history. Williams negates two models of cyclical time—the avant-garde's violent and recurring interventions into history, and other modernists' return to ancient mythologies—and replaces them with evolutionary time.[118] The implications of the prose sections are born out in "By the Road to the Contagious Hospital," where new life is imminent in the regular mud of a roadside ditch.

4. *Paterson*'s Substratum

Williams continued to frame his work within the broad scale of evolutionary time over the next several decades of his career. The way he did so, however, shifted in the late 1920s,

[118] Bonnie Costello uses the phrase "evolutionary time" in her chapter on Robert Frost in *Shifting Ground*. She argues that Frost "integrates the pastoral and the evolutionary, the stable and the dynamic senses of time" (40). The persistence of pastoral time distinguishes Frost from Williams, who doesn't retain as much of the stable sense of time, and was less conflicted over Darwin's theory of evolution.

after he read Whitehead's *Science and the Modern World* (1925). The book consists of the revised Lowell Lectures that Whitehead delivered in early 1925, and traces the development of modern science in relation to philosophy from the seventeenth century onward. Whitehead's account is holistic in scope. In the preface he writes that he was

> guided by the conviction that the mentality of an epoch springs from the view of the world which is, in fact, dominant in the educated sections of the communities in question . . . . The various human interests which suggest cosmologies, and also are influenced by them, are science, aesthetics, ethics, religion. In every age each of these topics suggests a view of the world.[119]

These views of the world establish themselves over long periods of time: "Thoughts lie dormant for ages; and then, almost suddenly as it were, mankind finds that they have embodied themselves in institutions" (x). Whitehead laid out his intellectual history in order to interrogate philosophical assumptions that were no longer consonant with the view of the world implied by modern science, particularly after Einstein's theory of relativity had been confirmed by measurements of the solar eclipse in 1919. Williams was given a copy of *Science and the Modern World* in December 1926 and finished it in September of the following year. He wrote in his copy: "A milestone surely in my career, should I have the force & imagination to go on with my work."[120] He did go on with his work, and the influence of Whitehead's argument is apparent in several of his writings beginning in the late 1920s.

Chief among the philosophical assumptions that *Science and the Modern World* interrogates is a concept that "underlies the whole philosophy of nature during the modern

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[119] Whitehead, *Science and the Modern World*, ix. Further references to this edition (hereafter abbreviated as *SMW*) will be cited in the text.

[120] Weaver, *William Carlos Williams: The American Background*, 48. Williams' copy of *Science and the Modern World* is held at Fairleigh Dickinson University in Rutherford, New Jersey. He also mentioned the book in letters to his wife after he finished reading it aboard a ship bound for New York (Williams, *Selected Letters*, 79, 85).

period"—namely, the concept of matter defined in terms of *simple location* (84). This is the idea that matter is matter by virtue of being locatable in place and time. To use Whitehead's language, matter is knowable by virtue of the fact that "it is where it is, in a definite finite region of space, and throughout a definite finite duration of time," and can be defined with no reference to "the relations of that bit of matter to other regions of space and to other durations of time" (84). Whitehead sets out to abolish the concept, because, he claims, "among the primary elements of nature as apprehended in our immediate experience, there is no element whatever which possesses this character of simple location" (84-85). We can only know that a material body (say, a rock) occupies a certain bit of space by observing it from another bit of space. The rock comes into being in the admixture of our sensory perceptions and the outside world, what Whitehead calls "the unity of a prehension," which "defines itself as a *here* and a *now*." Our immediate experience goes against the doctrine of simple location because "the things so gathered into the grasped unity have essential reference to other places and other times" (102).

Whitehead's alternative to the philosophy of nature inaugurated in the seventeenth century is what he calls "the objectivist position," the creed "that the actual elements perceived by our senses are *in themselves* the elements of a common world; and that this world is a complex of things, including indeed our acts of cognition, but transcending them" (128-129).[121] Instead of simple location, Whitehead suggests (though he doesn't use this phrase) that matter should be understood in terms of complex location. The locus of this complex location is the body: "we have to admit that the body is the organism whose states regulate our cognisance of the world. The unity of the perceptual field therefore must be a unity of bodily experience. In being aware of the bodily experience, we must thereby be aware of aspects of the whole spatio-

[121] Whitehead reverses the terms of transcendentalism in saying that the common world transcends our cognition, rather than vice versa.

temporal world as mirrored within the bodily life" (133). According to Whitehead's objectivist philosophy, bodily life—which is to say, life on earth—always involves an interplay between the particular coordinates of individual experience and the whole universe.

Williams was particularly interested in the final chapter of *Science and the Modern World*, which asserts that modern professionalism has narrowed peoples' thinking and eroded their ability to grasp the whole. "Each profession makes progress, but it is progress in its own groove," says Whitehead; "the modern chemist is likely to be weak in zoology, weaker still in his general knowledge of the Elizabethan drama, and completely ignorant of the principles of rhythm in English versification" (282). The modern professional only engages the material of his particular specialty, and he encounters everything else as abstraction. This is dangerous, according to Whitehead, because "there is no groove of abstractions which is adequate [by itself] for the comprehension of human life. Thus in the modern world, the celibacy of the medieval learned class has been replaced by a celibacy of the intellect which is divorced from the concrete contemplation of the complete facts" (282-283). Williams reiterates these statements in his notes from 13 November 1927, as he praises Shakespeare's devotion to the "instinctive whole" and says "*That* has never sunk into literature as it has into geography, cosmology. Literature is still medieval, formal, dogmatic, the scholars, the obstinate rationalists—."[122] Like Whitehead, Williams stresses the value of facts. He goes on to declare that "the difficulty of modern styles is made by the fragmentary stupidity of modern life. . . . The only human value of anything, writing included, is intense vision of the facts."[123]

Williams' responses to *Science and the Modern World* are significant because they coincided with his mature attempts to define a poetics of material things. He thought poetry

[122] Williams, *Selected Essays*, 70.
[123] Ibid., 71.

should have "its own internal fire that is 'like' nothing": "That thing, the vividness which is poetry by itself, makes the poem. There is no need to explain or compare. Make it and it *is* a poem. This is modern, not the saga. There are no sagas—only trees now, animals, engines: There's that."[124] Williams' reading of Whitehead begs the question of the scientific and philosophical depth of his mature style. It was a question that goaded Williams throughout his career, as illustrated by the last chapter of his *Autobiography* (1948), where he mentions that "the critics would have it that I, the poet, am not profound. . . . They think, and to think, they believe, is to be profound." His response is the mantra of *Paterson*—"for the poet there are no ideas but in things."[125] The *Autobiography* ends with an account of the poet and his grandson at the top of the Falls: "'How deep is the water? asked Paul. 'I mean at the deepest place?'"[126] His insistence on the sufficient depth of the material world suggests a philosophy of nature akin to Whitehead's objectivism.

In order to understand Williams' response to Whitehead, we have to distinguish between the poet's critique of science as a methodology sufficient unto itself, from his larger worldview, which was informed by scientific discoveries. Based on a cursory reading of his prose from the late 1920s, it would be easy to assume that Williams rejected the argument of *Science and the Modern World*. As Mike Weaver points out, he repeatedly attacks science and philosophy in the essays and notes he composed between 1928 and 1930 under the title, *The Embodiment of Knowledge*.[127] Reading Whitehead's book helped Williams rearticulate the value of poetry as the only human and universal form of knowledge, "the breath of life itself."[128] He contends that

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[124] Ibid., 68.
[125] Williams, *The Autobiography of William Carlos Williams*, 390.
[126] Ibid., 394.
[127] Weaver, *William Carlos Williams: The American Background*, 51–52.
[128] Williams, *The Embodiment of Knowledge*, 26. Further references to this edition (hereafter abbreviated as *EK*) will be cited in the text.

science and philosophy are at best clumsily aware of the means they use to articulate their understanding of the world; all they can manage are "grotesque wall paintings of half men, half women, men walking, sitting down with little feet projecting like birds' legs from the middle of their buttocks, and a wheel under their brains" (26). Poetry is the most complete embodiment of knowledge for Williams because it attends to its own medium, language.[129] Whitehead agrees. He writes that poetry, "the poetic rendering of our concrete experience," achieves a fuller realization of nature than philosophy or science; in fact, he defines his objectivist philosophy in a chapter devoted the romantics poets' reaction to mechanistic science (136). Although Williams broadly criticizes the disciplines of science and philosophy—to which *Science and the Modern World* is still understandably committed—he borrows the terms of his critique from Whitehead himself.

In *The Embodiment of Knowledge*, Williams funnels Whitehead's objectivist philosophy into his burgeoning conception of place. He keeps up his cantankerous feud with science and philosophy, but he uses Whitehead's language at key moments and rearticulates the objectivist position that life, the universe, and everything are the unfolding sum of immediate experiences realized in particular bodies, places, and times. Although his notes and expositions on the subject are cryptic at times, it is clear that *place* is Williams' version of Whitehead's common world, against the philosophy of nature based on simple location. Place unifies human experience with the past and the "un-human":

[129] Williams elaborates, "…if you want to know anything about man, about a man, a woman, how they will act under all conditions—in love, after his head has been cut off, you go to poetry—to Dante, to Donne. This is knowledge, this is the knowledge that the others mirror. All other presentation uses writing to speak about something else, as in the writing of philosophy wherein the philosophers themselves are frequently mistaken since they are not primarily writers. But poetry is all of a piece, knowledge presented in the form of pure writing which is made of the writing itself" (*EK*, 72-73).

> As far as man is concerned, science, poetry, philosophy—are no more than material manifestations of his brain, of equal value whether in clay, iron, or words. . . . Before any of the arguments begin they must be placed, for from place, a place, begins everything—is in fact a place. Synchronously occupied by everything and at the same time space itself—nothing but. . . . Here lies the un-human, call it what pleases, super, per, sub. It is only (if at all) accidentally in the past for the intelligence—but that gives it objectivity. We have not progressed out of it (the past) for it is here now exactly as it was then. It cannot be called the "unknowable," the superhuman before which we plead ignorance—for how have we the data to say that? It is simply the unlogical, including all our past, (our past fits into it, not it into our past)—they are not the same. It is this that may be apprehended only. (130)

Williams' leveling of poetry, science, and philosophy sounds, at first, like the idealist argument whereby the outside world is a projection of the mind. In fact, he has flipped the equation, making these three modes of knowledge the material manifestations of an already material mind. Matter is key to Williams' sense of place. Several critics—and, indeed, the editor of *The Embodiment of Knowledge*, Rob Loewinsohn—point out the correspondence between this passage and Whitehead's description of "the unity of the perceptual field" whereby "every location involves an aspect of itself in every other location" and "every spatio-temporal standpoint mirrors the world" (*SMW*, 133; *EK*, 197). Whitehead's explanation of this idea in terms of "naïve experience" must have been attractive to the poet: "You are in a certain place perceiving things. Your perception takes place where you are, and is entirely dependent on how your body is functioning. But this functioning of your body in one place, exhibits for your cognisance an aspect of the distant environment, fading away into the general knowledge that

there are things beyond" (*SMW*, 133). As a doctor Williams spent most of his time paying careful attention to the functioning of other peoples' bodies, and as a poet he was hyper-aware of his own located-ness in New Jersey. However, place is more than that. It is the "palpable mode by which this 'beginning' is universally objectified, where it centers not as a mystery"; place is "the mode by which all the prelogical is made known to us, the unknowable, the 'beginnings' of whatever it may be" (*EK*, 131). For Williams, place gives objectivity to the past.

In addition to registering his response to Whitehead's objectivism, *The Embodiment of Knowledge* shows us Williams rethinking literary history in terms of natural history. His discussions of Shakespeare set up an opposition between "classical" literature and "naturalism" that is reminiscent of Hulme's account of literary history in "Romanticism and Classicism." For Williams, Shakespeare's naturalism seems to be a matter of careful observation. ("He saw at first hand with the dignity of a discoverer," unencumbered by "classical training" [140].) He uses Shakespeare as inspiration for creating "a new formal category outside of and opposed to the classical modes which date back step by step to Greece and elsewhere" (137-138). Williams' scheme is ultimately quite different from Hulme's: "We must create our basis . . . if we are to survive save as provincials in the art. If we will take the situation seriously in hand as a new people we cannot go back to the classic mode but in the manner of Shakespeare (not in the *style* of Shakespeare) follow his naturalism to a neglected conclusion—a wholly new literature" (138). The reference to surviving as "provincials in the art" demonstrates that Williams was well aware of the implications of the critical misunderstanding of his work as properly regional or pastoral. His understanding of place makes provincialism a non-issue. Its reference is philosophical rather than social; place is the common world in Whitehead's sense, the material basis of everything known and unknown. Williams finally proposes "that every individual, every place, every

opportunity of thought is both favored and limited by its placement in time and place. Chinese 8th cent., Italian 12th, English 15th, French 18th, African, etc" (149). In other words, history is not a parade of alternating forms or styles. History is not cyclical. Williams' model is evolution by natural selection, which emphasizes that the life of any individual—like the survival and adaptation of any species—is contingent on its specific environment. The poet suggests as much when he discusses the "pluralism of experience," by which he means something like variation. He writes that pluralism "offers this release—life, continued productivity not only in fish eggs but thought. It is opposed by the pinching academy which tries to relegate it to paleontology, to the 'crude beginnings,' to an earlier condition. But it is new—so new, that it will shortly be the newest, most pregnant motivation of thought and life in the world" (149). Pluralism enables evolution. Williams' view of natural history emphasizes the future, rather than the dusty origins out of which we have progressed. The past is our material basis and our starting place in the present.

Williams develops his materialist worldview more fully in his unpublished set of "Five Philosophical Essays."[130] The first essay, "Faith and Knowledge," begins with a creation story: "Upon a great round hot and cold mass of eight odd indestructible materials I am thrust in an unconscious state. Here I am whirled about through an unfathomable space while other great round masses, some all ablaze, whirl past by me at great distances" (154). The narrator goes about this world learning what he can, and by the second essay, "Beauty and Truth," he has fallen in with a companion equally interested in acquiring knowledge of the things around him. As they compare notes they discover that their approaches differ—his companion seeks truth

[130] The essays were published in *The Embodiment of Knowledge* (1974), but Loewinsohn explains that "they never formed part of the original typescript . . . . They are included here as a somewhat more consecutive articulation of many of the concerns Williams takes up in *The Embodiment*. Both their style and the physical condition of the typescript indicate that they were written much earlier than the bulk of this collection, most likely during the second decade of this century" (xxii).

through analysis while the narrator seeks it through beauty—and they part ways. On his own the narrator pursues beauty in the manner of a romantic poet; he turns to nature, but beauty eludes him so thoroughly that he has to devise an abstract philosophy in order to grasp it: "I no longer see trees but beauty in form of trees and thus a new life. All nature now becomes a symbol for me to use" (164). In this statement Williams clearly echoes—and subverts—Emerson's account of language in *Nature* (1836). Emerson's assertions that "words are signs of natural facts" and that "nature is the symbol of spirit" grew out of his idealist philosophy, which was entirely at odds with Williams' materialist view of natural history.[131] At the end of "Beauty and Truth" Williams has the scientist respond to his transcendentalist narrator-poet. After they have each perfected their approaches to the truth and "arrived at some degree of eminence among men," they meet again. The scientist narrates his process of discovery, which has led him to abstractions much like those of the poet, and then announces, "But let us look out again. We have gotten ourselves well into abstraction, well off the earth and nothing remains but the earth itself, these same troublesome materials which we have neglected" (168). Williams gives the scientist the last word; he declares that "the very existence of this material" gets at "the endless mystery of life" and "the most fascinating part of truth" (168). The implications are clear. Long before he was seduced by Whitehead's philosophy of nature, Williams admonished the romantic tradition for leaving the writer "suspended in ether with both feet off the ground," and affirmed science's direct engagement with the materials of the earth (168).

Later in the "Five Philosophical Essays" Williams responds more fully to Emerson's idealism. His earlier statement that "all nature now becomes a symbol for me to use" points to Emerson's philosophy of language, so attractive to Fenollosa and Pound. For Emerson, the emblematic nature of words was an extension of the emblematic nature of things:

[131] Emerson, *Essays and Lectures*, 20.

> Every appearance in nature corresponds to some state of the mind, and that state of the mind can only be described by presenting that natural appearance as its picture. An enraged man is a lion, a cunning man is a fox, a firm man is a rock, a learned man is a torch. A lamb is innocence; a snake is subtle spite; flowers express to us the delicate affections.[132]

Williams rejects Emerson's theory of language. By the fourth of his "Five Philosophical Essays," "Love and Service," he has shed the voice of the transcendentalist poet and he insists that we must not mistake metaphors for reality: "For I could live forever in a hut in a valley and if I were born there I would mistake the valley for peace, the hut for comfort, my dog for love, one flower for beauty and *myself for king of creation* just as has been done many times in the past. Therefore I travel" (182; emphasis mine). Williams essentially accuses Emerson of being provincial. This might be considered an odd move for a poet who lived in one place for his whole life. However, his charge of provincialism has more to do with natural history than geography. Against the timeless view of nature, he argues that words and natural objects alike are "perishable" (182). From his evolutionary perspective, the transcendentalist philosophy of nature and language overestimates the dominion of the human mind. For Williams, the mind is related to nature through its embodiment and not by virtue of abstract correspondences. The New Jersey poet places language in Whitehead's common world of thought and things. He ultimately answers Emerson, Fenollosa, and Pound with the roar of the Falls in *Paterson*.

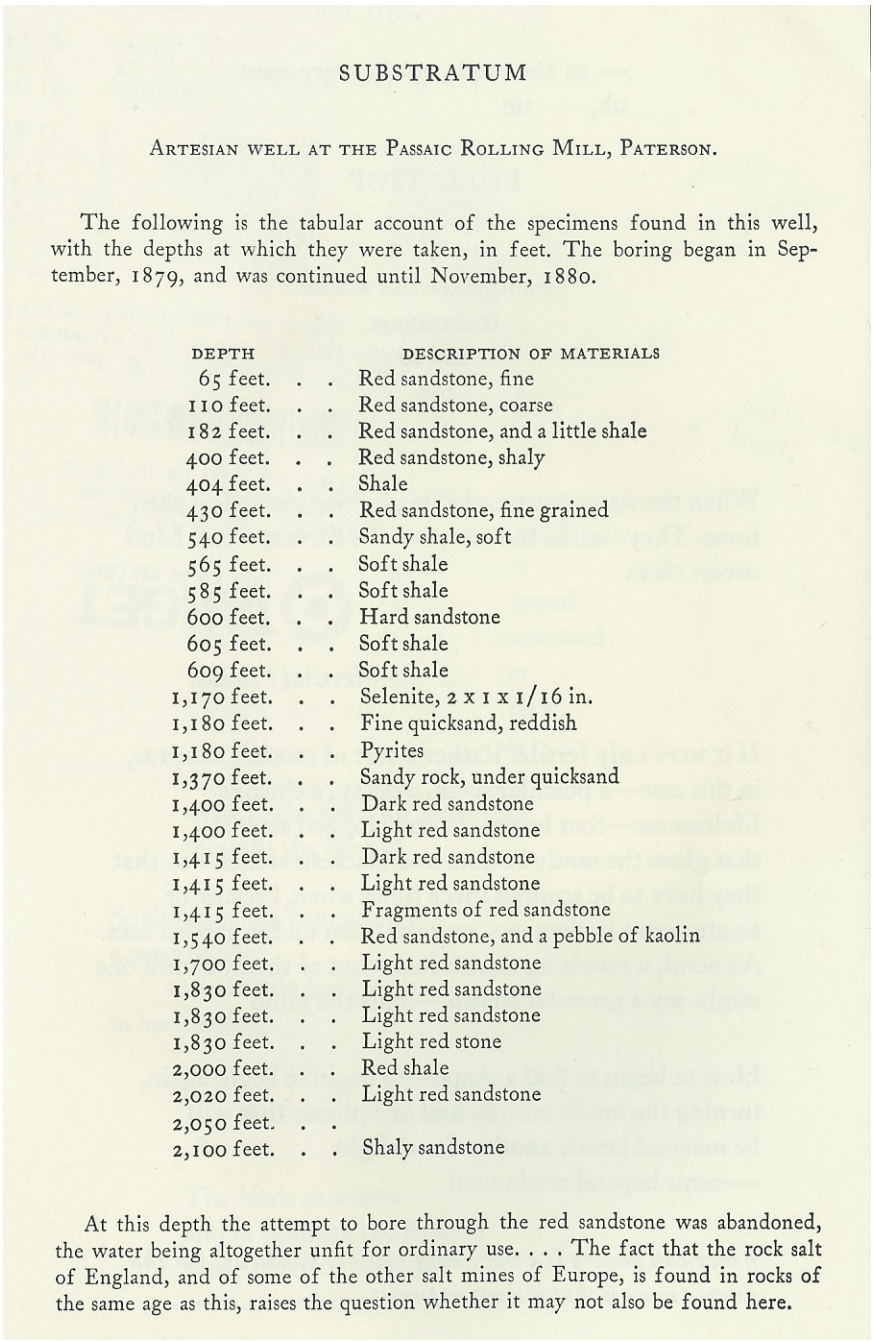
In *Paterson* we can see Williams' geological timescale embedded in place, and his evolutionary historiography enacted by the Passaic River. Perhaps the best illustration of the poet's materialism comes in the document Williams incorporates near the end of Book Three (1949), a table that itemizes the layers of rock and soil found at various depths at the site of a

[132] Ibid.

proposed artesian well (see fig. 1). Coming as it does after extended descriptions of things swept up by the river, the table implies that everything is ultimately transformed into cumulative layers of sandstone and shale. The table and the summary that accompanies it were taken from William Nelson's *History of the City of Paterson and the County of Passaic New Jersey* (1901), though Williams added the title "Substratum" himself.[133] Immediately preceding the table is an excerpted letter from Pound, dated October 13, 1948, which implores Williams to read the Greeks ("re read *all* the Gk tragedies in / Loeb.—plus Frobenius, plus Gessell" and so on [138]). The placement of the "Substratum" table in relation to Pound's letter was deliberate; Williams specified that he wanted the letter "to occupy a full page, as it stands—facing the page following" (*P* 285). Jay Rogoff reads the table as a continuation of the letter, and of Pound's strategy of looking to the past for knowledge: "Confronted with Pound's smug dictatorship, the poem rebels. Dr. Paterson has been digging around in the Library throughout Book 3, so Williams immediately presents a metaphor for this attempt to bore into the past. . ."; he writes that the "chart not only works as a metaphor, but also shows the poem literally digging into the geological past, directly confronting it and discovering nothing new."[134] I would argue that the relation between Pound's method of digging into the past and Williams' tabular account of substrata is only clear if we understand the poets' competing notions of language and history, as derived from their competing philosophies of nature. Williams' listing of geological strata is not metaphorical in the Poundian (or Fenollosean) sense. The point of the substratum table is not to find something new; it is to locate Paterson in time and place—in time *through* place.

[133] Williams, *Paterson*, 252, 286. Further references to this edition (hereafter abbreviated as *P*) will be cited by page number in the text.

[134] Rogoff, "Pound-Foolishness in 'Paterson'," 37.



SUBSTRATUM

ARTESIAN WELL AT THE PASSAIC ROLLING MILL, PATERSON.

The following is the tabular account of the specimens found in this well, with the depths at which they were taken, in feet. The boring began in September, 1879, and was continued until November, 1880.

DEPTH	DESCRIPTION OF MATERIALS
65 feet. . .	Red sandstone, fine
110 feet. . .	Red sandstone, coarse
182 feet. . .	Red sandstone, and a little shale
400 feet. . .	Red sandstone, shaly
404 feet. . .	Shale
430 feet. . .	Red sandstone, fine grained
540 feet. . .	Sandy shale, soft
565 feet. . .	Soft shale
585 feet. . .	Soft shale
600 feet. . .	Hard sandstone
605 feet. . .	Soft shale
609 feet. . .	Soft shale
1,170 feet. . .	Selenite, 2 x 1 x 1/16 in.
1,180 feet. . .	Fine quicksand, reddish
1,180 feet. . .	Pyrites
1,370 feet. . .	Sandy rock, under quicksand
1,400 feet. . .	Dark red sandstone
1,400 feet. . .	Light red sandstone
1,415 feet. . .	Dark red sandstone
1,415 feet. . .	Light red sandstone
1,415 feet. . .	Fragments of red sandstone
1,540 feet. . .	Red sandstone, and a pebble of kaolin
1,700 feet. . .	Light red sandstone
1,830 feet. . .	Light red sandstone
1,830 feet. . .	Light red sandstone
1,830 feet. . .	Light red stone
2,000 feet. . .	Red shale
2,020 feet. . .	Light red sandstone
2,050 feet. . .	
2,100 feet. . .	Shaly sandstone

At this depth the attempt to bore through the red sandstone was abandoned, the water being altogether unfit for ordinary use. . . . The fact that the rock salt of England, and of some of the other salt mines of Europe, is found in rocks of the same age as this, raises the question whether it may not also be found here.

Figure 1. The substratum table in *Paterson* 3.3 (139).

In one sense the table can be read as Williams' attempt to answer his critics' charges of superficiality with a pun on depth—as in, *I'll show you how deep I can go without ever leaving the realm of material things*. The quality of depth in geological strata (like that suggested by the

question at the end of Williams' *Autobiography*—"How deep is the water?")[135] is different from the notion of depth as meaning that resides below the surface, or the spiritual truth symbolized by the material thing. Williams had a fundamentally different view of material things. The substratum table implicitly comments on Pound's understanding of history and his transcendentalism. In the final chapter of *Nature*, Emerson writes,

> When I behold a rich landscape, it is less to my purpose to recite correctly the order and superposition of the strata, than to know why all thought of multitude is lost in a tranquil sense of unity. I cannot greatly honor the minuteness in details, so long as there is no hint to explain the relation between things and thoughts; no ray upon the *metaphysics* of conchology, of botany, of the arts, to show the relation of the forms of flowers, shells, animals, architecture, to the mind, and build science upon ideas.[136]

Against Emerson's epistemology of resemblances and metaphysical unity, Williams builds his art upon things. His use of the singular "Substratum" to describe multiple substrata implies that the table is more than a pun on material depth. In addition to the obvious meaning of *substratum* as a layer of soil, the title recalls a longstanding philosophical debate. Substratum is the term John Locke uses, in a rather muddled way, to explain substance in general. The trouble begins when Locke describes the qualities of things—for example, the quality of being round or the quality of being orange—as "simple ideas," effectively locating them in the mind of the observer. In *An Essay Concerning Human Understanding* (1693), Locke explains that the mind is "furnished with a great number of simple ideas conveyed in by the senses" and eventually realizes that "a certain number of these simple ideas go constantly together"—i.e., roundness and orangeness often coincide when a piece of fruit is at hand. He continues, "not imagining how

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[135] Williams, *The Autobiography of William Carlos Williams*, 394.
[136] Emerson, *Essays and Lectures*, 43.

these simple ideas can subsist by themselves, we accustom ourselves to suppose some *substratum* wherein they do subsist and from which they do result; which therefore we call *substance*."[137] Jonathan Bennett remarks that "we can only smile at the idea that unless something lies under the qualities and props them up they will . . . what? Fall flat? Scatter? Disintegrate? But if that were the whole source of the trouble, we could walk away from it as a mere muddled metaphor in which substratum is like a shelf."[138] One problem with Lockean "substratum," he explains, is that we imagine it to exist apart from the qualities it bears to our senses—our "simple ideas"—but we can never understand what *kind* of thing it is, or what qualifies it to bear qualities, because we only know things by their qualities.[139] The problem is that Locke locates substratum in the semisolid realm between mind and not-mind; he divorces ideas from things. It is the same problem that Whitehead addresses with his objectivist philosophy, the effect of which is "to edge cognitive mentality away from being the necessary substratum of the unity of experience. That unity is now placed in the unity of an event. Accompanying this unity, there may or there may not be cognition" (*SMW*, 134). In short: things are not neatly conveyed in to the sovereign mind; the mind travels out. Whitehead insists that if "cognisance conveys knowledge of a transcendent world, it must be because the event which is the bodily life unifies in itself aspects of the universe" (133-134). This is the unity that Williams affirms in *Paterson*, a place that is both man and city. Its substratum is the physical shelf upon which all its particular qualities rest and into which they are folded over time.

Williams' attention to facts, minute details, and concrete particulars grows out of his materialist sense of natural history. *Paterson* famously makes its "start / out of particulars"; the river "flows / and encircles: / / shells and animalcules / generally and so to man, / to Paterson"

[137] Locke, *An Essay Concerning Human Understanding*, 208.
[138] Bennett, "Substratum," 198.
[139] Ibid., 199.

(3, 5). Williams imagines the passage of time as the falls of the Passaic River: "The past above, the future below / and the present pouring down" (144). In this important sense the world of Paterson is fundamentally different from Emerson's transcendental natural world, typified by the poem that opens *Nature*:

> A subtle chain of countless rings
> The next unto the farthest brings;
> The eye reads omens where it goes,
> And speaks all languages the rose;
> And, striving to be man, the worm
> Mounts through all the spires of form.[140]

Emerson's circle is a form that unifies all things in the minds of men. Williams' circle, on the other hand, is the condition of being engulfed. His animalcules do not strive to become man, as does Emerson's worm; in the Passaic River man and worm are encircled by the same onrushing force. *Paterson* treats bodies and things as part of the same material world. Humans and their objects are equally thing-like, equally subject to the forces that act upon plants, animals, rocks, and soil, which is to say, equally subject to history.

Paterson's account of natural history emphasizes gradual, ongoing change. Williams wrote that he originally conceived of the first four books as corresponding to "the river above the Falls, the catastrophe of the Falls itself, the river below the Falls and the entrance at the end into the great sea" (*P*, xiii). If the Passaic Falls is a catastrophe, it is nothing like a revolutionary torrent. Catastrophic events—like the earthquake recounted at the end of Book One or the "Cyclone, fire / and flood" that destroy the library at the beginning of Book Three—are ultimately subsumed by the steady force of water, the same kind of force that Lyell contended

[140] Emerson, *Essays and Lectures*, 5.

had reshaped the surface of the earth over the course of millennia. The river gathers abstract and material debris in its wake: a broken oar; a dead dog; stories overheard on the street or found in old newspapers; Pound's reading recommendations; documents from the city's archives. After the flood "most things have lost their / form" and "lean in the direction the current went"; what is left is "a sort of muck, a detritus" and "decay" (140). Time marches on: "There is no recurrence. / The past is dead" (142). The materials of the present are tumbled around, pushed downstream, and eventually "baked by endless desiccations into / a shelly rime"—like the "fossil conch" whose "mud / and shells" are "baked by a near eternity / into a melange, hard as stone" (143). All of the things that constitute the life of Paterson are continually broken down, rearranged, and transformed into the substrate upon which man and city go on living.

Williams' subtle divergence from the revolutionary historiography of the avant-garde and the transcendental assumptions of Poundian modernism can be easy to miss, since he had so much in common with Pound and other avant-garde figures. However, his adherence to a worldview structured by geological and evolutionary time increasingly shaped his poetics as his career went on. Williams' conception of the new is modeled on the slowly emerging novelty of a world undergoing continual, ordinary change. His reading of *Science and the Modern World* gave him a way to unite his evolutionary timescale with a poetics of things. Whitehead showed him that matter's relationship to space and time is never simple; every material thing exists both in the here and now, by way of the human body that registers its existence, and by way of other places and times. Williams conceived of "place" as the complex embodiment of human experience within the material world and its history. His 1932 review of Logan Clendening's *The Human Body* ("Water, Salts, Fat, etc.") stands as a clear statement of his materialism and his faith in the worldview implied by science: "We see a play of slow and solid understanding

gradually coming about through vague apprehension followed by careful rejection of the inessential until we arrive at last at a very simple and thoroughly physical explanation of everything" (*I*, 364). Williams found the "physical explanation of everything" illuminating, rather than oppressive, because he understood the material world to embody all the truth, mystery, and possibility of the unknown, alongside the mundane objects of everyday life.

Williams' materialist poetics served as a model for younger modernists who incorporated evolutionary and geological history into their work; many of the poets I discuss in later chapters admired Williams. However, he was not the purveyor of the scientific worldview they shared, and they developed their own aesthetic responses to it. Rexroth's correspondence with Zukofsky in January 1931 suggests that he was already thinking beyond Williams' "bare awareness of *sensa*, or 'localism.'"[141] Forty years later Rexroth praised *Paterson* as "a philosophical epic, although its overt philosophizing is rather childlike": "Its implicit philosophy, the pedal point that sustains all its manifold melodies and recitativas, is a profound philosophy indeed—'It is the thing itself which is transcendent.'"[142] Second-generation modernists elaborated on Williams' philosophy and aesthetics as they immersed themselves more fully in the details of geological and evolutionary history.

[141] Rexroth, "To Louis Zukofsky," 22.
[142] Rexroth, *American Poetry in the Twentieth Century*, 83.

Chapter 2: Animal Kinship in James Agee's *Let Us Now Praise Famous Men*

1. Our Older Cousins, the Animals

William Carlos Williams wasn't the only American poet in the 1920s to imagine human extinction. On the other side of the continent, Robinson Jeffers had been developing his own "inhumanist" attitude since the end of World War I, when "a new manner of thought and feeling" came to him, "based on a recognition of the astonishing beauty of things and their living wholeness, and on a rational acceptance of the fact that mankind is neither central nor important in the universe; our vices and our blazing crimes are as insignificant as our happiness."[143] (Jeffers was quick to explain that this attitude "is neither misanthropic nor pessimist nor irreligious, though two or three people have said so . . . but it involves a certain detachment.")[144] From the 1920s onward, his poetry was singularly aware of deep time. Like Williams, Jeffers was officially unimpressed by urban centers of culture and civilization by middle adulthood. He too had gone to medical school, was thoroughly versed in the major scientific texts of the nineteenth century, and again like Williams, neither recoiled against their ideas nor abandoned them as outmoded narratives of progress.[145] The California poet explained his intellectual development to a literary critic in the late 1930s: "My father was a clergyman but also intelligent, and he brought me up to timely ideas about the origin of species, descent of man, astronomy, geology, etc., so that progress was gradual, none of the view-points of modern science came as a revelation."[146] Neither did they come as a shock, Jeffers implies, even if his

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[143] Jeffers, *The Selected Poetry of Robinson Jeffers*, 719.

[144] Ibid.

[145] Waggoner, "Science and the Poetry of Robinson Jeffers," 276. Jeffers studied medicine at the University of Southern California but never completed his medical degree.

[146] Jeffers, *The Selected Letters of Robinson Jeffers*, 255; Waggoner, "Science and the Poetry of Robinson Jeffers," 287.

critics found the inhuman attitude of modern science difficult to swallow.

These poets' familiarity with nineteenth-century science meant they were unafraid to pull out the starker details of geology or evolutionary theory to make a point. Although most often remembered for love poems, Edna St. Vincent Millay was entertaining the idea of human extinction more bluntly by the late 1920s than Williams ever did. In 1928 the *St. Louis Post-Dispatch* ran a series of Millay's sonnets entitled "Epitaph for the Race of Man."[147] Unlike Williams, she offers no imaginary rebirth or second evolution. Her poems dramatize several close calls wherein scattered humans barely survive flood, earthquake or volcano. By series-end humanity has gone the way of the dinosaur in the second sonnet, who "slept contented, in a world he knew" and lived "with the race in mind"—"but to no avail."[148] Millay describes an earth oblivious to civilization, where the cumulative racket of humanity registers as the "patient beating of the animal heart."[149] On a planet that cannot "tell the leopard and the newt apart" *Homo sapiens* is just another species of animal, outlived by mountain sheep.[150] Millay's later poem, "Apostrophe to Man" (1934), cuts people down with as much wrath as anything by Jeffers: "Detestable race, continue to expunge yourself, die out. / Breed faster, crowd, encroach, sing hymns, build bombing air-planes."[151] Jeffers takes the same tack in poems like "Shine, Perishing Republic" (1923), but more often he simply reminds readers of the many species he would rather see live, among them, seals, horses, and hawks. For Jeffers, thinking of *Homo sapiens* as another kind of animal was not a debasement; if anything, it offered a perspective that would help people thrive, rather than kill each other off: "Man, much more than baboon or wolf, is an animal formed for conflict; his life seems to him meaningless without it. Only a clear shift

[147] Atkins, "Man and Animals in Recent Poetry," 272.
[148] Millay, *Collected Sonnets*, 165.
[149] Ibid., 167.
[150] Ibid.
[151] Millay, *Wine From These Grapes*, 42.

of meaning and emphasis, from man to what is not man, nor a man-dreamed God, a projection of man, can enable him in the long run to endure peace."[152] Against the nineteenth-century idea that life always progresses toward increasing complexity, Jeffers emphasized humanity's rudimentary outlook. He later wrote, "An infant feels himself to be central and of primary importance; an adult knows better; it seems time that the human race attained to an adult habit of thought in this regard."[153] In order to mature as a species, humanity would need to drop its infantile anthropocentrism.[154] Out of their profound disappointment with human behavior, Jeffers and Millay both turned to animals.

They were not alone. In 1936, literary critic Elizabeth Atkins counted 236 writers in the U.S. "publishing earnest and philosophical poems about animals" since the early 1920s. She attributed the trend largely to the popularization of evolutionary theory.[155] "Before our day, to be sure, there have been scattered poems about animals, but nothing like the mass of our new poetry could have arisen till the theory of biological evolution had not merely been formulated and accepted but also become part of the unconscious background of men's thinking, so that its subtler implications might color the poet's moods."[156] The animal poetry of the 1920s and 1930s, she writes, "sees man and animals in perspective against a vast background of evolutionary æons" and "regards the animal as the elder brother of man, more at home on the earth, yet an intimate comrade on our strange and perilous journey through time."[157] Atkins was echoing a statement by George Santayana, who wrote in 1924, "The world is old, and can have changed but little since man arose in it, else man himself would have perished . . . Sundry

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[152] *The Selected Poetry of Robinson Jeffers*, 722.
[153] *Ibid., 719.*
[154] See also Zaller, "Robinson Jeffers and the Uses of History." Zaller makes a similar point when he says that "Jeffers ironically reverses the post-Darwinian progression of inorganic to organic matter and primitive to complex life-forms, calling the process (with a nod to Genesis) a 'fall'" (32).
[155] Atkins, "Man and Animals in Recent Poetry," 263.
[156] Ibid.
[157] Ibid.

animals not much older than man . . . have had time to take the measure of life, and have settled down to a routine of preferences and habits which keeps their heads as a race above water."[158] Santayana's animals were not much older than man but possibly a good deal smarter. After the horror of the World War I, many poets began to recognize a new kinship with their lesser creatures.

The newfound respect for animals articulated by Jeffers, Millay, and other writers echoed contemporary public discourse about the nature of evolution and the role of humanity in the evolutionary timescale. During the first several decades of the twentieth century, early paleontology and anatomical studies of fossils had begun to replace Darwin's hint of monkeys with a more precise lineage. Although natural selection was not widely accepted as the primary mechanism of evolution until the 1940s, public acceptance of evolution itself rose considerably in the meantime.[159] Publications like *The Scientific Monthly* found much to admire in the creatures peopling our genealogy. In 1920, for example, American biologist Roy L. Moodie described the enterprising beasts who brought us out of the tidal flats: "These small creatures are the oldest known land vertebrates and represent that most interesting and romantic phase when the animals which later resulted in the evolution of man were beginning to come out of the water and live a portion of their existence on land."[160] Reconstructing the details of those long evolutionary histories gave scientists—and the public—a chance to imagine themselves as different kinds of animals. Moodie continued, "It is difficult for us, in these noisy times, to realize the stillness which pervaded all nature in this period when animals were first considering an existence away from the water. It took eons of time for them to develop sufficient courage for

[158] Ibid., 268.
[159] Bowler, *Evolution: The History of an Idea*, 246–248, 307–318.
[160] Moodie, "Evolution's Most Romantic Moment," 465.

a complete separation from their ancestral home."[161] This account shares an obvious narrative of progress with its nineteenth-century forebears, but it does not dismiss animals as crude prototypes of humanity or fixate on the contrast between *Homo sapiens* and Paleozoic mud puppies. Instead it imagines their existence with something like nostalgia, endowing them with emotion as well as consciousness.

Many Anglo-American biologists had already begun to question their attitudes toward evolution in the lead up to World War I. Germany's celebration of the principles of social Darwinism provoked strong reactions; "in numerous presidential addresses and popular articles, prominent American biologists such as Leon J. Cole, Vernon L. Kellogg, David Starr Jordan, William Patten, Raymond Pearl, and William Ritter attacked what they perceived as a distorted view of Darwinian evolution taken by Germany as justification for international war."[162] In his critique of Friedrich von Bernhardi's *Germany and the Next War* (1911), I. W. Howerth suggested in 1916 that the Prussian general's view of war had much in common with U.S. and British imperialism ("current articles in English and American periodicals on the nature of war and the necessity of preparedness would serve our purpose quite as well"). He concluded, amending Theodore Roosevelt's advocacy of the strenuous life, that "man can be strenuous without being destructive."[163] The prospect of world war forced these scientists and scientific writers to reexamine the Victorian picture of evolution as a process driven by unadulterated competition, if not outright combat. Popular writing about biology and evolution continued to heed that lesson after the war. B. W. Kunkel summarized the problem: "Far back in the days of pre-history, some genius suggested that man was made in the image of god and from that time on, there has been a pride of birth on the part of man, reaching a climax with the Junkers of

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[161] Ibid.
[162] Mitman, *The State of Nature: Ecology, Community, and American Social Thought, 1900-1950*, 59.
[163] Howerth, "War and the Survival of the Fittest," 592.

Prussia and their super-manhood."[164] To counterbalance popular faith in evolutionary progress, he undertook a survey of human "maladjustments," including the disadvantages of the upright skeletal position and certain destructive impulses—which he likens to other "perverted reactions in animals," like moths flying into the candle flame.[165]

Like the poets, biologists in the 1920s held particular respect for those species of animal that had managed to survive relatively unchanged through vast geological epochs. Robert E. Coker remarked in 1920, "Having held its own for such long ages, we may well impute to the turtle clan, biologically speaking, a rare tenacity of purpose, and a signal ability to attend to the essential business affairs of life regardless of the phenomena which, as age succeeded age, have worked marvelous changes upon the face of the earth and the conditions of animal existence."[166] Longevity suddenly implied great wisdom. In one of the more fanciful examples of this trend, William Morton Wheeler, who studied the social behavior of insects at Harvard, relayed a letter from the king of a termite colony in West Africa. The termite king ("Wee Wee") explained to readers of *The Scientific Monthly* how his species had "'not only existed but flourished for a period of at least a hundred million years'" and noted, too, that "though larger and more versatile, you and your fellow human beings are after all only animals like myself."[167] The presence of other animals in the family tree did not call up the same dread for post-war readers that it had in the late nineteenth century.

The postwar shift in attitude about humanity's evolutionary past was not universal, however. The highly publicized 1925-26 debate over Wells's *Outline of History* (1920) in Britain and the publicity surrounding the 1925 Scopes "Monkey" Trials in the U.S. both testify

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[164] Kunkel, "The Disadvantages of Being Human," 38.
[165] Ibid., 39–40.
[166] Coker, "The Diamond-Back Terrapin: Past, Present, and Future," 172.
[167] Wheeler, "The Termitodoxa, or Biology and Society," 114.

to the ongoing tension between an evolutionary account of human origins and various incarnations of traditional Christian cosmology.[168] At bottom, the issue was not whether newts deserve our admiration or leopards our fellowship, but how to deal with the idea that humanity does not constitute the central purpose of the universe. Joseph Wood Krutch wrote in *The Modern Temper* (1929) that man

> has arrived at a point where he can no longer delude himself as to the extent of his predicament[;] should he either become modified or disappear the earth would continue to spin and the grass to grow as it has always done. Of the thousands of living species the vast majority would be as unaware of his passing as they are unaware now of his presence, and he would go as a shadow goes. His arts, his religions, and his civilizations—these are fair and wonderful things, but they are fair and wonderful to him alone.[169]

His book ends with the ambivalent statement that "ours is a lost cause and there is no place for us in the natural universe, but we are not, for all that, sorry to be human. We should rather die as men than live as animals."[170] Krutch refuses to concede the special status of humanity, which, in the absence of spiritual justification, comes down to the dividing line between people and non-human animals. Literary critic I. A. Richards gave voice to a similar feeling in *Science and Poetry* (1926), where he describes "a sense of desolation, of uncertainty, of futility, of the groundlessness of aspirations, of the vanity of endeavor" that attended the rise of the scientific

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[168] For more on the debate between Wells and Hilaire Belloc, T. S. Eliot, and others, see Fluet, "Modernism and Disciplinary History: On H. G. Wells and T. S. Eliot," 301–311. Interestingly, the Wells-Belloc debate and the Scopes Trial broke along opposite social divides. In Britain, Wells positioned himself as an amateur who wanted to provide the "everyman" with a comprehensive and overarching view of history, which his opponents took as an attack on high culture. (Belloc defended the authority of the Catholic Church, and Eliot the sanctity of the professional disciplines.) In the U.S., Southern supporters of Tennessee's Butler Act, which banned the teaching of evolution in public schools, were often characterized as "yokels" by Northern journalists (see Larson, *Summer for the Gods*.

[169] Krutch, *The Modern Temper*, 14.

[170] Ibid., 169.

worldview. The casualty of this new cosmology is the "Magical View of the world," "the belief in a world of spirits and powers which control events, and which can be evoked and, to some extent, controlled themselves by human practices."[171] Richards takes this belief to be the foundation of ritual and art, and raises the question of whether the art of poetry will die out along with the last vestiges of the magical worldview. Under science, he asserts, "our attitudes and impulses are being compelled to become self-supporting; they are being driven back upon their biological justification, made once again sufficient to themselves."[172] Just as Krutch would do several years later, Richards falls back on the human-animal divide. He insists that the "more finely developed individuals"—poets among them—"cannot live by warmth, food, fighting, drink and sex alone" and, moreover, that the individuals "least affected" by the shift to a scientific worldview "are those who are emotionally least removed from the animals."[173] One's relation to animals had cosmological significance in the 1920s. Writers like Jeffers, Millay, Santayana, and Wells invited the comparison; they looked to other animals for relief from the anthropocentrism which, they believed, had led to the massive destruction of World War I. For Krutch, Richards, and other defenders of traditional culture, those writers' placement of *Homo sapiens* along a historical continuum with other life forms amounted to a denial of a metaphysical universe that granted humanity exceptional status, and threatened to dissolve everything good about human values and endeavors.

This chapter explores the implications of the scientific worldview that coalesced in the 1920s and 1930s, by way of an unlikely piece of writing: James Agee's *Let Us Now Praise Famous Men* (1941). Agee had been working as a staff writer at *Fortune* magazine for four

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[171] Richards, *Poetries and Sciences*, 50. Richards reissued a slightly revised edition of the 1926 volume, with "re-phrasings" and a new appendix, in 1935, which he reprinted in 1970 with added commentary, under the revised title (7-8).

[172] Ibid., 64.

[173] Ibid., 64–65.

years by 1936, when he was given an assignment to document the lives of white tenant farmers with photographer Walker Evans. The two spent several weeks in July and August of that year getting to know three families in Hale County, Alabama. When the resulting article was turned down by *Fortune*, Agee spent the next few years expanding his account into the most complex and reflective volume of literary prose to emerge from Depression-era America.

As a work of social documentary, *Famous Men* would seem to be more concerned with the practical situation of tenant farmers in the Southern United States than with humanity's place in the universe. There is little in Agee's biography to suggest he would be predisposed to support the scientific challenge to anthropocentrism following World War I. In addition to his Episcopalian background, his early training as a writer included a large dose of traditional humanism. Agee took two classes from Richards as a Harvard undergraduate in the spring of 1930, and that summer he relished the opportunity to socialize with the literary critic at the home of Arthur and Louise Saunders. He wrote that he "felt as though he were communing with a mystic, a priest of literature, who was at the same time maddeningly elusive."[174] Agee's encounters with Richards "encouraged him to develop his innate powers of description until he possessed a microscopic accuracy and eye for detail" and "unleashed his love of language," according to Laurence Bergreen.[175] However, Agee did not share Richards's despair over the immanent loss of a magical view of the world. In the early 1930s he counted Jeffers and Millay among his favorite poets; after college he started reading popular accounts of physics, astronomy, and evolutionary biology. The scientific worldview exerted a significant influence over his approach to writing. His notes from the mid-1930s eschew his literary influences: "Farmer Frost, everyone knows, is out of date—Jeffers is a hybrid minor prophet & bad

[174] Bergreen, *James Agee: A Life*, 83.
[175] Ibid.

tragedian. . . . Eliot's just a lousy Anglican metaphysician. Why not be up to date? What does up to date mean? It means an interest in science, an interest in social and political problems."[176] Agee's interests in science and social and political problems come together in *Famous Men*.

This chapter argues that the scientific worldview is integral to Agee's treatment of the ethics of social relationships and documentary representation. By "scientific worldview" I mean the post-World-War-I critique of traditional human-centered cosmologies, based on the sentiment that humanity should be understood as a recent innovation in the long and complicated history of life on earth. Animals were central to that critique, and they play an important role in *Famous Men*. The book frequently compares its human subjects to a variety of non-human animals; in so doing it subverts not only the assumption that humans are categorically different from other animals, but also the idea that certain humans are closer to nature than others, by virtue of being less civilized, more animalistic, and thus lower on the evolutionary ladder. Agee engages a more accurate and egalitarian version of evolutionary history. He does not imply that the poor, rural tenant farmers are any more or less beastly than the smug, middle-class readers he imagines for the book. He explicitly frames the farmers' lives—and his own life—in the broad scale of evolutionary time and astronomical space, wherein all of humanity occupies the same marginal position. This aspect of his engagement with the scientific worldview is significant because it solves one of the major challenges posed in the front matter of *Famous Men*. Agee was acutely aware of the social and class differences between himself, his readers, and the tenant farmers who were his subjects, and he believed other documentary books had elided those differences in order to force superficial identification between readers and their subjects. *Famous Men* uses the expanded frame of the scientific worldview to establish shared experience

[176] Agee, *James Agee Rediscovered*, 190. Further references to this edition (hereafter abbreviated as *JAR*) will be cited in the text.

and common cause without recourse to pity or sentimentality.

2. James Agee's Scientific Worldview

The ethics of social relationships is one of Agee's chief concerns in *Famous Men*. By the time his book was published in August 1941, the onset of World War II had shifted public attention away from the Depression and the documentary genre; the book drew mostly negative reviews and sold just 600 copies. When Houghton Mifflin reissued it two decades later, *Famous Men* was reborn amid the cultural climate of the 1960s and growing interest in the New Journalism.[177] The first wave of scholarly responses to *Famous Men* emerged from this glowing revival. In *Agee* (1966), for example, Peter Ohlin writes that a "proper response to the book . . . might be: to pray, to join the Peace Corps, to make love, to listen to Beethoven, to eat a good meal, to go without a meal, to paint a painting, or build a cathedral."[178] More recent critics have been troubled by the ambiguity of Agee's social and political stance, which they explain in terms of his modernist literary aesthetics. Ella Zohar Ophir calls *Famous Men* "a case study in how modernist self-consciousness hopelessly dissolves political clarity."[179] Paula Rabinowitz calls it "a paradigmatic instance of the problems intellectuals face when they search out and describe their social others."[180] These critics have missed the point. Agee's self-consciousness was not part of an attempt to elevate documentary into high art, nor was it a symptom of his discomfort among poor people. On the contrary, Agee was countering earlier trends in Depression-era social documentary. He recoiled against the representational strategies of Erskine Caldwell and Margaret Bourke-White's extremely popular *You Have Seen Their Faces* (1937), a book that, in

[177] Bergreen, *James Agee: A Life*, 143.
[178] Ohlin, *Agee*, 65.
[179] Ophir, "Romantic Reverence and Modernist Representation," 126.
[180] Rabinowitz, "Voyeurism and Class Consciousness," 146.

Agee's view, sensationalized the poverty of its subjects and dealt in stereotypes of rural Southerners, even as it told readers that the tenant farmers were people just like them.[181] Thus, at the expense of political clarity and in spite of his desire to make readers identify with the tenant farmers, Agee insists that some economic and social divisions cannot simply be wished away; they unavoidably shape our experience and the way we relate to other people.

Very few critical accounts discuss *Famous Men*'s references to natural phenomena in relation to its ethical stance. Those that do explore Agee's naturalism tend to fall back on the standard explanation for any noncritical evocation of nature in early-twentieth-century literature: *must be the influence of romanticism*. For instance, Ophir observes that "one of Agee's most pervasive rhetorical patterns is a rapid shifting from the minute particular to progressively broader views—regional, planetary, and finally cosmic—so that humanity is contracted to the single point of an anomalous and precarious life form."[182] She is correct in claiming that Agee's shifts in spatial and temporal scale constitute one of the most significant rhetorical patterns in the book, but misreads the finer details of his depiction of nature. After comparing various passages from *Famous Men* to the attitudes and tropes of Wordsworth, Emerson, and Whitman, she concludes that "Agee absorbed from romanticism a conviction of the sanctity of consciousness; and an image of the natural world as an organic whole into which the good human life is harmoniously integrated."[183] The correlation to romanticism is loose at best, and breaks down under scrutiny. That Ophir could find no other context in which to ground Agee's thoughts about nature testifies to the power of the critical belief that nature and natural processes ended on or about December 1910, and lived on thereafter as a kind of nostalgia irrelevant to modern

[181] Agee and Evans, *Let Us Now Praise Famous Men*, 5–7. Further references to this edition (hereafter abbreviated as *FM*) will be cited in the text.
[182] Ophir, "Romantic Reverence and Modernist Representation," 139.
[183] Ibid., 128.

experience.[184]

Agee does not idealize humanity's relationship to the natural world. He treats it as historical and material circumstance. For earlier romantic and transcendental writers, consciousness was the vehicle for humanity's harmonious integration with the natural world. Agee expresses serious doubts about the primacy of consciousness. He begins his most extensive discussion of aesthetics in *Famous Men* by asserting that "the materials which people any intersection of time and space are at all times marvelous, regardless of consciousness" (200). He goes on to write, "we should realize that life and consciousness are only the special crutches of the living and the conscious, and that in setting as we do so high a virtue by them we are in a certain degree making a virtue of necessity; are being provincial" (*ibid.*). We are being provincial, Agee quips, "like that small Nevada town whose pride, because it is its chiefly discernable exclusive distinction, is a mineral spring whose water, assisted by salt and pepper, tastes remarkably like chicken soup" (ibid.). *Famous Men*, though biblical in girth and undertone, is not so self-contradictory that this point about consciousness can be ignored. Agee' picture of the natural world differs from those of his romantic predecessors both in its downplay of humanity and in its modern sources. The references to earth, stars, and animals in *Famous Men* are not vague relics of nineteenth-century romanticism. On the contrary, they are the clear product of their time, both in terms of the contemporary reading public's taste, and of Agee's own reading proclivities.

As we are about to see, Agee had been reading popular scientific nonfiction during the year before he travelled to Alabama, and his musings on nature in *Famous Men* have much more in common with these contemporary texts than with nineteenth-century romanticism. In

[184] Ophir makes another common charge against modernist evocations of the natural world earlier in her article, when she describes Agee's "residual pastoralism," again assuming that nature belongs to the past (127).

February 1936 he wrote to his longtime mentor, Father James Flye, "Do you know the writing of J W N Sullivan? (on science mostly.) I've just read one, *Beethoven: His Spiritual Development*, which I think very fine, and am reading *Science: A New Outline*, which seems so too."[185] The latter book, published in the United States in 1935, gave an overview of contemporary scientific knowledge on a range of topics, beginning with the earth ("Its Dimensions," "Its Constitution," "Its Motions," and "Its Origin"), and ending with evolution.[186] It follows the general pattern of many books of its kind from the decades between the wars, summarizing recent developments in astronomy and physics in order to contextualize life on earth. *Science: A New Outline* may have introduced Agee to the scientific nonfiction of H. G. Wells, as Sullivan quotes at length from *The Science of Life* (1930), which Wells co-authored with Julian Huxley and his son, G. P. Wells. Agee's journals and manuscripts for *Famous Men* suggest that after reading Sullivan's *Science*, he read *Science of Life* and possibly *The Outline of History* (1920). His 1946 *Time* obituary for the elder Wells declares that *Science of Life* "may come to be recognized as an achievement still more remarkable than his world famous *Outline of History*."[187]

The success of Wells' *Outline* offered an early indication of the widespread popular interest in scientific topics later in the decade. It became an international bestseller within a few years of its first release, selling more copies by far than Wells' most popular novels.[188] He conceived of the book as a remedy for the habits of thought that led to World War I, because, he reasoned, "with nothing but narrow, selfish, and conflicting nationalist traditions, races and peoples are bound to drift towards conflict and destruction."[189] It was written to show "*history*

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[185] Agee, *Letters of James Agee to Father Flye*, 80.
[186] Sullivan, *Science: A New Outline*.
[187] Agee, *Selected Journalism*, 174.
[188] See Skelton, "The Paratext of Everything: Constructing and Marketing H. G. Wells' The Outline of History." Its "initial sales reached into the hundreds of thousands" and by 1932 "the work had 'found more than two million purchasers' on both sides of the Atlantic" (238).
[189] Wells, *The Outline of History*, vi. Further references will be cited in the text.

as one whole" (vi). Instead of beginning with Mesopotamia or Greco-Roman civilization, Wells begins with the earliest stages of geological and evolutionary history. He explains the earth's position in space and time, describes the formation of its first rocks, the condensation of water from its steamy atmosphere, the early sediment moved around by rivers and streams, and "the soft jellies and simple beginnings that flowed and crawled for hundreds of millions of years between the tidal levels and in the shallow, warm waters of the Proterozoic seas" (18). Volume One's first sixty pages detail the beginnings of life, from its first forms, "small and soft," to worms and shellfish, fish and reptiles, and so on to mammals (5). Humanity makes no appearance until the seventh chapter. Yet the book's "epic story, presented plainly though it was, without any attempt at literary flourishes or poetic passages"—Wells humbly noted—"seized upon the imaginations of a great number of people."[190] Its sequel would delve into the evolutionary history of animals human and non-human with more gusto than the *Outline*'s first seven chapters allowed. *The Science of Life* (1930) begins with the proposition "that all the life which exists at this moment derives, so far as human knowledge goes, in unbroken succession from life in past time" (6).

Agee's notes from the time when he was working on *Famous Men* include several outlines that describe the scale of the universe, the formation of the planet, and the evolution of life on earth (*JAR*, 323-25). The information in Agee's notes could have come from any number of scientific books published during the 1920s and 1930s. His outline entitled "Notes on the Universe" follows the general order of the first chapters in Sullivan's *Science* (1931), Wells' *Outline of History* (1920), and Sir James Jeans' *The Mysterious Universe* (1930). Each begins by describing the scale of the earth in relation to the solar system and universe, and then uses that

[190] Wells, Huxley, and Wells, *The Science of Life*, 1. Further references to this edition (hereafter abbreviated as *SL*) will be cited in the text.

scale to frame the appearance and evolution of living things.[191] Although *The Science of Life* saves its pre-human history of the earth until mid-way through, the first chapter still ponders the limited geographical range of living creatures, which are confined, the authors point out, "to a layer of air and a layer of water, having a total thickness of less than fourteen miles, on this comparatively small planet Earth, and no one single form of life is able to span even these petty limits" (11). After explaining the inhospitable conditions on Mars, *Science of Life* quotes at length from James Jeans' "recent survey of the whole universe":

> It is difficult to imagine life of any high order except on planets warmed by a sun, and even after a star has lived its life of millions of years, the chance, so far as we can calculate it, is still about a hundred thousand to one against its being a sun surrounded by planets. In every respect—space, time, physical conditions—life is limited to an almost inconceivably small corner of the universe. (13)

In his "Notes on the Universe" Agee writes, "Out of an infinite # of chances they all crossed right here: a bombardment out of the whole 'universe': and there was 'Life.' Once there, the rest was <u>easy</u>" (*JAR*, 323).[192] Echoing general-interest surveys of science from the 1920s and 1930s, Agee highlights the improbability of life in such a vast scale, and emphasizes its stark physical limitations.

Moreover, Agee's notes connect the physical limitations of life to the question of how we relate to other living things.

> Between what temperatures: what altitudes: what depths: between what gasses: life feeds only on itself: without 'earth': nothing but fish: without water, not even that: <u>we are not necessarily 'relatives'</u> i.e. we are not necessarily of the same cell. But if you want to get

[191] *The Outline of History*, for example, quickly puts our planet into perspective: "Vast though it seems to us, it is a mere speck of matter in the greater vastness of space" (Wells, *The Outline of History*, 1.)

[192] Unless otherwise noted, quotations from the notes preserve Agee's original emphasis.

either hard [or] sentimental about it, we are all creatures of the sun. (321)[193]

Agee implies that we should identify with animals and other creatures because we are all in the same predicament, as living things improbably perched in a far corner of the universe. This entry echoes a statement from Sullivan's *Science: A New Outline*, which clarifies the reference to life feeding "only on itself": "Animals are, in the long run, entirely dependent upon green plants. Green plants, in their turn, cannot make use of their food without the aid of the sun's rays. The sun's energy is indispensible to the chemical food processes of plants. Thus all forms of life depend, ultimately, upon the energy of the sun."[194] It is significant that Agee describes the underlying connection between all living things as potentially "hard" or "sentimental." He favors the hard in *Famous Men*: even if a sympathetic approach would lead to the same conclusions that he reaches by way of cold scientific materialism, the logic of identification matters. He wants to identify with the tenant families on an emotional level—indeed, he does identify with them emotionally, and describes his feelings at length throughout *Famous Men*—but also constantly scrutinizes that impulse. Agee takes it for granted that empathy can easily slip into sympathy, which can easily slip into pity; the desire for personal identification is too mired in social and cultural circumstances, which is precisely why he objected to Caldwell and Bourke-White's *You Have Seen Their Faces*. *Famous Men* grounds Agee's emotional identification with the tenant farmers, as human beings, in the cold, hard fact that they are all "creatures of the sun."

A 1937 draft of the introduction to *Famous Men* shows Agee applying this logic to the tenant farmers. He begins by locating the families "on Mills Hill, about seven miles from

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[193] The original note reads "if you want to get either hard *of* sentimental," and remains uncorrected in *James Agee Rediscovered* (321; emphasis mine). I am reading "of" as an error based on the either/or formulation and the clear opposition between hard and sentimental.

[194] Sullivan, *Science: A New Outline*, 185.

Moundville, in Hale County, in west central Alabama, in the United States, in the fourth decade of the twentieth century" (*JAR*, 25). He writes that they "represent nine million other human beings, white or black, who are cotton tenants in similar houses . . . all over a stretch of land sixteen hundred miles wide and three hundred miles deep," and contends that "they have much more than they lack in common with all but a very negligible fraction of the two billion human beings who at present carry human existence on the surface of this planet" (25). The negligible fraction is presumably set apart for reasons of extreme wealth, since the draft goes on to say the only thing that would help the tenant families is a communist revolution. The planetary and species-wide scale may not entirely dissolve the social hierarchy, but it does outsize it, rendering all but the starkest differences in social and economic circumstances trivial compared to the shared predicament of the rest of humanity. Thus, at the end of the draft, when Agee describes the tenant farmers' experience as "one contemporary expression of an old and plain matter: the human predicament," he is making an appeal to universal experience, not based on vague or sentimental generalizations about human nature, but based on the vastness of time and space (26).

That Agee arrives at his universal appeal by way of the scientific worldview stands in direct opposition to Richards' argument in *Science and Poetry* (1926). Richards considered those perspectives antithetical: "Science can tell us about man's place in the universe and his chances; that the place is precarious, and the chances problematical . . . . But it cannot tell us what we are or what this world is; not because these are insoluble questions, but because they are not scientific questions at all."[195] Nor did Richards believe in any possibility for compromise between the magical and scientific worldviews. According to his assessment, "the belief in inspiration and the beliefs underlying ritual" had nothing in common with the belief in a world

[195] Richards, *Poetries and Sciences*, 55.

governed by laws which could be observed through scientific methodologies. "A god voluntarily or involuntarily subject to the General Theory of Relativity does not make an emotional appeal," he wrote.[196] For this and other reasons he became a target for J. W. N. Sullivan, whom Agee had recently begun to read. After rehearsing Richards's critique in *Gallio; or, The Tyranny of Science* (1928), Sullivan wrote, "Apparently it is the existence of any law at all that is resented: the poet can feel happy only in a world of pure miracle. I strongly doubt the correctness of Mr. Richards' diagnosis. I am certain that not all poets have been as childish as that."[197] He contended that "the essential element in this general outlook is not that phenomena occur in an orderly way, but that man's existence is not regarded as forming part of some universal purpose."[198] According to Sullivan, artists and writers living in the aftermath of World War I had begun to diverge from their Victorian predecessors' disdain for men of science. Their truce with science was inspired in part by the violence of the war itself, which "made the acceptance of materialism easier," and even more so by the popular circulation of Einstein's theory of relativity.[199] "The artist is attracted by the theory, and respectful to it, not in the least because he understands it," Sullivan wrote, "but because he feels it is the result of a most unusual and most powerful *imaginative* effort."[200] Agee was one of those artists between the wars who found science imaginatively compelling, in spite of Richards' influence over his literary taste.

Where Richards insisted that the scientific and magical worldviews were polar opposites, Agee posits ritual as a basic characteristic of life, from its earliest to its most advanced stages. He observes a "strict ritual" at the smallest level—in "electrons in their dances & the simplest

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[196] Ibid., 52.
[197] Sullivan, *Gallio; or, The Tyranny of Science*, 20.
[198] Ibid.
[199] Ibid., 14. Sullivan wrote, "It is a curious but indisputable psychological fact, perhaps first noted by Tolstoi, that the sight of a large number of naked human bodies makes it difficult to believe that they are animated by immortal spirits possessing an eternal destiny" (13).
[200] Ibid., 11.

forms" (322)—all the way up to the complex behavior of human beings, as seen in the last few items in his "Notes on the Universe":

> 18. 2 characteristics of man: he is like all else a ritualist. (2) the greater part of him is & always will be lunkheads; the work is done by a few who often suffer the consequences.
>
> 19. He like all else is hungry and in danger. And he is capable of love and of wonder. Out of all this: his societies &c &c.
>
> (323)

Agee's outline proceeds "from jellyfish to Uncle Frederick," from the first appearance of life to "religion: science: 'society': 'art'" (322). He does not separate humanity's capacity for higher consciousness from its material existence or its evolutionary past. In fact, he identifies consciousness as a product of evolution, the most recent innovation in life's "straining & pouring & wringing itself through narrow & labyrinthine molds," a development nevertheless continuous with life's unicellular beginnings (322). Agee's notes suggest that our capacity for ritual is not uniquely human; it unites us with other living things just as much as "lower" biological functions like the need to eat and sleep.

Agee's assimilation of a scientific worldview appears to be consistent with Sullivan's observation that most of the artists who became interested in science in the 1920s and 1930s ended up adopting the previous generation's scientific outlook:

> It is agreed that a modern intelligent man, conscious of his responsibilities as an inhabitant of the twentieth century, should be familiar with "the scientific outlook." But to acquire this outlook by brooding over the teachings and implications of modern physics is not easy. Thus although it is the recent astonishing development in physics

> which is responsible for the renewed public interest in science, it is other sciences that reap the benefit. We have poets and painters who study anthropology, and literary critics who read books on the nervous system. The result appears to have been disastrous. At a time when the physicists are abandoning materialism the artists are accepting it.[201]

Physicists were abandoning materialism because the theory of relativity had replaced the material universe with "a four-dimensional world of point-events," only some of which the human mind registers—namely, those that suggest a permanent structure outside of ourselves.[202] Sullivan explains the phenomenon by saying, "This is merely because the mind happens to be that kind of thing. As a consequence of this predilection of the mind there arises space and time, matter, and the laws of nature."[203] Agee would have read about modern physics in Sullivan's *Science: A New Outline*, which devotes a whole section to relativity, atomic theory, and the end of the material universe as it was previously understood. Agee's notes, however, suggest that he found space and time more compelling than four-dimensional point-events. He absorbed a strong sense of the earth's origins, its relations to the sun, and its placement in a largely unknown universe; of humanity's physical dependence on the earth, the continuity between our current existence and our evolutionary past, and our close interrelationships with other living things.

3. Small House in a Vast Universe

Agee's scientific outlook enters the text of *Famous Men* in a variety of ways, some subtle and some more overt. His "Notes on the Universe" do not form the basis for any particular section of the book, which is in keeping with his description of his ideal aesthetic as "an art and a way of seeing existence based, let us say, on an intersection of astronomical physics, geology,

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[201] Ibid., 12–13.
[202] Ibid., 23.
[203] Ibid., 24.

biology, and (including psychology) anthropology, known and spoken of not in scientific but in human terms" (*FM*, 216). At no point does Agee foray into a technical discussion of astronomy, planet-formation, or the evolutionary history of mammals. Instead, he includes in the front matter an excerpt from a third-grade geography textbook that introduces "The Great Ball on Which We Live" as "our home" and "the home of many, many other children" (xiv). He describes each family's house and acreage in relation to nearby towns, the whole landscape of the South, the North American continent, the earth itself, the visible stars, and beyond that "the alien size of space" (18). He describes the tenant farmer as "a child of the substance and bowels of the stars and of all space" who was "created forth of an aberration special to one speck and germ and pollen fleck of this planet" (89). Only then does Agee narrow the scope of his description to his subject's social circumstances: "yes, he is of the depth of the working class; of southern alabamian tenant farmers; certain individuals are his parents, not like other individuals; they are living in a certain house . . ." and so on (94). Without announcing his reference to scientific topics or sources, Agee echoes the language of *The Science of Life* and *Science: A New Outline* at key moments, translating astronomical physics, geology, and biology into human terms. He embeds the lives of the tenant farmers in evolutionary time and locates their small houses in a universe so vast that their precarious situation is seen as one variation on the precariousness of all life.

The spatial and temporal scales Agee gleaned from his scientific reading are most overt in the framing sections of *Famous Men*, especially the three sections entitled "On the Porch." "(On the Porch: 1," "(On the Porch: 2," and "(On the Porch: 3"—with their deliberately open parentheses—punctuate the entire volume at beginning, middle, and end. In these sections Agee describes his thoughts as he and Evans fell asleep on the front porch of the Gudger house, on an

unspecified night of their visit. He clarifies the structure in a footnote to "(On the Porch: 2": "I have set up this silence under darkness on this front porch as a sort of fore-stage to which from time to time the action may have occasion to return"—and later—"I may as well explain that *On the Porch* was written to stand as the beginning of a much longer book. . . . It is here intended still in part as a preface or opening, but also as a frame and as an undertone and as the set stage and center of action, in relation to which all other parts of this volume are intended as flashbacks, foretastes, illuminations and contradictions" (215, 217). The other parts of the volume include all of its explicitly documentary content: Agee's account of his interactions with the Gudger, Woods, and Ricketts families, and his pseudo-sociological observations of their living conditions. "On the Porch" is Agee's amendment to the documentary genre. It frames his account of the tenant farmers' lives, but, following his own statement, it also forms the core of *Famous Men*. His description of this part of the book as "the set stage and center of action" is curious for several reasons, chief among them the fact that hardly anything happens: everyone is asleep or nearly asleep (217). Agee and Evans hear the family settling into sleep, they exchange a few words, listen to the sounds of animals and a nearby creek; these few actions give rise to pages and pages of reverie. "On the Porch" is more concerned with setting than with action. It allows Agee to locate his and the families' experiences in space and time, writ large.

The most important topic of Agee's reverie in "On the Porch" is the act of falling asleep. Falling asleep is significant because it involves the loss of consciousness, the suspension of that faculty which has been used to distinguish humans from other animals for hundreds of years. The first "On the Porch" section is the shortest of the three, and describes the act of falling asleep from a disembodied perspective. Agee makes no appearance in the scene except by way of the first-person plural, and the Gudger family makes only the briefest of appearances:

> The house and all that was in it had now descended deep beneath the gradual spiral it had sunk through; it lay formal under the order of entire silence. In the square pine room at the back the bodies of the man of thirty and of his wife and of their children lay on shallow mattresses on their iron beds and on the rigid floor, and they were sleeping, and the dog lay asleep in the hallway. (17)

From here the perspective immediately expands from the family to "most human beings, most animals and birds who live in the sheltering ring of human influence, and a great portion of all the branched tribes of living in earth and air and water upon a half of the world," all of whom "were stunned with sleep" (17). The perspective moves out further still, to the inanimate, as Agee explains that "that region of the earth on which we were at this time transient was some hours fallen beneath the fascination of the stone, steady shadow of the planet, and lay now listing toward the last depth" (17). The house and the sleeping family sink together with half the earth, and whole tribes of living things. The loss of consciousness enacted when a person, or even a group of people, falls asleep is not an isolated or specifically human phenomenon. Agee externalizes the subject of this passage to what he later calls "a quality in the night itself," a quality "not truly apparent to any one of the senses, yet, by some indirection, to every sense in one, of a most complete and universally shared withdrawal to source" (47). The loss of waking consciousness makes human experience consonant with the experience of other and earlier life forms. This first section of "On the Porch" leaves the Gudger family fallen into deepest sleep—with everything that entails—"sunken not singularly but companionate among the whole enchanted swarm of the living, into a region prior to the youngest quaverings of creation" (19).

The Science of Life too points out that consciousness is not uniquely human, nor is it the only faculty that shapes our experience. Contrary to what Descartes believed, "other vertebrata

also possess pineal glands" and, from the perspective of twentieth-century biologists, "it seems obvious that apes and dogs and mice and birds have consciousness" (1273). Moreover, the authors write, "it is impossible to draw any sharp line in development and to say, 'Here consciousness enters the embryo or the infant'"—or, for that matter, the species. Between the embryo and the child "there is an imperceptible sliding into conscious life," just as "we with our consciousness have developed imperceptibly out of ancestral fish, out of still more remote ancestors no more elaborate than worms, than polyps, than amoebae" (1273-74). In the introduction they describe their subject as the "drama of movement, metabolism, and reproduction" that "plays in endless variations," giving rise to the full catalogue of living things, from "green scum" to "Solomon in his glory" (16). Here consciousness is an outgrowth of life's incessant creativity: "And, perhaps, in endless variations" this drama "plays also upon the themes of conscious and sub-conscious life, it dreams and slumbers in the plant or in the motionless fish, or drinks deep of contentment or flashes into frenzies of desire and delight and terror in hunter and hunted, in basking snake or playing cub or singing bird" (16). The image of sleeping plants and fish reappears in "(On the Porch: 1," when, after the Gudger family has finished "sinking and settling" into "the late stages of fatigue unharnessed or the early phases of sleep," their bodies are relieved of consciousness:

> Bone and bone, blood and blood, life and life disjointed and abandoned they lay graven in so final depth, that dreams attend them seemed not plausible. Fish halted on the middle and serene of blind sea water sleeping lidless lensed; their breathing, their sleeping subsistence, the effortless nursing of ignorant plants; entirely silenced, sleepers, delicate planets, insects, cherished in amber, mured in night, autumn of action, sorrow's short winter, water hole where gather the weak wild beasts; night; night: sleep; sleep. (18)

Sleep effectively returns them to a past beyond their scope of memory. With bodies "disjointed" they join the broad spectrum of life, that underlying stream of which each of them is a manifestation. However implausible their own dreaming, thanks to physical or mental fatigue, life dreams through them. Later Agee writes that "human beings may be more and more aware of being awake, but they are still incapable of not dreaming" (209). In other words, however much we enjoy the privilege of consciousness, that privilege is short-lived and losing it is one of our greatest pleasures. Dreaming means "drinking deep" at the "water hole where gather the weak wild beasts." Agee implies that humanity cannot help but partake in the contentment, the frenzy, the delight, the terror, and the abandon which constitute the experience of all living things. Moreover, the Gugders' union with other living creatures is not simply representative; the syntax of Agee's passage is designed to lull readers into the same drowsy state, thus enacting the shared experience it describes.

If "(On the Porch: 1" establishes fellowship in the abstract—with everything living upon a large swath of the earth, and everything alive in the past—in what follows, Agee uses the astronomical and evolutionary scales to establish his and his readers' relationship with the families. "Part One: A Country Letter" begins where "On the Porch" left off, in "a house set deep and solitary in the country" where Agee writes by lamplight after the Gudger family has gone to sleep (44). He muses on the possible spiders and bats hiding in the attic, playing up his aloneness in the dark, and eventually buoys himself with a little superstition ("Yet this mere fact of thinking holds them at a distance, as crucifixes demons…" [48]). Then he turns his imaginary gaze further upward, and finds something from which religion offers no reprieve:

> Above that shell and carapace, more frail against heaven than fragilest membrane of glass, nothing, straight to the terrific stars: whereof all heaven is chalky; and of whom the

> nearest is so wild a reach my substance wilts to think on: and we, this Arctic flower snow-rooted, last matchflame guarded on a windy plain, are seated among these stars alone: none to turn to, none to make us known; a little country settlement so deep, so lost in the shelve and shade of dew, no one so much as laughs at us. (48)

This passage continues the strategies initiated in "(On the Porch: 1." The solitary country house is metonymically linked to the solitary planet. We are alone in one and alone on the other, but in the latter frame every living thing is alone with us. Human frailty is mingled with the arthropod's fragile shell, and Agee's "substance wilts" like that of a plant. He makes us all a single "snow-rooted" flower with "none to turn to" or "make us known," with no hope of response from the universe beyond. Pulling back to the astronomical scale allows Agee to remind his readers of their shared predicament in the vast universe, in preparation for an analogy. At this point he returns from outer space to the scale of the single house: "And thus, too, these families, not otherwise than with every family in the earth, how each, apart, how inconceivably lonely, sorrowful, and remote! Not one other on earth, nor in any dream, that can care so much what comes to them, so that even as they sit at the lamp and eat their supper, the joke they are laughing at could not be so funny to anyone else" (48). Just as no one laughs at our predicament as living things clinging to the earth—there being no one outside of our sphere capable of recognition, let alone laughter—no one outside the family will ever grasp their full humor or complexity. Just as we cling to the protective shell of our planet, "all over the whole round earth. . . people are drawn inward within their little shells of rooms" (49). Agee declares it a "small wonder how pitiably we love our home"—which is to say, our planet—and likewise calls it a "small wonder" that people "are drawn together so cowardly close" into family houses (48, 49). Thus "Part One" draws readers from their vulnerable perch in an inhospitable universe, into

the lives of the inward-drawn tenant families and, finally, back out again, to the large-scale pattern of human life "of whose fabric each individual is a part" (50). Only now does Agee "lift away a part of this so thin shell and protection of wall" in order to describe Annie Mae and George Gudger and their children, asleep inside the house.

Although Agee frames the lives of the tenant families in terms of large-scale patterns of human existence, he does not assume the position of an objective narrator or an uninterested third party in relation to the families themselves. In fact, Agee's idiosyncratic presence is one of the most pervasive qualities of the book. He considered it essential to his ability to tell the families' stories: "I am confident of being able to get at a certain form of the truth about him, *only if* I am as faithful as possible to Gudger as I know him, to Gudger as, in his actual flesh and life (but there again always in my mind's and memory's eye) he is." At the same time Agee is aware of his limitations, as he promptly explains, "of course it will be only a relative truth. Name me one truth within human range that is not relative and I will feel a shade more apologetic of that" (211). He insists on observing the families from his own perspective—shaped by his particular memories, inclinations, and appetites—even to the point that his perspective seems transparently biased at times, as in his description of Annie Mae's eighteen-year-old sister Emma. After explaining that she is apprehensive about joining her much-older husband in Mississippi, he concludes that the best thing for Emma would be to "spend her last few days alive having a gigantic good time in bed, with George, a kind of man she is best used to, and," he reasons, "with Walker and with me, whom she is curious about and attracted to, and who are at the same moment tangible and friendly and not at all to be feared" (55-56). Agee delights in the thought of disregarding social conventions for the sake of Emma's good time, but it never occurs to him, for example, that Annie Mae might have complicated feelings about her

husband and sister sharing said time. Agee is there as a person, not a social worker, and he is determined to make that clear to readers.

At other times Agee's self-awareness seems to make his relations with the people he encounters unnecessarily strained. His account of his interaction with a young black couple in "Near a Church" registers his unyielding desire to transcend social codes, and his simultaneous awareness that he cannot. The couple walks by just as he and Evans are peering into the window of an empty church, and after they pass Agee decides to jog down the road to ask their permission to go inside. The young woman's startled reaction clues him into the fact that they have misread his intentions, or rather, they are interpreting his behavior according to the going custom of their place and time: their immediate concern is to avoid being lynched. Upon realizing this he assures them they have nothing to fear and offers profuse apologies, to which they respond with detached politeness. Instead of stopping here, and accepting the difficulty of altering the codes that govern Southern race relations in the span of a brief conversation with two strangers, he tries to push through, as if he can draw them out by the pleading look in his eyes. He wants to see them in their individual "grace and dignity" and be seen, in turn, as "their friend"—though he can scarcely help projecting his own "horror and pity and self-hatred" (38). His attempts to compensate for the imbalance of power make the situation even more awkward, and the writing registers his awareness of that, too. Agee's account of the episode in "Near a Church" amplifies his awkwardness; the scene is as much about him as it is about the couple. Here and elsewhere he insists that his role in relation to the people he recounts was, and is, highly particular.

Agee's brooding presence has led some critics to judge him as overly self-absorbed, more interested in his own psyche than in the tenant families. Susan Hegeman argues that *Famous*

Men marks a turning-point in the literary culture of the twentieth century, because the author's self-obsession is exactly what "would find favor with Cold War literary intellectuals, many of whom were increasingly drawn to psychoanalysis, and many of whom saw in Agee's anger and hand-wringing a model for their own—infinitely complex, fascinatingly ambiguous—position of self-imposed marginality in relation to the political and ethical questions of their day."[204] By this account, Agee eased the transition to a Cold War culture that focused "on the uniqueness of the American character, and on the complexities and ambiguities of a national subject now fully seeming to be at the center of the universe."[205] In short, Hegeman reads Agee's narration of his own conflicted thought-process as an easy out, an excuse to refrain from any meaningful engagement with the political and ethical issues at hand. Setting aside her qualms with Cold War literary intellectuals, this reading overlooks a central feature of *Famous Men* that I have tried to clarify in my discussion of its engagement with contemporary scientific discourse: namely, Agee locates himself, the tenant farmers, all other Americans, and all of humanity—indeed, all life on earth—far from the center of the universe. The primary complaint registered by this and other critiques of *Famous Men*'s politics seems to arise from a problem of generic expectations: because Agee was working within the genre of social documentary, and he took as his subjects poor people whose lives could have been improved in many ways, it stands to reason that the aim of his book was to contribute to the improvement of their lives—by raising public awareness, outlining solutions, or at the very least offering a more sensitive representation of their experience than other texts in the genre, in service of the larger project of social reform. This conclusion is reasonable, but mistaken. *Famous Men* fails as a work of social reform because its aim is philosophical, not reformist—related to politics, to be sure, but in a different

[204] Hegeman, *Patterns for America*, 191.
[205] Ibid., 192.

way and on a different timescale. Agee does not offer his own careful introspection as a model approach for alleviating poverty; rather, it functions as part of a larger strategy to re-conceptualize issues of social responsibility and identification in the context of humanity's role in space and time, as it was understood in popular scientific discourse from the 1920s and 1930s.

Agee's self-inclusion in the narrative has very different implications when read in the context of his scientific outlook. It becomes the counterpoint to his strategy of framing his and the families' immediate experiences within the colossal scales of evolutionary time and astronomical space. (Wells, Huxley, and Wells make a similar move when they say, in the introduction to *The Science of Life*, that "the writing and reading of this book and the thought-processes behind these things are life also. All these aspects must receive our attention in the general review of current biological knowledge we are now undertaking" [16].) Agee appears in the text as himself: a white, Harvard-educated, idealistic, conflicted, sensitive and occasionally manic twenty-four-year-old man. Whether he held himself in high regard is beside the point; the text is more concerned with what he has in common with the tenant families than with the uniqueness of his psyche. Even when *Famous Men* lingers on his inner conflicts, as in "Near a Church," it always returns to a large-scale view of life on earth, coupling the particular with the universal. Instead of shifting priority from "the other" to the self, this strategy dismantles the privilege of objectivity so often associated with literary appropriations of the natural sciences from the late nineteenth century onward. If literary naturalism in the wake of Zola examines individual lives from the "bird's eye" perspective, looking down on its characters as if they were ants in a maze, Agee positions himself on the ground, alternating his gaze between the stars and his fellow ants.

4. Humanity's Infantile Delusions

Famous Men's treatment of psychoanalysis merits further discussion, considering the influence of Freud's conception of the unconscious over the way so many modernist writers understood humanity's relationship to its own animal nature. Carrie Rohman situates modernist animality somewhere between Darwinian evolution and Freudian psychology. "Indeed," she writes, "the development of psychoanalysis in the early twentieth century should be contextualized as a logical response to the humanist crisis set in motion by evolutionary theory."[206] Rohman's reading of animality in modernist literature emphasizes anxiety more than celebration: "Psychoanalysis functions like modernism itself in terms of the animal: it acknowledges the uncertainty of the species barrier but must constantly cope with that acknowledgement."[207] The writers whom Rohman holds up as exemplary (Djuna Barnes and the later D. H. Lawrence) make the best of humanity's newly-realized affinities with other animals. Freudian psychoanalysis inspired many writers' interest in animals in the 1920s, and in that sense contributed to the challenge to anthropocentrism following the First World War. However, there is an important distinction to be made between the Freudian approach to the human-animal relationship and the approach taken by Jeffers, Millay, and Agee, which is closer to Darwin's. The former is internalized and the latter remains external. Although not necessarily mutually exclusive, they have different implications. Freud reminds us that we carry our primal origins with us wherever we go, however much we think we have advanced beyond non-human animals. Agee reframes human existence in the scale of evolutionary time and astronomical space, such that it seems laughable to do anything but celebrate the existence of other living things on our planet: we are all in the same small boat.

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[206] Rohman, *Stalking the Subject*, 22.
[207] Ibid., 22–23.

Agee shared with Freud an interest in seeing human psychology in the context of evolutionary and geological history. "For Freud," Lucille Ritvo notes, "there was always a continuum stretching back through the individual's development and the development of the human race to the development of life itself from the inorganic."[208] This makes perfect sense, given that Freud studied evolutionary biology while attending medical school in the 1870s—the "zenith" of Darwinism in Europe.[209] (He even temporarily abandoned the medical program in 1875 to study zoology under Carl Claus, a follower of Darwin who had visited the English scientist at his home four years earlier.)[210] Freud remained enthusiastic about Darwin's work for the rest of his life; he especially admired the implications of the theory of natural selection in undercutting humanity's "naïve self-love." He wrote that Darwin "robbed man of his apparent superiority under special creation, and rebuked him with his descent from the animal kingdom, and his ineradicable animal nature."[211] One point on which Freud differed from most twentieth-century proponents of Darwinian evolution was his reliance on the theory of recapitulation, which holds that ontogeny recapitulates phylogeny, or the development of every individual repeats the developmental stages of the whole species. For Freud, this meant that the unconscious can potentially give us access to a condition that predates our individual lives. His account of "The Archaic Features and Infantilism of Dreams" in *Introductory Lectures on Psychoanalysis* (1916-17) illustrates the relevance of recapitulation: "The prehistory into which the dream-work leads us back is of two kinds—on the one hand, into the individual's prehistory, his childhood, and on the other, in so far as each individual somehow recapitulates in an abbreviated form the entire development of the human race, into phylogenetic prehistory too. . . .

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[208] Ritvo, "Darwin as the Source of Freud's Neo-Lamarckism," 129.
[209] Ritvo, *Darwin's Influence on Freud*, 113–117.
[210] Ibid., 113.
[211] Freud, *A General Introduction to Psychoanalysis*, 246–247.

It seems to me, for instance, that symbolic connections, which the individual has never acquired by learning, may justly claim to be regarded as a phylogenetic heritage."[212] Freud considered his use of the theory of recapitulation to be consistent with his enthusiasm for Darwinian evolution. Darwin himself adopted the theory later in his career, and it was widely accepted among biologists until the 1930s and 1940s.[213] In that sense Freud differed from Louis Agassiz, who promoted recapitulation in direct opposition to Darwin's theory of natural selection, and in support of an idealist biology which placed humanity center-stage. At the same time, the vestiges of recapitulation in Freud's understanding of the unconscious suggest a more anthropocentric account of evolutionary history than the one that emerged in the twentieth-century revival of Darwinian natural selection.

The difference can be seen in Agee's account of dreaming in *Famous Men*. Here, the suspension of consciousness in sleep turns people over to faculties that predate the development of human beings, faculties we share with other and earlier forms of life. Only in that sense does the experience reach back to the beginnings of evolutionary history. Our early and unconscious memories do not give us access to the early history of life of earth, because we were not there at the beginning. Agee plays with this distinction in "(On the Porch: 2," when he writes that night relieves us of the "infantile delusion" that we own the planet:

> But now, in the short yet extreme winter of that shadow of itself through which a continuous half of the earth twists its surface, this fragile and shallow colonization was reduced to its least. . . . All normal human life was drained away; all creatures of the day

[212] Freud, *Introductory Lectures on Psychoanalysis*, 247.

[213] Ritvo, *Darwin's Influence on Freud*, 89–90. Indeed, *The Science of Life* offers recapitulation as support for evolution: "The evidence of the fossils in the rocks is direct evidence for Evolution. But the evidence of embryology, though indirect, is more immediate. You can watch the individual animal indulge in these amazing reminiscences, and pass almost before your eyes from ancestral primitiveness to adult modernity" (373). Although this passage describes recapitulation as a kind of memory, the authors' account of consciousness in later portions of the book does not suggest that human beings retain unconscious phylogenetic memories.

> time, under the passage and influence of that shadow, were shriveled as unanimously into sleep as when, in the leaning of the northern tracts of the globe away from the sun, all vegetable nature faints like the fading of a blush, the bees are stunned, and on the cold air in glittering swarms the tribal birds drain southward. This whole area of the planet itself, quite as literally as a weary human head, was loosened on its neck, was nodded and yielded over to the profound influences and memories, unknown to its sunblind daytime, of its early childhood, before man became part of its experience. The blind land itself and the blind water, the sky and the dove-light bombardment of its stars, the air, the shadow, the swarming, sleeping civilizations of the vegetable earth, certain frail insects, certain reptiles, birds, and fur-bearing personalities whose sleep is by day and whose business is dark, these were in complete self-possession. They did not even so much as tolerate the great hypnotized existence, the suspended animation, of human life; they simply ignored it, quite like an ocean is casual of the less than toylike traffic upon it. (218)

This passage endows the earth with psychological depth even as it removes humans from the picture. Agee conveys a physical sense of the planet's rotation and tilt on the scale of a human body. Released from the hold of sun, human life is "drained away" just like migratory birds "drain southward" in winter, as if by massive force of gravity. That half of the planet that finds itself again in the dark behaves just like a human head, weary to the point of relinquishing its mental dominion. The earth appears so human that even though its "early childhood" predates humanity, by the time Agee mentions "swarming, sleeping civilizations" we are ready for a glimpse of our lowly empire. He is referring, however, to the vegetable civilizations. The ensuing catalog—from "certain frail insects" to "fur-bearing personalities"—abounds in human

qualities that nevertheless belong to non-human creatures. These self-possessing insects, birds, reptiles, and small mammals go about their business while human life is "hypnotized." The animals awake at night are an uncanny reminder that things go on without us. Life and the earth have their own histories, into which we have only recently made our debut.

As this passage continues Agee clarifies his attitude about the relative significance of the human psyche:

> We bask in our lavish little sun as children in the protective sphere of their parents: and perhaps can never outgrow, or can never dare afford to outgrow, our delusions of his strength and his wisdom and of our intelligence, competence, and safety; and we carry over from him, like a green glow in the eyeballs, these daytime delusions, so inescapably that we can not only never detach ourselves from the earth, even in the perception of our minds, but cannot even face the fact of nature without either stone blindness or sentimentality: and we cannot bear, for any length of time, to carry in our minds in any literalness the fact of our small size and our youth. If this were merely the domestic and personal matter of a father or mother fixation, we would take it very seriously and those of us who could afford it would spend the next two years talking about ourselves in a shaded room. It is much more serious than that: it affects the deepest feelings and actions of a whole race at the very roots; and beyond a couple of psalms and a few almost accidental artistic trills and semiquavers, what thought have we taken for it: for that basis of our existence which is even simpler and more literal than the need to eat and sleep. (218-19)

This is not the first time that Agee fairly bellows to his readership about their problems, but it is the most important problem. We still imagine a world made for humanity despite what we know

about the earth and its past. The family romance is "merely" a "domestic and personal matter" compared to our inability to confront "the fact of nature" and "the fact of our small size and our youth." Agee's final extension of the psychoanalytic metaphor suggests that his goal in structuring the book around the three "On the Porch" sections is to force a confrontation with these facts. He adds in a footnote to his mention of the "shaded room": "Night is, for some, this shaded room; and in this room these talk of themselves to themselves in silence, and may sometimes profit of it, and may sometimes break the paralysis of their parentage" (219).

By Agee's account, our connection to evolutionary history is not primarily psychological. As he mentions in his "Notes on the Universe," life was not conscious at the beginning; the earliest life forms had no apparatus for registering experience (*JAR*, 322). *Famous Men* focuses on humanity's external and material connections to other life forms. Agee announces that every human being is "intimately connected with the bottom and the extremest reach of time: Each is composed of substances identical with the substance of all that surrounds him, both the common objects of his disregard, and the hot centers of stars" (50). *The Science of Life* asserts that the "history of living matter grows out of the history of planet earth, of which it is but a part; and the history of the earth in its turn grows out of the history of the star we call the sun, which, again, far back, merges into a history of a great nebula" (644). Wells, Huxley, and Wells' explanation of heredity and evolution also emphasizes material continuity, by way of August Weismann's then-current theory of the germ plasm, or the small part of an organism which detaches and grows into its offspring: "The germ-plasm is potentially immortal. Generation after generation it lives on, sprouting out bodies to house it and feed it and keep it warm" (457). Given that "life had a single origin . . . in the frame of space-time there is actual material continuity between Mr. Everyman, his wife, his cat, and his aspidistra" (458).

Famous Men's representation of heredity and its insistence on describing the tenant families in evolutionary terms have drawn charges of biological determinism from some recent critics. Gavin Jones, for example, argues that Agee rehashes late-nineteenth-century discourses of poverty and degeneration, and ultimately envisions "the poor as virtually another species in their cultural-psychological-biological damage."[214] This conclusion arises, I would argue, from a narrow reading of *Famous Men*'s references to biology. Although Agee was surely aware of broader cultural discourses of poverty, his interest in science emerged independently of his consideration of poverty, and his use of scientific discourse in *Famous Men* is otherwise quite deliberate. As this chapter has shown, he frames the lives of the tenant families in terms of the outlook he absorbed from the general-interest scientific texts he was reading in the mid-1930s, in particular, *The Science of Life*. Furthermore, the overwhelming implication of his references to evolution, psychology, and astronomy is that we have much more in common with all human beings (indeed, with our cats and our houseplants) than we normally assume from the perspective of our regular social interactions.

Jones pays special attention to the "Colon" section of Part Two, where Agee writes that in order to convey all the "particularities" of any one of the individual tenant farmers, the best approach is to consider each of them as the "heart, nerve, center" of a "globe" of life. He goes on, once again, to frame the individual human life in evolutionary time and astronomical space; before going into the details, he says, "we should first meditate and establish its ancient, then more recent, its spreaded and more local, history and situation: how it is a child of the substance and bowels of the stars and of all space: how it is created forth of an aberration special to one speck and germ and pollen fleck this planet, this young planet," and so on (89). Agee insists on "never relaxing the simultaneity of his ancestral and brotherly stars" as he moves closer to the

[214] Jones, *American Hungers*, 124.

particular history of humanity, and from there to the genealogy of the tenant farmer (90). He describes this individual life as "brought forth of a chain and weaving, a texture of sorrowful and demented flesh, which in all previous centuries has scarcely in few meaningless hundreds wrought up a head from the blind bottom of the human sea and breathed one cup of brightness and plain air." This passage blurs the general history of European immigrants to America with the tenant farmer's particular history; by the end, several generations have undergone disease, poor food, and difficult conditions to the point that "the germens they carry at their groins" are "strained, cracked, split, tainted, vitiate to begin with, a wallet of cheated coinage" (90). Jones correctly identifies this portrayal of heredity as Lamarckian—suggesting that acquired characteristics can be passed on to later generations. Jones compares this to a passage from *The Dangerous Classes of New York* (1872), "in which Charles Loring Brace describes the power of pauperism to enter a girl's blood in the form of inherited 'gemmules' that produce 'irresistible effects on her brain, nerves, and mental emotions.'"[215]

Given Agee's careful engagement with *Science: A New Outline* and *The Science of Life*, it seems more likely that he got his information from these sources than from late-nineteenth-century Lamarckian depictions of the poor. *The Science of Life* calls the inheritance of acquired characteristics "a knotty and controversial question" (585). The authors present Lamarck's hypothesis as very unlikely, given more recent developments in genetics, and suggest that, in spite of "Neo-Lamarckian" arguments, "the human child is very plastic and subtly absorptive, so that it is often difficult to discriminate between this sort of transmission and true inheritance through the germ-plasm" (592). They write that the lack of overwhelming proof in favor of the inheritance of acquired characteristics "is perhaps best for humanity":

It would doubtless be very desirable if the benefits of healthy upbringing, good

[215] Ibid., 122.

> education and mellow experience could be entailed upon our descendents. But if they could be entailed, so could the effects of disease and unhealthy homes, the cramping effects of bad education and the fruits of vice and laziness and degenerate living. And it must be confessed that over the greater part of history, the bad has outweighed the good in the conditions under which most human beings have had to live. Disease, drink, excessive toil, slums, semi-starvation alternating with gross excess—the machinery of our germ-plasm is mercifully such that no taint rests upon us through the inheritance of these degradations (593).

Agee's description of generations of toil producing tainted "germens" appears to take up the dramatic force of this passage in service of the opposite argument. Wells, Huxley, and Wells ultimately conclude that the reader can believe in Lamarckian inheritance if "suits his philosophy," having noted earlier that the "Neo-Lamarckian view appeals most to those combatant spirits who would figure man in a Promethean and finally hopeful conflict with the universe" (593, 433). Perhaps Agee identified with these hopeful Prometheans, perhaps he engaged in sloppy reading, or perhaps he gave himself over to the feeling that the tenant farmers had been cheated from the beginning. At any rate, his suggestion that they inherited the effects of their grandparents' hard lives is inconsistent with his many statements about the "great potentiality" of every human life. Agee begins the "Education" section with a declaration that squarely contradicts his suggestion of Lamarckian inheritance: "In every child who is born, under no matter what circumstances, and of no matter what parents, the potentiality of the human race is born again" (255). In "Colon" he writes that every "individual mote" of human life is "in its beginning capable, in its terms, of health, which is perfection, which is holiness, which is simple and salted, blooded functioning of each animal in his own best" (89). It is worth noting

that this passage does not refer exclusively to the poor. Agee is talking about all human beings, thus, the variation implied by his mention of individual "terms" is spread across the entire species. We are all animals. We may not be equally suited for tennis or brain surgery or philosophical reverie, but each of us is capable of our own form of perfection. Examined holistically, *Famous Men*'s biological references do not imply that the poor constitute a different species. On the contrary, they recommend universal identification. That is precisely the point of anchoring the history of an individual tenant farmer to the "substance and bowels of the stars" and "all space" (89).

Contrary to the notion that Agee posits "generational determinism" as the "absolute" cause of poverty, "Colon" emphasizes numerous factors interacting in complex ways to produce the situation in which the tenant families find themselves.[216] Jones acknowledges that Agee's catalog of influences includes "physical, mental, emotional, and economic" factors, but he puts special emphasis on the mention of "*glandular*" influence, identifying "glandular" as "a key word of Agee's that reinforces the genetic causes of impoverishment."[217] The word appears three times. Its first use is unrelated to poverty or genetics: Agee writes that Annie Mae Gudger is "of that tribe who by glandular arrangement seem to exhaust rather than renew themselves with sleep" (78-79). As this "tribe" of bad sleepers does not include George Gudger or Fred Ricketts, or even Annie Mae's sister Emma, the statement amounts to an observation of physiological idiosyncrasy. The second two uses of "glandular" do relate to the tenant farmers' continued poverty, but in each case the glands are included among numerous possible forces shaping their lives. The word appears in "Colon" as part of Agee's twenty-one item list of everything an individual human being "can perceive and can receive and can react to and reflect

[216] Ibid.
[217] Ibid.

upon"; at the end of the list he writes that all of these things "interform one another" in "orchestral complex" (93, 94). Toward the end of "Shelter" Agee describes the source of the tenant families' poor living conditions as "the whole world-system"—i.e., capitalism—to which he adds: "and there are in the people themselves, and in the land and climate, other sources quite as powerful but less easy to define, far less to go about curing: and they are, to suggest them too bluntly, psychological, semantic, traditional, perhaps glandular" (182). Neither here nor elsewhere does he suggest that the tenant families have been trapped primarily by their glands. In order to attach so much exclusive weight to his three references to human glands, we have to assume that the whole network of influences he discusses is offered as a smoke-screen for what he must consider the true physiological cause of poverty. At the very least, we can infer from Agee's mention of Annie Mae's "glandular arrangement" that he believed glands could potentially have a wide range of effects over a person's experience and temperament, which is in keeping with what *The Science of Life* says about the functioning of ductless glands.[218] Wells, Huxley, and Wells never relate glandular function to heredity; rather, they describe it in relation to general health and bodily process.

Perhaps the best conclusion we can draw is that *Famous Men* does not actively work to distance its portrayal of the tenant families from fields of knowledge (physiology, evolutionary theory) that were used in problematic ways in earlier discourses of poverty and social reform. Presumably this is because the book *does* actively work to engage scientific discourse toward different ends. The kicker for Jones is that *Famous Men* employs "a disturbing series of tropes in which the poor are compared directly with animals."[219] The young black woman near the church flinches "like a kicked cow scrambling out of a creek" and springs "forward into the first

[218] See *SL*, 163-167. Wells, Huxley, and Wells explain, "Like other tissues, the ductless glands are sensitive to changes in the composition of the blood" (167).

[219] Jones, *American Hungers*, 122.

motions of a running not human but that of a suddenly terrified wild animal" (*FM*, 38). The younger Ricketts daughter steps "beautifully as a young mare" and one of the Ricketts boys laughs "snortily like a horse with pleasure" (285, 342). Thomas is "frog-legged" and Ellen "fish mouthed" (69). Woods is described as "an old man with a lightly made, still vital and sexually engaging body" and "the beautiful and light-boned, pleasingly carried, skeptic's unconquered head of those men whose ancestors are birds, not mammals" (242). The white landowner has a "deeply cut, not unkindly monkey's face" (23). These comparisons are disturbing if we understand all animals to be symbols of degeneration, but *Agee did not understand them as such*. His letter to Father Flye from August 1939 explains, "I think that human beings might do exceedingly well to learn from animals and hope to come halfway up to them, rather than exert themselves in distinguishing themselves from them."[220]

5. Particular and Universal

Even more pervasive than Agee's animal metaphors are his depictions of the ways the tenant families' lives are closely intertwined with the lives of animals. *Famous Men*'s emphasis on material continuity through time, from stars to unicellular organisms to everything currently living, finds its corollary in Agee's attention to our spatial proximity to other life forms. The extensive detailing of the tenant families' houses in "Shelter" ends with a description of the multitudinous plants and animals "sewn into these human lives" (191). "Recessional and Vortex" clearly echoes *The Science of Life*'s illustration of the principles of ecology. Book Six, "The Spectacle of Life," begins with a chapter devoted to habitats, which delves into the little world of "Mr. Everyman," who lives in the suburbs with Mrs. Everyman, Master Everyman, one servant, a cat, and a terrier (823). However tame it may appear, the life-world of the middle

[220] Agee, *Letters of James Agee to Father Flye*, 111.

classes is biologically rich, the authors explain: "This small portion of the earth's surface is the abode of a multitude of living creatures, each fulfilling its own biological destiny as best it may. Each has its own way of life, each inhabits its own private world… And yet the whole assemblage of lives is biologically intertwined; it forms an interlocking whole" (823). What is true in the English suburbs is also true in rural Alabama, where Agee is nearly overwhelmed by richness—"for, taking even a single center, the human animals alone, they live in an immediate and most elaborate texture of other forms of existence, of the whole need and fear and spread of nature on their part of the surface of the earth; and this fact is no less powerful and shaping through the mere impossibility of measuring it" (187). The close correspondences between these and other passages point to *The Science of Life* as a likely source of Agee's understanding of the complex interrelationships between organisms and their environments, and his awareness of every plot of land as a small portion of the globe.

In their account of the "Everymans," Wells, Huxley, and Wells catalog mice, domesticated rabbits, garden vegetables, butterflies, bees, earthworms, microbes, and weeds. For his part, Agee reports that

> each of the families owns and is drawn-round with animals, for work, for food, or by more vague functions: a mule as one kind of center and leverage, a cow as another, a hog as still another, a dog in different meanings of his own, the tolerated tramp's and robber's life of the cat, the three generations of chickens, the peripheral or parasitic or almost unmagnetized spheres of rats, vermin, insects, and serpents, all in turn sprung round with tended and with random vegetation, and finally, those which lounge in the fields, and the many birds, and those who are hunted. (187)

His catalogue of animals suggests both abundance and particularity. The various forms of plant

life are "netted through with the traffic and simmering of bees and of wasps and hornets and snakedoctors, and with the needs and leisures of rabbits, red squirrels, gray squirrels, opossums, raccoons, wild razorbacks, wildcats, perhaps rare foxes, and spiders," in addition to frogs, turtles, and numerous species of birds (192). Agee's title, "Recessional and Vortex," sets up this chapter as a kind of hymn accompanying his exit from the tenant houses; the dynamic web of plant and animal life he notices upon leaving comprises the tenants' primary and immediate connection to the outside world. Agee describes the animals in relation to each other and the families, but also characterizes them individually, apart from human use. He mentions the violent "young cow, [who] has had one calf, and has been crazy in this way ever since she lost him" and the "starved, red young hog" who "stood by the front steps fumbling, with his jaws, at the tail of a black kitten, who crouched while this happened, and looked back over his shoulder in apprehension…" (187). This portrait of the local ecosystem begins with "the human animals," but they are only a provisional starting place, "a single center" among many. The fact that certain creatures' spheres are "peripheral or parasitic or almost unmagnetized" makes them no less relevant than the humans, mules, cows, or dogs. Their hunger, their fear, their needs and leisures exist alongside those of the tenant families. The animals' lives are contiguous rather than symbolic.

Contiguity also organizes Agee's sense of the tenant families' connection to the planet. Before embarking on "Part Two," which includes "Money" and "Shelter," Agee declares his hope that readers imagine the specific places he describes in their coextension with a much larger landscape: "let this be borne in mind, in order that, when we descend among its windings and blockades, into examination of slender particulars, this its wholeness and simultaneous living map may not be neglected" (98). "(On the Porch: 2" ends on a similar note. Agee returns us to the Gudgers' porch, where he and Evans are in the process of falling asleep, and he thinks about

the creek a few hundred yards from the house. He makes a point of saying that it is out of his range of hearing—"it lay only very lightly across our experience" (221)—but that prompts him to extend his thought: "we knew its beginning and course and ending only in a generalized way, a beginning in the sprouting of cold springs, a wandering of the land in sensitive forms, an ending, or a change, at that unknown place where at length it continuously smiled into some stronger stream" (221). The ensuing passage fuses Agee's direct perception of his surroundings, his sensory memory of the creek, and his idea of the entire continent. Those things outside of his immediate perception he "knew in imagination and yet could be sure of" (221). The "brown heavy water," "the flat stones," "the sudden deeps" and "the sand and the clay" of this particular creek give way to the "surface of a continent, condensed here and there by chance" (222). Agee compares the river system to a vine, which "takes growth not by the radiant outward energy which compels a branched tree to burst still further into branches but always by a sinking away of its energy toward the center, as leaves are drawn into the wake of an auto" (222). This image of leaves drawn behind a moving car first appears in Agee's description of the formation of the solar system in "Notes on the Universe and World History": "Once upon a time by some odd chance some celestial body swam past the sun so fast and so near that it drafted off a flock of fire as an auto draws leaves in its wake and the [planets] were hung, several of them" (*JAR*, 323). The process that created our physical environment mirrors itself in smaller and smaller forms; solar system, earth, continent, river, tree and vine. The creek is connected to both the physical origin of the earth and its continued existence, because the action of water "is carrying on in ten million parts of the face of earth at once, so that in the least creasing of the land sucked into scars between two stalks of corn you are seeing an organic part of the great body of the Mississippi River . . . . one of those few, huge, casual and aloof creatures by the mercy of whose existence

our own existence was made possible" (*FM*, 222). Local particulars are continuous with the whole and "simultaneous living map" of the globe (98).

"On the Porch" culminates in *Famous Men*'s most extensive use of *The Science of Life*, which translates the cosmological question of humanity's role in space and time into the local scene of falling asleep on the Gudgers' porch. Agee's description of the landscape in "(On the Porch: 2" ends in suspense: "From these woods a good way out along the hill there now came a sound that was new to us" (224). He repeats the sentence at the outset of the third installment of "On the Porch," and continues, "All the darkness in near range of earth as far as we were able to hear was strung with noises that were all one noise" (409). Out of the backfield comes a dissenting voice. It's the last thing Agee and Evans hear before falling asleep on the Gudgers' porch: an exchange of calls between two foxes. In a journal entry Agee described the sound as "exciting nearly to the point of fear with mystery: I don't know any wilder noise in the woods; more entirely alien to human existence; nor with half as much implicit contempt" (*JAR*, 43). He made a similar observation in another journal entry from the trip, where he remarked that the "roaring and ringing of frogs had been going on all that day and would keep going on all in one unbroken breath, and would have been there if human beings had never existed" (41-43). His description of the fox calls in "(On the Porch: 3" emphasizes the same alien quality. The call is "as cold and as chilling as the pupil of a goat's eye" and Agee describes the first fox as "so entirely itself, without regard for us, not part of us, more alien to us, because it was alive and conscious and within our near perspective of kinship, than any stone or star" (*FM*, 409, 411). "(On the Porch: 3" registers the shock of irrelevance. The kinship they share with the fox—as a fellow living creature, vertebrate, and conscious mammal—heightens the sting of its disregard.

The fox song coaxes Agee and Evans into their own sort of animal communication:

"Without exchange of word or glance we each received communication of a new opening of delight: but chiefly we now engaged in mutual listening and in analysis of what we heard, so strongly, that in all the body and in the whole range of mind and memory, each of us became all one hollowed and listening ear" (409). Listening to the foxes does not enact a mystical inter-species communion, but it does unite Agee and Evans in a mutual goal and sensation. They sense the animal's bodily experience—they "hear, or rather by some equivalent to radioactivity strongly feel, the motions and tensions of the throat and body, the very tilt of the head, that discharged it" (410). In addition, the second fox's response, more distant than the first, causes a back-and-forth shifting of alliance. Agee notes,

> At one moment the more distant call was more exciting simply in its distance and because, by its secondary appearance and by its distance beyond the first caller in relation to us, we got the illusion that it was the thing sought by the other; the next, the nearer call took all the honors from it, by nearness; by having become the searcher with whom we had identified ourselves and taken sides and by having yet at the same time remained so entirely itself. (411)

The first fox's lack of regard for Agee and Evans both alienates them and makes them admire the animal even more. Their experience parallels that of the foxes as they wait to hear each call and response—"When this second voice had spoken, the first did not answer, but froze just as we and our world had frozen. That which had called was listening intently too" (412). Agee attributes to the whole experience "the frightening joy of hearing the world talk to itself, and the grief of incommunicability" (414). But vocal communication, he eventually decides, is not as important as that visceral, shared experience that briefly unites them, makes them part of that world which talks "to itself."

Agee and Evans' peripheral role in the landscape, as they listen to the foxes exchange calls, reiterates the overall message of *Famous Men*'s scientific outlook: human beings are not as important as we like to think. It also echoes *The Science of Life*'s discussion of humanity's relative place in the universe. In order to narrate "The History and Adventures of Life" in Book Five, Wells, Huxley, and Wells adopt a new theatrical metaphor: "The time has now come to give an account of the actual history of life upon the earth, the procession of events which, never repeating themselves, have led onwards until this present instant where the past is busy eating into the future. Of this colossal drama no man knows the scheme" (644). Man may not foresee the end of the play—whether it will be "catastrophic" or "slow and gloomy"—but he "at least believes that he has been called to take the leading part in it" (644). The writers qualify their portrayal of earth history as a "colossal drama" shortly thereafter, saying that although they "may be tempted to use theatrical metaphors" and "speak of the earth as life's stage and the heavens as its background," "this is not really accurate." Their reasons: "Living matter is but a special arrangement of ordinary matter, the evolution of life but a local and peculiar eddy, so to speak, in cosmic evolution. Players, stage, and background are all of one substance together" (644). From the perspective of the cosmos, humanity resembles background more than players: "Man is an inhabitant of a thin rind on a negligible detached blob of matter belonging to one among millions of stars in one among millions of island-universes" (646). Despite these technical reservations, the authors continue their theatrical metaphor. After briefly explaining the spatial and temporal scales of the universe—"we must leave our readers to find out about it for themselves in the pages of Eddington or Jeans" (645)—they move on to local history: "So much, very briefly, for the cosmic background. Next comes the setting of the actual stage—Earth. If there is one obvious lesson of evolutionary biology, it is that life is inseparably interwoven with its

surroundings, changes responsively with them, and is indeed meaningless thought of apart from its environment. We shall never understand the play and appreciate the *crescendo* of its action unless we see how the stage was prepared and what changes were made from time to time in its setting" (648). By the end of the prologue to Book Five, the authors have established the stage and the principal actors in their drama.

Consider, then, Agee's final comment on the fox performance he and Evans witness from "the set stage and center of action" of the Gudgers' porch (217):

> It was thoroughly as if principals had been set up, enchanted, and left like dim sacks at one side of a stage as enormous as the steadfast tilted deck of the earth, and as if onto this stage, accompanied by the drizzling confabulation of nocturnal-pastoral music, two masked characters, unforetold and perfectly irrelevant to the action, had with catlike aplomb and noiselessness stept and had sung, with sinister casualness, what at length turned out to have been the most significant, but most unfathomable, number in the show; and had then in perfect irony and silence withdrawn. (415)

Agee's dramatization reverses the egotistical presumptions inherent in *The Science of Life*'s first rendering of the evolutionary drama, in which humanity takes the leading role. It agrees slightly more with its second rendering, in scope if not in spirit. In Book Six, "The Spectacle of Life," the section devoted to ecology reluctantly downplays humanity, calling life "rather like the work of some extremely popular playwright who has only one leading idea in his head, which he repeats again and again with no great originality or invention" (967). Clearly this individual does not produce plays one would like to attend, however much his genius admits of variety: "The scenery varies—it is not his work—the costumes and the names change, new fashions soak into him, the cast of the actors is different and now one personality dominates and now another,

there is a lack or a superfluity of supers for the minor parts or some performing animal or other novelty has to be worked in, but beneath these changes we detect the same old plot and very much the same roles" (967). Elsewhere the writers enthusiastically describe the leveling effect of the new ecological outlook, but here the tone is more subdued. By evoking the distinction of good taste this passage overlays class hierarchy onto species relations in none too cheery a manner.

Agee's rendering of the spectacle of life in "(On the Porch: 3" imparts a very different message. The human principals, despite their enchantment, are more like sandbags than actors, and the performing animals are not shuffled onstage for the sake of novelty. Earlier Agee describes the foxes' "participation in, yet aristocratic distinction from, that plebian, unanimous ringing" of other animals' nighttime sounds (411). He judges the "first entrance" of the call "as perfect a piece of dramatic or musical structure as I know of . . . with none of the quality of studiousness in its surprise which hurts for instance some of the music of Brahms" (412). What he initially describes as "a work of great, private and unambitious art" becomes "the most significant, but most unfathomable, number in the show" (415). Whereas Wells, Huxley, and Wells end their "strange eventful history of life . . . at the point when the sun of humanity rises upon the world," Agee concludes *Famous Men* at the moment when he and Evans fall asleep, further emphasizing his call for species-wide humility (*SL*, 822). This final moment completes the narrative scene held aloft through the entire book, and carries the weight of Agee's ruminations in the earlier "On the Porch" sections. When he and Evans slip from consciousness they join the Gudgers "among the whole enchanted swarm of the living" (19).

The popular scientific texts that Agee read in the mid-1930s exerted a significant influence over *Let Us Now Praise Famous Men*, and the nature of that influence has been

overlooked or misconstrued by literary and cultural histories skewed toward reading all biological discourse as deterministic and all other references to nature as transcendental. It is no accident that these critical tendencies abide by the two major nineteenth-century responses to the natural sciences. Agee and his peers engaged science on different terms, even though some of the science they engaged dated to the nineteenth century; in keeping with the worldview promoted by the popular scientific nonfiction of the 1920s and 1930s, his conception of nature was materialistic but open-ended. The modern scientific worldview provided a set of grounding assumptions for his ethical stance and his sense of social justice. Agee argues that our "inability to grasp" the rudimentary facts of our position in time and space "does not qualify us very highly to handle more difficult facts which are of central importance at very least (to remain provincial) to the good of the human race" (220). He depicts anthropocentrism as provincial. Agee calls our current "ideas of justice" "cavalier" and "self-centered" in light of planetary and evolutionary history:

> What would we have to think of hogs who, having managed to secure justice among themselves, still and continuously and without the undertone of a thought to the contrary exploited every other creature and material of the planet, and who wore in their eyes, perfectly undisturbed by any second consideration, the high and holy light of science or religion. (220)

The point of this statement is not to insist that mules and kittens need as much protection from maltreatment as do tenant farmers. Rather, the point is to establish a larger frame of reference. If humanity has been wrong to self-righteously exploit other species, it goes without saying that certain humans have been wrong to exploit other humans and posit their actions as the natural expression of superior breeding or intelligence or moral fortitude. Agee's strategy of framing the

lives of the tenant families within the broad scales of earth history and planetary geography supersedes economic and cultural divisions without erasing them. The reasons for identification become obvious. It would be naïve, he implies, for a reader to imagine that she lives a world apart from Hobe's Hill, Alabama.

Agee's sense that being "up to date" as a writer meant "an interest in science" along with "social and political problems" speaks to a larger trend in the 1930s, especially among second-generation American modernists who were just beginning to launch their careers (*JAR*, 190). Whereas Agee struggled to articulate the relevance of science against Richards' brand of literary humanism, however, other writers incorporated the modern scientific worldview more seamlessly. Niedecker and Rexroth absorbed the details of geology and evolution while researching natural history for WPA state guidebooks, and didn't worry about whether their interests in science conflicted with the goals of poetry. By the late 1930s, field studies in geology and paleontology had advanced to the point that the state guides could describe the flora and fauna of a million years ago alongside current features of the landscape. Although Niedecker and Rexroth continued to admire earlier naturalists and nature writers, the poems they wrote in the wake of their WPA employment clearly reflect modern attitudes toward geological and evolutionary history. They highlight the historical depth of natural landscapes. They assume that the earth exists independently of human consciousness. They also adopt an attitude toward place remarkably similar to Agee's. An awareness of the earth's material history gave all three writers a new way to think about the local and the particular; instead of imagining local landscapes as distant outposts of urban centers of culture and civilization, they emphasized their contiguity with the whole planet.

Chapter 3: Local Geology and Late Modernist Poetics of Place

1. Introduction

In June 1957, Lorine Niedecker wrote to her friend and fellow poet Louis Zukofsky that she was "reading Emerson between China and Japan."[221] It was a subtle private joke. Despite the suggestion, she did not pen this missive from the East China Sea. The farthest Niedecker ever traveled from her native southern Wisconsin was to New York, and the second farthest was to the Canadian side of Lake Superior. She was rare among modernist poets in that she lived out her life in the rural Midwest and maintained her involvement in a literary community through the mail. Niedecker's interest in East Asian poetry was recent, and very much in vogue. In a letter to Zukofsky the previous September she mentioned two poems she liked in Kenneth Rexroth's translation, *One Hundred Poems from the Japanese* (1955), and her letters over the next year were sprinkled with references to haiku.[222] Rexroth, another second-generation modernist poet whose career got an early boost from Zukofsky's objectivism, had intensified his interest in East Asian poetry following World War II. By the mid-1950s he was serving as godfather to the San Francisco literary scene that launched the Beat Generation, whose principle members embraced Eastern religion as an alternative to the stifling culture of postwar America. Josephine Park argues that the Beats picked up on earlier American writers' attitudes toward the cultural traditions of East Asia, attitudes that were laden with "aesthetic mystification" and "transcendental ideals" and "marked by a repeated desire to reinvigorate an epic sense of

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[221] Penberthy, *Niedecker and the Correspondence with Zukofsky, 1931-1979*, 237.

[222] Ibid., 229–230, 233. Jenny Penberthy specifies, "This is Niedecker's first mention of Japanese poetry. She owned Rexroth's translation, *One Hundred Poems from the Japanese* (New York: New Directions, 1955) and two other collections of Japanese poetry: *Japanese Haiku* (Mt. Vernon, New York: Peter Pauper Press, 1955) and *Japanese Haiku, Series III* (Mt. Vernon, New York: Peter Pauper Press, 1966)" (230).

America through contact with the Orient."[223] Thus, the fact that Niedecker was reading the New England transcendentalist among haiku might be read as a sign that her literary interest in Asia was in line with that of the younger Beat writers.

Niedecker's simultaneous interest in Emerson and Asian poetry might also be contextualized in terms of the modernist poetic tradition she inherited. Long before Gary Snyder championed Zen Buddhism or Jack Kerouac penned a subculture of Dharma Bums, Ezra Pound based his "ideogrammic method" on Ernest Fenollosa's equivocal grasp of the Chinese written character.[224] Fenollosa's understanding of the ideogram contained heavy doses of Emersonian transcendentalism and the idealist biological theories of Louis Agassiz. Agassiz, Emerson, and Fenollosa believed that the natural world coheres through formal sympathies and correspondences. Agassiz made it his life's work to show "'that there is a correspondence between the succession of Fishes in geological times and the different stages of their growth in the egg,'" and thereby prove that nature was crafted by intelligent design rather than haphazard innovation.[225] Emerson insisted that "*nature is always self-similar*. . . . The globule of blood gyrates around its own axis in the human veins, as the planet in the sky"; all natural phenomena follow the same universal laws [226] Bell points out that one of the defining characteristics of Agassiz's and Emerson's idealist discourse is its apparent timelessness: "nothing is recognized as having a beginning or, by extension, an end."[227] Their vision of nature as a closed system organized by timeless correspondences and relations of form persisted in Fenollosa's approach to

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[223] Park, *Apparitions of Asia*, 16.

[224] Bell, *Critic as Scientist*, 103. Bell writes that "the most useful perspective" on the Pound-Fenollosa relationship "is Hugh Kenner's: that Fenollosa's notes, while adding nothing radically new to Pound's theories about art, had the effect of a codifying influence over many of Pound's rather disparate ideas; their main value was to synthesize a position Pound had already been moving towards. Things Japanese and Chinese had been familiar to literary London since Whistler's introduction of Japanese paintings in the 1860s. There was nothing novel about Pound's reception of oriental aesthetics; such things were simply very much in the air" (103).

[225] Ibid., 126.

[226] Quoted in Ibid., 119.

[227] Ibid., 130.

poetic language. Fenollosa's famous essay argued that Chinese written language was an ideal medium for poetry because it was "based upon a vivid shorthand picture of the operations of nature."[228] Pound's preface to the 1918 edition announces, "We have here not a bare philological discussion, but a study of the fundamentals of all aesthetics."[229] Pound's ideogrammic method translates Emerson's and Agassiz's natural correspondences into "a logic of juxtaposed particulars, 'luminous details' that speak for themselves when revealed by the poet."[230] Thanks to Pound, modernist poetics came to be dominated by a set of aesthetic principles and a theory of language infused with transcendental idealism, and thus built on a romantic conception of nature. Niedecker came of age at a time when Poundian aesthetics held sway, whether via imagism, vorticism, or objectivism, but she also happened to be acutely interested in the natural world. In sum, her remark to Zukofsky that she was "reading Emerson between China and Japan"—from the quiet remove of Black Hawk Island, Wisconsin—not only raises questions about her relation to American Orientalism and modernist poetics; it speaks to her fundamental assumptions about nature.

Niedecker's letter quotes Emerson's declaration, in *Representative Men* (1850), that "'a man of thought must feel the thought that is parent of the universe,'" to which Niedecker adds, "Second cousin of the universe, anyhow."[231] The demotion of thought from parent to cousin might sound trivial, but it implies a radically different cosmology. Emerson uses "parent" as a metaphor in that line, and the metaphorical relation goes both ways; he understood "the whole of nature" to be "a metaphor of the human mind."[232] In regard to nature, the romantic thinker finds

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[228] Fenollosa, *The Chinese Written Character as a Medium for Poetry*, 45.
[229] Ibid., 41.
[230] Ibid., 4.
[231] Emerson, *Essays and Lectures*, 708; Penberthy, *Niedecker and the Correspondence with Zukofsky, 1931-1979*, 237.
[232] Bell, *Critic as Scientist*, 127.

himself in a position not unlike that of God, encountering his own kindred spirit wandering among hill and dale. The modern poet, on the other hand, if she thinks of life as "a local and peculiar eddy . . . in cosmic evolution," has to face the strangeness of her existence among rocks and trees (*SL*, 644). By demoting *thought* to the status of second-cousin, Niedecker insists on a literal family tree. Consciousness is not the ultimate sphere of reality, but a faculty evolved among certain complex animals who are only distantly related to the stars.

Niedecker's casual amendment of Emerson registers a crucial distinction between transcendental idealism, one version of the philosophy of nature that took hold under nineteenth-century romanticism, and the new version of natural history that was popularized in the 1920s and 1930s. The shift in the way certain modernist writers imagined the origin and primacy of consciousness was apparent to Elizabeth Atkins, the same literary critic who tallied the rising number of poems about animals following World War I. Whereas Wordsworth "so nearly" endowed the earth with consciousness, the attitude of Edna St. Vincent Millay, Atkins wrote, "seems to be that of the philosopher Whitehead, who is convinced that human thought and a green hill are one order of being, and who yet does not conceive of the green hill ruminating in a rational fashion."[233] She goes on to say that "Whitehead and Santayana and Jeans—in fact, most of the philosophical writers of today who are influencing poets—think of the earth as holding only a vague potentiality of consciousness, which reaches actuality in the little human creatures on its surface."[234] The writers I have discussed thus far understood consciousness to be a cousin of the universe, not its parent. They heeded the philosophies of Whitehead, Santayana, and Jeans, whose principle innovation was to re-contextualize human life within the vast scales of time and space revealed by modern geology, evolutionary theory, and astronomy. This new

[233] Atkins, *Edna St. Vincent Millay and Her Times*, 255.
[234] Ibid.

history of the earth shaped William Carlos Williams' treatment of materiality, informed James Agee's understanding of social justice, and defined two late modernists' poetics of place.

Niedecker and Rexroth both diverged from romantic Orientalism and the modernist poetics informed by it. Their aesthetic attitudes toward Asia were neither mystical nor transcendental, and were, in fact, rooted in their aesthetic attitudes toward the United States, which can be traced to an unlikely source: the awareness of local geological history they each gained while working on Federal Writers' Project (FWP) state guidebooks in the late 1930s. As a subsidiary of the WPA, the FWP employed writers in the production of state-specific tourist guides celebrating the uniqueness of American landmarks, culture, and local history. If any experience were going to impart an epic sense of America, that should have been it; the guidebooks themselves certainly convey pride of place. Yet the nationalism inherent in the state guides did not inhere in Rexroth's or Niedecker's later poetry. The details of local geology did, however. Working on the state guidebooks gave these two otherwise disparate poets a common picture of the earth, as a planet whose history does not respect national, state, or continental boundaries.

Both poets were deeply connected to specific rural and natural areas—in Niedecker's case, her native southern Wisconsin and the region surrounding Lake Superior, and in Rexroth's case, the northern California mountains where he roamed throughout his life. The features of Blackhawk Island and the Coast Range do not confer personal, regional, or national identities; instead, they anchor both poets to the earth. As second-generation modernists, Rexroth and Niedecker were both influenced by Pound and Fenollosa, and they pushed against that tradition as they brought their poetics into line with their ideas about nature. They used geological history to connect their local environments to the whole planet and its past, to think beyond their own

limited cultural traditions, and to design a poetic language that reflected humanity's embeddedness in place and time.

2. Natural Settings

The FWP American Guide Series adopted something of the ethos of the late-nineteenth-century "local color" movement, celebrating regional histories, customs, and points of interest in order to define a composite national identity. According to Jerome Hirsch, it was "the central vehicle for the efforts of the Writers' Project to rediscover America, to introduce America to Americans, and to make the culture accessible to the people to whom it belonged."[235] The state guides were written for tourists and general readers alike, and were composed of three main sections: historical essays, city descriptions, and automobile tours. The essays begin with "Natural Setting," broken down into climate, geography, geology, flora, and fauna, and from there they move to topics like "First Americans," "History," "Immigration," "Agriculture," "Industry," "Labor," "Transportation," "Press and Radio," "Education," and "The Arts." The essays attempted to rewrite social history incorporating the experiences of working people and ethnic minorities, but they also recycle traditional American myths. Alfred Kazin, in *On Native Grounds* (1941), criticized their "unprecedented affirmation" of the achievements and future progress of American civilization, and said the guides were marked by a "new nationalism."[236] That nationalism had everything to do with pushing back against Europe. One of the founding goals of the series was to produce guidebooks that would assert the depth and value of United States culture, and show that Americans did not have to travel to Europe or Egypt to find historical monuments and cultural artifacts. At the time, the only other comprehensive American

[235] Hirsch, *Portrait of America*, 42.
[236] Ibid., 11.

travel book was "Baedeker's guide to America, written from a European perspective and last revised in 1909," which "had in the eyes of FWP officials treated America with traditional Old World condescension."[237]

Although the American Guide Series borrowed the form of Baedeker's quintessential late-nineteenth-century guidebooks, the natural history essays follow very different assumptions. True to the German romantic tradition, the Baedeker guide to the United States declares outright that the physical circumstances of the terrain, climate, soil, and geology "have gone far to determine the history and development of the people who have come to the country from the old world"—and it finds confirmation of America's lackluster cultural heritage in the continent's prehuman history: "The scenery of North America is generally characterized by a largeness of mould and simplicity of outline dependent on the relatively uncomplicated nature of its geological history."[238] The essays on geology and paleontology in the WPA guides do not focus on how the land's past had shaped the character of current residents. In fact, they often leave people out altogether. These essays dramatize the alien nature of otherwise familiar places. The essay on Minnesota's natural history proclaims that "huge tusks, joints, jawbones, and the teeth of elephant-like animals found in the glacial drift, bones preserved in peat-bogs, plants from the deep muck of ancient swamps, all point to a strange Minnesota."[239] A pleasant lake or field suddenly stretches back hundreds of millions of years, through the rise and fall of whole mountain ranges, the advance and retreat of vast seas and glaciers, and the slow accumulation of sedimentary rock. The "Natural Setting" essays of the American Guide Series imbue local land-masses with histories that dwarf the rise of modern America.

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[237] Ibid., 49–50.
[238] Muirhead, *The United States, with an Excursion into Mexico: Handbook for Travellers*, lxvii, lxxv.
[239] *Minnesota: A State Guide*, 16.

Rexroth signed on with the FWP's Northern California branch in 1935, "as editor of all natural history articles."[240] He contributed to *California: A Guide to the Golden State* (1939) as well as the guide to San Francisco.[241] According to Linda Hamalian, "Notes and uncompleted manuscripts suggest that his hand can be found in the sections about Mt. Shasta, a tour from the state line to Sacramento, Sequoia National Park, the General Highways and Trails, and a history of the Donner Party tragedy of 1846."[242] Rexroth built on the hiking and mountaineering experience he had gained since moving to California in the late 1920s, and "writing for the guide became the means of and the excuse for spending extended amounts of time in the high country of the Sierra Nevada."[243] Jerre Mangione's history of the FWP describes Rexroth as a firebrand who "dominated the San Francisco office with his volatile personality and compulsive storytelling" and led the other "'real writers'" in demanding more interesting projects, since "they considered the writing of guidebooks a form of hack work which contributed nothing to their literary development."[244] Mangione writes, "When at last the Project swung into action there was less time for talk as Rexroth went off on field trips to collect data on California's flora and fauna, the guidebook topic assigned to him."[245] In addition to the guidebook contributions he also wrote an unpublished manuscript entitled *Camping in the Western Mountains* that offers practical advice for backpackers and mountaineers.

Whatever his complaints at the time, working on the state guide gave Rexroth a thorough understanding of the natural history of particular locations in the California mountains as well as

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[240] Rexroth, *An Autobiographical Novel*, 451.

[241] Hamalian, *Life of Kenneth Rexroth*, 79, 83.

[242] Ibid., 83. Hamalian goes on to note, "In the introduction to the *Guide* reissued in 1984, Gwendolyn Wright . . . singled out Rexroth's descriptions of the national parks, forests, lakes, and deserts as 'some of the most beautifully written passages in the guide.'" Rexroth's notes and manuscripts are held in special collections at the UCLA and USC libraries.

[243] Hart, "The Discursive Mode: Kenneth Rexroth, the California State Guide, and Nature Poetry in the 1930s," 6. Also see Hamalian, *Life of Kenneth Rexroth*, 100.

[244] Mangione, *The Dream and the Deal: The Federal Writers' Project, 1935-1943*, 132, 138.

[245] Ibid., 132–34.

a broad view of the geological and evolutionary history of the west coast. The chapter on Sequoia and Grant National Parks is a case in point. Its first paragraph begins with a generic description of the parks' location and ends with an account of the region's geological history: "In the eastern section of Sequoia are high mountain lakes—of glacial origin, as are the mountainsides of exposed rock and the great, irregular granite ridges, cleared of their earth and vegetation by ice thousands of years ago. The Sierra—as a distinct range—dates from the latter part of the Jurassic period, when it began to rise from the receding Logan Sea; it is approximately 120,000,000 years old (*see NATURAL SETTING*)."[246] Rexroth's writings on Sequoia, Mt. Shasta, and the Klamath Mountains (along US 99) repeatedly gesture toward the long-term forces that created those landscapes, interspersing human and natural history.[247] Even as he describes the tourist amenities of Sequoia National Park, he reminds readers that the "park's outstanding attraction—the big tree—was present millions of years ago, when the present coal deposits were marshes crowded with dense and luxurious vegetation."[248] The "Sequoia Park Tour"—like "Tour 3" down US 99—describes roadside geology along with local towns and landmarks. "The road cuts again and again through limestone, honeycombed with caves (*not safely accessible*). As the road continues to climb the limestone rocks are replaced by schists, the tightly pressed, metamorphosed stone that lies along the surface of the Sierra."[249] Although the surviving notes and manuscripts from Rexroth's WPA years do not document his involvement with the "Natural Setting and Conservation" chapter, the contents of his personal library suggest that he very well could have written the essays on California's geography,

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[246] *California: A Guide to the Golden State*, 656.

[247] Ibid., 433. The Sequoia essay includes historical anecdotes that clearly reflect Rexroth's politics—communalism, etc.. Likewise the following sentence on the "discovery" of Mt. Shasta: "Although it dominates the landscape for a hundred miles, Shasta was unknown to white men until Peter Skene Ogden discovered it February 14, 1827" (433).

[248] Ibid., 660–61.

[249] Ibid., 662.

geology and paleontology, and plant and animal life.[250] Among other books, he owned a 1922 edition of John Muir's *The Mountains of California*; Joseph Grinnell's *Animal Life in Yosemite* (1924) and *Fur-bearing Mammals of California* (1937); Harvey Monroe Hall and Carlotta Case Hall's *A Yosemite Flora* (1912); George Sudworth's *Forest Trees of the Pacific Slope* (1908); Frank Jason Smiley's *Report Upon the Boreal Flora of the Sierra Nevada* (1921); William Berryman Scott's *A History of Land Mammals in the Western Hemisphere* (1937); François Matthes' *Geologic History of the Yosemite Valley* (1930); *Geology: Principles and Processes* (1939); and two volumes of *A Textbook of Geology* (1932, 1935).[251]

Rexroth's guidebook research worked as an intellectual catalyst. The deepened understanding of local geology and ecosystems that he gained in those years had a lasting effect on his worldview. From the 1940s on his poetry is inflected with a broad scientific understanding of natural history as well specific knowledge of local plants, animals, and rock formations. He continued his research in natural history after the 1930s, and if anything, his reading grew more technical and scientific as he amassed an extensive library on geology and astronomy in the decades that followed. His books on geology ranged from popular surveys, such as Frank Dawson Adams's *The Birth and Development of the Geological Sciences* (1954), to volumes aimed at educated readers and specialists, like *The Earth and Its Atmosphere* (1957), edited by D. R. Bates, and Charles H. Hapgood's *Earth's Shifting Crust* (1958). He owned more

[250] The California state guide lists the editorial staff for the Northern and Southern California offices without indicating particular assignments. If Rexroth was the editor of everything related to natural history, including the "Natural Setting" chapter, he likely consulted Olaf Jenkins and Norman E. A. Hinds, both of whom are acknowledged in the preface. Hinds had published two books on the geology of the southern Klamath Mountains with the University of California Press (1932, 1935), and went on to write *Geomorphology: The Evolution of Landscape* (Prentice-Hall, 1943), among other books. Olaf Jenkins was the State Geologist of California in the 1930s.

[251] Rexroth's personal library—consisting of 15,000 volumes—is held in the Kenneth Rexroth Collection at Kanda University of International Studies in Chiba, Japan. The catalog is searchable online through the Kanda University Library website, http://www.kuis.ac.jp/toshokan/krc/english/.

than a dozen books on astronomy published in the 1950s and 1960s.[252] Rexroth's library indicates that he continued to research the natural history and ecology of Northern California, in particular. He owned François Matthes' *Sequoia National Park: A Geological Album* (1950), Olaf P. Jenkins's *Geologic Guidebook of the San Francisco Bay Counties* (1951), Arthur David Howard's *Evolution of the Landscape of the San Francisco Bay Region* (1962), and Oliver Bowen's *Rocks and Minerals of the San Francisco Bay Region* (1962), in addition to numerous books on California plants and animals. He even appears to have researched the local geology, flora, and fauna of other places; he owned Christopher Schuberth's *The Geology of New York City and Environs* (1968), and several books on the natural history of Britain. As his library suggests, natural history—local and planetary—would be crucial to Rexroth's poetry for the remainder of his career.

Niedecker joined the Wisconsin staff of the FWP in 1938, and stayed on as a writer and research editor until 1942. Her contributions to *Wisconsin: A Guide to the Badger State* (1941) have been obscured by the circumstances of collective authorship—and the fact that she burned her papers—but letters and poems indicate that her work involved research into the life of Thure Kumlien, a Swedish naturalist who settled in Wisconsin in 1843.[253] The influence of Niedecker's FWP work over her later poetics is easier to trace. The research she began in preparation for her car trips around the upper Midwest in the mid-1960s influenced her poetry for the next several years. She immersed herself in the geological and human history of the

[252] These include: Fletcher G. Watson, *Between the Planets* (1956); John Pfeiffer, *The Changing Universe* (1956); Gerard de Vaucouleurs, *Discovery of the Universe* (1957); Fred Hoyle, *Frontiers of Astronomy* (1956); J. B. Sidgwick, *Introducing Astronomy* (1957); Donald Menzel, *Our Sun* (1959); Bart and Priscilla Bok, *The Milky Way* (1957); Clyde B. Clason, *Exploring the Distant Stars* (1958); Walter Baade, *Evolution of Stars and Galaxies* (1963); Robert Jastrow, *Red Giants and White Dwarfs* (1969); F. Graham Smith, *Radio Astronomy* (1960); and three volumes of *The Solar System* (1953, 1954, 1961), edited by Gerard Kuiper.

[253] Penberthy, *Niedecker and the Correspondence with Zukofsky, 1931-1979*, 125–129.

region surrounding Lake Superior, and left behind more than two hundred pages of notes.[254] Chief among her sources were the WPA state guidebooks. She took extensive notes from the "Natural Setting" essays of the guides for Michigan, Wisconsin, and Minnesota, focusing on each state's geological history. Her notes include handwritten summaries, typed versions of the same, and eventually syntheses of the information she gathered. She paid attention to physical and historical geology, linking particular rock and mineral formations to the processes that created and altered them.[255] "The first sedimentary rock laid upon the Archean surface was of sandstone, shales, and limestones—now appearing as quartzite, slate and marble—and the iron formation."[256] Her typed summary from the Wisconsin's "Natural Setting" includes an account of the formation of Lake Superior: "The Lake S. syncline formed in the final movement when mountains were made. St. Croix Falls, Mellen and Superior afford good outcroppings of the Keeweenawan masses of lava, sandstone, and conglomerate. With the end of this Keeweenawan period more than half of the earth's estimated billion years of record had passed. Living things had developed slightly in complexity but without backbone or shell, still confined to water."[257]

She was especially interested in traces of rock and sediment from the earliest geological eras. From the "Natural Setting" chapter in the Michigan guidebook, she wrote: "Michigan and Wis. formed from the first N. A. continent called Laurentia; 'Traces of granitic rim of Laurentia'

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[254] Niedecker's notes on the geological history of the Lake Superior region are held by the Hoard Historical Museum in Fort Atkinson, WI, but are also available online through the University of Wisconsin Digital Collections (UWDC), at http://digital.library.wisc.edu/1711.dl/WI.FortAtkinsonLocHist. To facilitate online access, further citations will refer to individual documents by their UWDC titles—which sometimes encompass several distinct sets of notes—and page number(s). Documents are undated unless otherwise noted. The full citation for Niedecker's papers can be found in the bibliography.

[255] See, for example, "Geology Notes," "Lake Superior Country," "Lake Superior Notes 2," and Small Handwritten Notes, Niedecker Papers.

[256] "Natural History of the States," Niedecker Papers, 1.

[257] "Lake Superior – American Lake Series – Ft. Library," Niedecker Papers, 35; "Summary of Rocks – Tests for Identification," Niedecker Papers, 5. Also see *Wisconsin: A Guide to the Badger State*, 10.

remain in southern Canada and the northwest in Wis. Successive creations and destructions."[258] She goes on: "Archean rock from ancient continent found in Upper Peninsula, composed of schists, granites, and gneisses cut by dykes of lava, are believed to have been formed when convulsively moved rock masses reared above the sea of the newly formed planet. Many knobs of Archean rock, some rounded by glacial action, rise west of Marquette" (ibid.). Niedecker drew a line in the margin next to the last half of this passage. Her notes on geological history conjure images of a time before the present continents formed, when the materials of the earth were all jumbled together.

Given the breadth of the FWP state guides and the number of writers involved in their production, the fact that the experience nudged Niedecker's and Rexroth's poetics in such parallel directions seems partly coincidental. The two poets cultivated their interests in natural history in separate backwaters of a massive New Deal program. The "Natural Setting" essays are perhaps the only portions of the guidebooks that consistently avoid the theme of national unity, since they deal largely with the remote geological past. At the same time, the scientific perspectives the guidebooks consolidate reflect a uniquely modern attitude toward natural history, which coalesced in the 1920s and 1930s. Working on the state guides gave Niedecker and Rexroth thorough educations in the natural history of their respective regions, and focused their engagement with scientific nonfiction and nature writing in the decades that followed. Rexroth's library tended toward the technical and scientific, while Niedecker read widely among earlier naturalists such as Audubon, Crevecoeur, Humboldt, and Agassiz. Her library also included contemporary works by J. W. N. Sullivan, Julian Huxley, Joseph Wood Krutch, Giorgio

[258] "Lake Superior – American Lake Series – Ft. Library," Niedecker Papers, 10; "Michigan," Niedecker Papers, 7. In my quotations from Niedecker's handwritten notes I have replaced her shorthand "+" with "and."

de Santillana, and Loren Eiseley.[259] In addition, Niedecker and Rexroth came to their FWP research solidly grounded in the hallmark scientific texts of their era; in particular, both poets owned and admired books Wells' scientific nonfiction and Whitehead's scientific philosophy.

3. Kenneth Rexroth's Earthy Ideogram

Rexroth was already an avid outdoorsman before he worked for the FWP, but his research into local geologic and evolutionary history shaped his engagement with the landscape and directly impacted his poetry. George Hart explains Rexroth's "ecological" shift in the years following his FWP research in the context of "the growing popularity of wilderness recreation" in the early twentieth century, which he traces back to the "revaluation of wild nature that began with the Romantics in the nineteenth century."[260] It is certainly true that the mass production of automobiles and the establishment of national parks shaped Rexroth's engagement with the natural world. Hart argues that Rexroth's "evolving wilderness aesthetic" transformed him from a "second-generation modernist," interested in Cubism and other modes of formal experimentation, into a "sacramental nature poet," a "precursor to many postwar and contemporary poets who look to nature for religious and spiritual values."[261] He goes on to say that Rexroth's poetry from these years "reintroduces the speaking subject of the Romantic lyric but with an expanded interest in the nonhuman, a naturalist's attention to things that posses inherent value as material objects rather than only as signs or symbols of spirit or imagination."[262] Rexroth was well-versed in the romantic lyric tradition and the work of later

[259] The Friends of Lorine Niedecker website maintains a list of the books in her library at http://www.lorineniedecker.org/resources.cfm.

[260] Hart, "The Discursive Mode: Kenneth Rexroth, the California State Guide, and Nature Poetry in the 1930s," 5–6.

[261] Ibid., 9.

[262] Ibid., 14.

nineteenth-century nature writers like John Muir, Clarence King, and John Tyndall. Yet the sensibility that emerged from his wilderness recreation was a world apart from theirs, because it was shaped by twentieth-century interpretations of geology, evolution, and astronomy. Rexroth's interest in the non-human, and his downplaying of symbolic and spiritual meaning, are entirely consistent with the attitude spread by science and nature writers in the 1920s and 1930s, and diverge in significant ways from romantic attitudes toward nature.

Rexroth's second collection of poems, *The Phoenix and the Tortoise* (1944), is full of references to the geological history of Northern California. Its title poem begins on a beach scattered with refuse from the sea: "Fragments of its inexhaustible / Life litter the shingle, sea hares, / Broken starfish, a dead octopus" and "Innumerable hermit crabs."[263] The dead sea creatures intimate other forms of life casually and continually sprung up, tossed against the earth, and forgotten. The second verse paragraph establishes the rocky beach as the poem's ultimate frame of reference:

> This is not the first time this shingle
> Has been here. These cobbles are washed
> From ancient conglomerate beds,
> Beaches of the Franciscan series,
> The immense layer cake of grey strata
> That hangs without top or bottom
> In the geological past
> Of the California Coast Ranges.
> There are no fossils in them. Their

[263] Rexroth, *The Complete Poems of Kenneth Rexroth*, 239. Further references to this edition (hereafter abbreviated as *CP*) will be cited in the text by page number—or, for shorter poems, page and line number.

Dates are disputed – thousands of feet,
Thousands and thousands of years, of bays,
Tidemarshes, estuaries, beaches,
Where time flowed eventless as silt.
Further along the beach the stones
Change; the cliffs are yellow with black
Bands of lignite; and scattered amongst
The sand dollars in the storm's refuse
Are fossil sand dollars the sea
Has washed from stone, as it has washed
These, newly dead, from life.
(239-40)

"Shingle" is a geological term; one of Rexroth's textbooks explains that "where the beach is composed largely of flattened, disk-like pebbles produced by a gliding wave motion, these may overlap forming a *shingle beach*."[264] Rexroth's description of this particular shingle beach echoes the *California Guide*'s essay on "Geology and Paleontology," which explains that from "the Jurassic come most of that complex series of Coast Range rocks known as the Franciscan. These are sedimentary rocks of several types: conglomerate, sandstone, shale, variegated chert, and (rarely) limestone."[265] Conglomerate is "a near-shore sedimentary rock" and "suggests an ancient shore line"—even an ancient storm, as "some of them seem to be made up of fragments

[264] Emmons et al., *Geology: Principles and Processes*, 241.
[265] *California: A Guide to the Golden State*, 17.

of rocks broken by waves during heavy storms."[266] The poem opens with an image of continuity; the rocks have crashed and reformed, and crash again.

Rexroth juxtaposes the shingles from the "ancient conglomerate beds" of the Franciscan series with the cliffs up the beach, from a different geological era. The latter have preserved a long historical record, which offers the comfort of solidarity to "newly dead" starfish (240). The former are utterly opaque, fossil-less. Later Rexroth calls the Franciscan series "a mile thick / Mummy of blank catastrophe" (254). He describes the rocks in very similar terms in "Past and Future Turn About":

> In the granite
> Cliffs are swarms of dark fish shaped patches
> Of rock oriented to the flow lines
> Of the hot magma. Nobody knows
> Exactly what caused their formation,
> Deep in the blind earth under the blind
> Jurassic world, under the dead
> Franciscan series, what disorder,
> What process.
> (234-35; ll. 17-25)

The geological record contains traces of past life but also large swaths of oblivion. Rexroth's vision of the natural world is material, not mechanistic. His attitude toward nature is neither intoxicated nor full of despair. It's measured; it accommodates mystery; it acknowledges the limitations of human consciousness.

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[266] Emmons et al., *Geology: Principles and Processes*, 367.

"The Phoenix and the Tortoise" is useful for situating Rexroth's work in relation to other iterations of modernist poetics, though it is not his best poem. Denis Devlin criticized its obtuse passages of philosophical reverie in his 1945 essay for *The Sewanee Review*, but his comments also reveal two important misconceptions about Rexroth's engagement with nature:

> Kenneth Rexroth has a poetics; it is Objectivism, one of Pound's bad jokes. *The Phoenix and the Tortoise* is a long, philosophical treatise 'of what survives and what perishes' in the struggle of personality to establish itself in history. It proceeds under the patronage of Luther, Kierkegaard and Barth—who must be among Mr. Auden's mentors but filter into his verse with so much more tact for form—and is constructed on alternate, insulated paragraphs of "thinking" and "feeling." It is because the latter, which are descriptions of the natural beauty of the scene in which the meditation takes place, show a sensitiveness to traditional aesthetic standards, having at times a subdued Wordsworthian clarity, that one is bewildered by the critical obtuseness which can permit itself to serve up such unappetizing speculative ingredients.[267]

In the first place, Rexroth's version of nature is not Wordsworth's. This account highlights the pervasiveness of an outdated critical assumption that fixed anything remotely natural to romantic aesthetics and cosmology. "The Phoenix and the Tortoise" does not describe nature for the sake of beauty or feeling, or as the scene of an edifying retreat from the serious concerns of modern life. Nature is serious, for Rexroth. It is the ultimate frame of reference, extending beyond the poet's immediate vicinity in time as well as space. It is what remains after his night of philosophical rumination ends inconclusively. In the morning his philosophical dilemma "hangs suspended, lucid / In a crystal cabinet of air / And angels where only bird song wakes"—in other

[267] Devlin, "Review: Twenty-Four Poets," 460. Although Devlin reviewed the entire collection, his observations are specific to the poem "The Phoenix and the Tortoise."

words, abstract thought returns to its rarefied bubble (265). Outside on the beach, however, time moves on: "And deep in the empty mountains melts / The snow of Winter and the glaciers / Of ten thousand thousand years" (270). This is the poem's best answer to the problem "Of what survives and what perishes" (240). The natural world is integral to Rexroth's thinking on history. In the second place, Rexroth's poetics were not objectivist. He may have been included in the objectivist issue of *Poetry* (February 1931), but, as Rexroth later wrote, "almost all the people Zukofsky picked as Objectivists didn't agree with him, didn't write like him or like one another, and didn't want to be called Objectivists."[268] His own differences with Zukofsky's poetics surfaced in letters the two exchanged soon after the appearance of the objectivist issue, and they can be traced to the influence of Pound.

Pound's influence can be seen throughout the early formulations of objectivist poetics. Zukofsky outlined the basic principles of objectivism in "Program: 'Objectivists' 1931" and "Sincerity and Objectification," both included in the objectivist issue of *Poetry*. In the first essay he extends the definition of "objective" from optics to poetry, where it becomes a "*desire for what is objectively perfect, inextricably the direction of historic and contemporary particulars*."[269] "For Zukofsky," writes Charles Bernstein, "'objectification' marks an insistence on 'the detail, not mirage, of seeing' . . . the desire is to represent not the appearance of nature but its conditions—autonomy, completeness, self-sufficiency, particularity."[270] In "Sincerity and Objectification," Zukofsky describes a poetics of "thinking with things as they exist"; he declares that, "in contemporary writing, the poems of Ezra Pound alone possess objectification to a most constant degree."[271] The word is the basic unit of objectification. In the work of Charles

[268] Rexroth, *American Poetry in the Twentieth Century*, 111.
[269] Zukofsky, *Prepositions+*, 189.
[270] Ibid., x.
[271] Ibid., 194, 196.

Reznikoff, Zukofsky admires "the isolation of each noun so that in itself it is an image" and "the grouping of nouns to that they partake of the quality of things being together without violence to their individual intact natures."[272] A poetics of objectification brings one "back to the entirety of the single word which is in itself a relation, an implied metaphor, an arrangement, and a harmony."[273] This emphasis on the single word as the embodiment of a "relation" or a "metaphor" comes directly from Pound's edition of Fenollosa's "The Chinese Written Character as a Medium for Poetry" (1918). Zukofsky's 1929 essay on Pound illustrates an intermediary step in the argument; "instead of "sentimentalisms," he writes, Pound has "contented himself . . . primarily (thanks to his study of the Chinese ideograph) with implicit metaphor present in simple verbs and their modifiers."[274] Pound did not study the Chinese ideogram so much as he studied Fenollosa's study of the ideogram; Fenollosa's study was shaped by nineteenth-century ideas about nature that remain palpable, albeit veiled, in Pound's and Zukofsky's aesthetic theories.

Metaphor is central to Fenollosa's theory of language; it is "the revealer of nature" and "the very substance of poetry."[275] The "primitive metaphors" upon which the "whole delicate substance of speech is built," he writes, "are possible only because they follow objective lines of relation in nature herself."[276] Fenollosa's argument depends on a particular conception of the natural world wherein objects relate to each other by way of invisible, immaterial patterns: "The best poetry deals not only with natural images but with lofty thoughts, spiritual suggestions and obscure relations," because the "greater part of natural truth is hidden in processes too minute for vision and in harmonies too large, in vibrations, cohesions and in affinities."[277] The poetry of

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[272] Ibid., 197.
[273] Ibid.
[274] Ibid., 82.
[275] Fenollosa, *The Chinese Written Character as a Medium for Poetry*, 54.
[276] Ibid.
[277] Ibid., 53.

concrete particulars is vivid because it echoes the harmonies and vibrations of natural objects, and those harmonies, sympathies, and affinities are nothing other than the design principles of an intelligent creator. Fenollosa conceived of the ideogram through the distinctly rose-colored glasses of transcendentalism. As Hugh Kenner writes, "from Emerson's lectures on 'The Poet' (1844) and on 'The Method of Nature' (1841) we can collect without trouble a body of propositions indistinguishable in import from the statements about reality out of which Fenollosa's great Ars Poetica is educed."[278] Emerson's transcendentalism is the source of Fenollosa's claim that metaphor is "the substance of nature and of language," and it lives on as the principle of coherence in the ideogrammic method, the relation between discrete particulars, the veiled logic of Pound's modernist poetics.[279] In *Critic as Scientist*, Bell elaborates on the implications of the modernist poetics of metaphor:

> The act of metaphor that deciphers a world conceived as correspondence follows [Emerson's] pattern of self-reflecting repetitions by proclaiming simultaneously that all natural facts are symbols of spiritual facts and that all spiritual facts are represented by natural symbols. . . . As the making of analogies within a system of correspondence proceeds from an assumption of unity, which is usually hidden in that we cannot trace the origins of its coherence, so metaphor insists on its coherence by minimizing the difference between the *explanans* and the *explanandum*, the signified and the signifier. The adjustments of metaphor are designed to predicate symmetry; the continuity that metaphor proposes relies on a something behind itself, as it were, some mysterious and invisible force of coherence.[280]

[278] Kenner, *The Pound Era*, 158.
[279] Fenollosa, *The Chinese Written Character as a Medium for Poetry*, 54.
[280] Bell, *Critic as Scientist*, 130–131.

In Emerson's writing this invisible force is universal spirit, the divine intelligence that infuses all of nature; Fenollosa's essay on the ideogram drops any mention of spirit and grounds its claims about poetic language in its descriptions of nature. Pound lifted Fenollosa's conception of metaphor as "the very substance of poetry" with no mention of nature or spirit, but the logic of transcendentalism remains.

Zukofsky took things one step further, lifting his conception of the object from the web of Pound's poetics and thereby collapsing the logic of metaphor into a self-contained bubble, an "entirety" which is "in itself a relation, an implied metaphor, an arrangement, and a harmony."[281] Bell writes of the *Cantos* that "the objects in the poem, the texts displaced by Pound's concentrated selection, are offered to us as meaningful only through the nexus of relationship, of 'rhyme', they share with each other and with the idealist unity they signal by their special objectivity."[282] Zukofsky calls this "nexus of relationship" the "imagism-in-music of the *Cantos*"; although it "would seem bare statement without further connotation," he writes, "there is no excuse for this feeling but an unfortunate lack of acuteness to music and a verbal training founded on characteristic sentimentalisms."[283] The language of natural sympathies and correspondences has been replaced by the language of music. With no mention of the natural world, he asserts that Pound derives his poetics from the nature of his subject. ("Pound has not wrapped mannerisms around his subject matter but made the subject matter his style."[284]) Emerson wrote that "objects paint their images on the retina of the eye" by virtue of the "divine *aura* which breathes through forms"; the task of the transcendentalist poet is to abandon himself

[281] Zukofsky, *Prepositions*+, 197.
[282] Bell, *Critic as Scientist*, 247.
[283] Zukofsky, *Prepositions*+, 81–82.
[284] Ibid., 82.

to "the nature of things" thus understood.[285] Zukofsky's objectivist "Program" defines "*An Objective*" as "*the lens bringing the rays from an object to a focus*"—akin, in poetry, to the "*desire for what is objectively perfect*."[286] The objectivist poet, "thinking with things as they exist," pursues the "rested totality" of objectification.[287] Zukofsky drops the aura, but his logic only holds in a transcendental universe where things naturally harmonize with each other, where nature is a metaphor of mind—a universe which is the natural offspring of thought. The objectivist object, whether it be a word or a poem, is the ideogram's younger brother.

Rexroth was puzzled by Zukofsky's account of objectification. The two exchanged several long letters after Zukofsky asked Rexroth to contribute to the *Poetry* issue he was guest-editing under the banner of objectivism. After considering Zukofsky's essays in the objectivist issue, Rexroth responded on 10 March 1931: "It is hard to know where to begin. Perhaps in the most fundamental notions I am in radical disagreement with you, but I am not sure. Your manifesto is not exactly written on your shirt front where all who run may read."[288] He eventually settles on Zukofsky's elusive description of the object:

> ... in your use of the words 'objectively perfect,' you seem to lose sight of the fact that objectivity is essentially terminal, that it implies a subject and a relation between subject and object. Purely as such, all objects are 'perfect.' If by perfection one understands independence, the object evaporates.[289]

Rexroth essentially asks, what makes your objects so special? They can only be held up as perfect—more objective than other objects—against the background that Zukofsky leaves out. His "objectively perfect" particular is the relic of a transcendent natural world, a piece abstracted

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[285] Emerson, *Essays and Lectures*, 458, 459.
[286] Zukofsky, *Prepositions+*, 189.
[287] Ibid., 189, 194.
[288] Rexroth, "To Louis Zukofsky," 27.
[289] Ibid., 36.

from the whole, whose relation to everything outside itself has been obscured. Rexroth's letter continues,

> If by the 'totality of perfect rest' you mean structural cohesion, you are guilty of an anthropomorphic fallacy. The contingent organism is incurably transitive, to demand of it the same type of completeness revealed in self-consciousness is to attempt to permit the observer identification with the observed as it is for itself.[290]

Emerson's transcendental idealism avoids contingency by ignoring the passage of time. (Bell writes, "Emerson's proposition that 'the whole of nature is a metaphor of the human mind' suggests the hermeneutics of total enclosure by the concealing of origin, of lines of production. Self and other, past and present are not formally separated but always considered together as an organic totality."[291]) The observer identifies completely with the observed; both are expressions of the same transcendent spiritual force. Emerson's philosophy posits consciousness as the ultimate sphere of reality. This is the concealed origin of Zukofsky's "objectively perfect" particular. Charles Bernstein asserts that his pursuit of the "'rested totality' and 'what is objectively perfect'" stems from "a desire for something beyond history's transitory instability and its inevitably partial (not to say *mis*-) representation."[292] Rexroth later wrote that "beneath its obscure kabalistic prose," the founding statement of objectivism "differed very little from 'The Preface to Lyrical Ballads' or 'The Imagist Manifesto.'"[293] He removed himself from the objectivist school soon after the appearance of *An Objectivist Anthology* (1932), when he realized "that Zukofsky was almost totally under the influence of Ezra Pound's *Cantos*."[294] The transcendental lineage of objectivist poetics is significant, though not necessarily because it

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[290] Ibid.
[291] Bell, *Critic as Scientist*, 130.
[292] Zukofsky, *Prepositions*+, xi.
[293] Rexroth, *An Autobiographical Novel*, 447.
[294] Ibid.

reveals Zukofsky's true beliefs about nature; rather, it illustrates how far that earlier discourse about the natural world travelled, and how much it was implicated in later systems of thought and creative expression.

Rexroth's most articulate statement about the relationship between poetry and the natural world appears in "Lyell's Hypothesis Again," from *The Signature of All Things* (1949). This is one of his best poems, exploring simultaneously the nature of time and love, and what remains of each. Unlike "The Phoenix and the Tortoise," its argument unfolds through the poet's immediate experience, as he comes to the end of a mountain road whose "bridge washed out years ago," and he and his lover lounge naked in a redwood forest. Lest the scientific reference be lost on readers, Rexroth includes the subtitle of Lyell's *Principles of Geology* (1830) as an epigram:

> *An Attempt to Explain the Former*
>
> *Changes of the Earth's Surface by*
>
> *Causes Now in Operation*
>
> (*CP*, 278)

As the subtitle suggests, Lyell hypothesized that former geological changes were caused by the same forces observable in the present, which meant that the dramatic shifts in geological history were not the result of global cataclysms like the biblical flood. Instead, he argued, shells land on mountaintops though the exceedingly gradual action of water and heat over untold millennia—streams and rivers carry debris to the ocean, where it settles and hardens, and the heat of the earth's core eventually pushes the new fossil-laden crust upward. Rexroth's hypothesis comes in the poem's second section:

> Naked in the warm April air,
>
> We lie under the redwoods,

In the sunny lee of a cliff.

As you kneel above me I see

Tiny red marks on your flanks

Like bites, where the redwood cones

Have pressed into your flesh.

You can find just the same marks

In the lignite in the cliff

Over our heads. *Sequoia*

Langsdorfii before the ice,

And *sempervirens* afterwards,

There is little difference,

Except for all those years.

(279; ll. 30-43)

What does Rexroth imply by transferring the logic of Lyell's uniformitarian geology to this scene? First, that the two of them are implicated in the passage of time and the ongoing process of nature. The mark of the redwood cone might disappear from his lover's flank, but it serves as a reminder that they might be lignite some day. That the cliff over their heads contains fossil imprints of the sequoia tree before and after the last ice age emphasizes their fate. There might be "little difference" between the marks, but time changes everything for the individual tree or person.

Faced with the realization of life's transience in the scale of geological time—the scale embedded in the landscape—the poem lingers on those marks. They offer the closest thing to immortality:

Here in the sweet, moribund
Fetor of spring flowers, washed
Flotsam and jetsam together,
Cool and naked together,
Under this tree for a moment,
We have escaped the bitterness
Of love, and love lost, and love
Betrayed. And what might have been,
And what might be, fall equally
Away with what is, and leave
Only these ideograms
Printed on the immortal
Hydrocarbons of flesh and stone.
(279-80; ll. 44-56)

These ideograms are not Pound's or Fenollosa's, though the term points directly to them. Instead of representing immaterial relationships between things in the natural world, Rexroth's ideograms register direct contact. They are imprints rather than pictures. "Lyell's Hypothesis Again" depicts a natural world structured by time, in which things relate through physical proximity and not through a shared spiritual essence or a hidden system of correspondences. Abstract connections between things are indicated by similes; in the first section of the poem, "The engorged creek / Roars and rustles *like* a military / Ball" and "darts of blossom" are "*Like* flagellant blood" (ll. 6-8, 17-18; emphasis mine). These connections occur in the mind of the poet. Hydrocarbons are immortal; the ego is not. Consciousness is bound by time and material

circumstance. Rexroth argues for a poetic language that reflects humanity's provisional existence, a language that acknowledges that nature is bigger than we are.

3. Lorine Niedecker's Historical Materialism

In her own lifetime, Niedecker was hard-pressed to shake her image as a diminutive Wisconsin yokel whose sparse poetics and small frame made her the Emily Dickinson of her day. After seeing herself described as a regional poet late in her life, she vented, "What region—London, Wisconsin, New York?"[295] She played with the idea of virtual travel in the same letter in which she mentioned Emerson. Zukofsky and family were touring Europe that summer, and she wrote, "while you're journeying over there I've been to Madison again, picked up Robert Payne's White Pony, trans. of Chinese poetry, and a beautiful little book of Gerard Manley Hopkins, another of Heine – so I get around – China, England, Germany (Paris?)."[296] Niedecker clearly understood what century she lived in, and how a poet in the rural Midwest could be connected to things happening elsewhere in the world, however infrequently she travelled.

Her critics have only just begun to catch on. Rachel Blau DuPlessis attributes that aspect of Niedecker's reception to her 1930s interest in the folk, writing that much of her work "may seem to" be characterized by "a minority, a littleness, a miniature scale almost unthinkable, especially for a female writer who can be culturally coded as minor no matter what genre she chooses, but especially if she chooses tiny-looking and folk forms."[297] Michael Davidson concurs in a recent essay, and argues for a reappraisal of the poet's regionalism. Like other female or African-American writers first classed as regional, he writes, "Niedecker's use of folk idioms, ballad forms, naturalist lore, nursery rhymes, haiku, and other 'minor' genres represents

[295] Niedecker and Faranda, *Between Your House and Mine*, 208.
[296] Penberthy, *Niedecker and the Correspondence with Zukofsky, 1931-1979*, 236.
[297] Blau DuPlessis, "Lorine Niedecker, the Anonymous: Gender, Class, Genre, and Resistances," 114.

a use of region and vernacular to comment on marginal subject positions in U.S. culture generally."[298] While I agree that Niedecker uses folk idioms and forms with a critical edge, some of these things are not like the others: her interest in nature and haiku complicate any straightforward understanding of the local and the regional. The phrase "naturalist lore" is misleading; it suggests a figure from the nineteenth century like Sarah Orne Jewett's stalwart Almira Todd, whose herbal wisdom intimately connects her to the coastal Maine landscape and evokes "a dim sense and remembrance of something in the forgotten past."[299] Mrs. Todd gives Jewett's narrator access to a set of local customs understood to be vanishing in the increasingly metropolitan and industrialized late nineteenth century, customs not merely quaint but ancient and pseudo-mystical in their connection to the natural world. Davidson's phrase plays to this common vision of regionalism as the perfect melding of pastoral landscape, natural wisdom, and local culture. It is a vision that was not entirely accurate at the end of the nineteenth century—when the isolation of coastal New England towns was already tempered by global maritime trade—but in the context of the twentieth century it is woefully out-of-date. Niedecker did not learn about local botanicals by word of mouth. She read mass-market paperback editions of natural history guidebooks, nature writing, and scientific nonfiction. Any consideration of her regional landscapes needs to account for that circumstance.

Natural history became the primary focus of Niedecker's writing at the end of her career, as she moved away from the spare style she developed in the 1930s and 1940s and toward something more expansive. Niedecker had a much stronger connection to objectivism than Rexroth, of course: "Six months after reading Zukofsky's Objectivist issue of *Poetry*, she

[298] Davidson, "Life by Water: Lorine Niedecker and Critical Regionalism," 4.
[299] Jewett, *The Country of Pointed Firs and Other Stories*, 5.

worked up the 'courage' to write him and initiate their forty-year correspondence."[300] Objectivism occasioned her first entry into a community of poets, and her correspondence with Zukofsky kept her in touch with the literary world. That changed in the 1960s, however. Zukofsky grew increasingly distant. Niedecker started corresponding with younger poets, including Cid Corman and Jonathan Williams. She got married after several decades of living alone, left Blackhawk Island for Milwaukee, and started going on regular summer driving trips which provided material for her poetry. She told Corman about an upcoming trip in July, 1965, "Why Black Hills? I dunno. Al likes the history behind it. Maybe I'll like the color in the fantastic rocks? I have to take my eyes from the minute for two weeks—to the spatial."[301] Niedecker prepared for her driving trips by extensively researching the geological history of the upper Midwest. By the following year she had already begun to conceive of a poem based on that summer's trip about Lake Superior. In a July 16, 1966 letter, she wrote, "Cid, no, I won't be writing for awhile, and I need time, like an eon of limestone or gneiss, time like I used to have, with no *thought* of publishing. I'm very slow anyhow, you know."[302] She needed time in order to formulate a new poetics. Niedecker wrote her neighbor Gail Roub in June 1967 that she was

> Much taken up with how to define a way of writing poetry which is not Imagist nor Objectivist fundamentally nor Surrealism alone. . . . The basis is direct and clear—what has been seen or heard etc. . . .—but something gets in, overlays all that to make a state of consciousness. . . . The visual form is there in the background and the words convey what the visual form gives off after it's felt in the mind. A heat that is generated and takes in the whole world of the poem. A light, a motion, inherent in the whole. . . . And awareness of everything influencing everything . . . I used to feel that I was goofing off

[300] Niedecker and Faranda, *Between Your House and Mine*, 2.
[301] Ibid., 64.
[302] Ibid., 91.

> unless I held only to the hard, clear image, the thing you could put your hand on but now I dare do this reflection.[303]

Lisa Pater Faranda correctly observes that the new poetic stance Niedecker worked out during these years "is not purely aesthetic; it bespeaks a psychological awareness of one's place in the world."[304] The way Niedecker defined her place in the world in her late poems was shaped by her awareness of geological and evolutionary time.

The universe that emerges from Niedecker's Lake Superior notes is staunchly materialist. One essay she read and took notes on, Harlow Shapley's "Life and Hope in the Psychozoic Era," begins with the idea that people are composed of oxygen, plus "strontium, carbon, hydrogen, potassium, phosphorus, calcium, and many others—the same chemical elements that make up the mountains, the pine forests, the seashores."[305] The lesson that Shapley draws from these facts is noteworthy: "We are indeed of the earth—brothers of the boulders, cousins of the clouds, and distant kin, by way of the chemical tie-up, of the fossil plants and animals that in times past took a try, as we are now doing, at biological life and persistence."[306] Shapley's argument bypasses the abstraction of evolutionary history. We are kin to ancient ferns and mudpuppies in part because we share a common ancestor, but also because some of the atoms that compose our bodies are the exact ones that composed their bodies. The relationship is both more direct and more haphazard. Shapley's material kinship offers an alternative to Emerson's transcendental family tree, which Niedecker quietly amended several years earlier. Thought is the offspring of this universe, fueled by a lucky combination of chemical elements that fell into place over the course of millennia.

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[303] "Dear Gail," 20 June 1967, Niedecker Papers, 1-2.
[304] Niedecker and Faranda, *Between Your House and Mine*, 11.
[305] Shapley, *Beyond the Observatory*, 97. Also see "Shapley," Niedecker Papers.
[306] Ibid., 97–98.

Niedecker's letters indicate that she had been mulling over Emerson for quite a while. In 1945 she wrote to Zukofsky about *Interpreter of Nature* (1938), a collection of the naturalist writings of Denis Diderot:

> This is what I could have used long ago, alongside Engels and while I was wondering what Emerson was getting at. A great many of my questions are suddenly answered. I really begin to believe that there is another life for us after we die, one not like ours, at least not for a long, long time. Elements for awhile before we again become, if we ever do, another mass. Time is nuttn in the universe. The elephant may be on his way to becoming a worm, and vice versa, as a species, I mean.[307]

This passage suggests that Diderot's materialist philosophy finally clarified, for Niedecker, how the universe might be conceived as a unified whole—in spite of the fact that his thinking is completely at odds with Emerson's transcendentalism. Most of Niedecker's comments pertain to the "Conversation Between d'Alembert and Diderot," which begins with a lengthy exchange on the sensitivity of stone. Diderot sets out to prove that he could turn marble into sentient flesh by breaking off a statue's arm, crushing it with mortar and pestle, mixing it with decaying organic matter, then letting the mixture stew and planting atop it a vegetable garden. d'Alembert responds, "Whether it's true or false, I like this passage from marble into humus, from humus to the vegetable kingdom, from the vegetable kingdom to the animal kingdom, to flesh."[308] A footnote in the edition Niedecker read silences d'Alembert's lingering doubt: "The chemical and biological steps in the transformation of inorganic or mineral matter into organic material, which Diderot brilliantly uses in this passage to support his completely materialist standpoint as against the idealist standpoint put forward by d'Alembert in his opening lines, were subsequently

[307] Penberthy, *Niedecker and the Correspondence with Zukofsky, 1931-1979*, 134.
[308] Diderot, *Interpreter of Nature*, 52.

worked out in detail by soil microbiologists many years later."[309] Many of the texts Niedecker read by twentieth-century scientists and nature writers take a similarly materialist stance toward our connection to the natural world. Niedecker's hundreds of pages of notes on the geology of the Lake Superior region attest to her new frame of reference. The rocks and minerals that show up in "Lake Superior" are certainly hard, clear images—"thing[s] you could put your hand on"—but unlike Zukofsky's "rested totality" or Pound's ideogram, their relation to everything else is equally hard and clear.[310]

The first long poem in Niedecker's last collection, *North Central* (1969), repeatedly stages the mixing of human bodies with rocks and minerals. The first section of "Lake Superior" introduces the basic principle; "In every part of every living thing / is stuff that once was rock."[311] The next couplet repeats and clarifies—"In blood the minerals / of the rock" (232). Niedecker insists on a material relationship between living things and rocks, not an abstract or conceptual one, and that material relationship forms the basis of the three long poems.

The wording of the opening lines of "Lake Superior" is derived from a children's geology book that Niedecker consulted for her trip, *Rocks, Rivers, & the Changing Earth* (1952). Her notes quote an extended passage from a section of the book headed "Changing Rock": "Rock is everywhere in the world, and everywhere it is being changed. . . . But the journey of the rock is not ended. It is never ended. In every tiny part of every living thing are minerals that once were rock that turned to soil."[312] The notes go on to quote from the end of the book, "You are part of

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[309] Ibid., 334.

[310] Niedecker and Faranda, *Between Your House and Mine*, 9; Zukofsky, *Prepositions+*, 195.

[311] Niedecker, *Collected Works*, 232. Further references to this edition (hereafter abbreviated as *CW*) will be cited in the text.

[312] Schneider and Schneider, *Rocks, Rivers & the Changing Earth: A First Book About Geology*, 83. "Rocks, Rivers of the Changing Earth by Herman Schneider and Nina Schneider," Niedecker Papers. Niedecker's notes condense and summarize the first few sentences of this passage, and go on to quote the whole paragraph with a few minor changes:

the earth's story. In your blood is iron from plants that drew it out of the soil. Your teeth and bones were once coral of the sea and tiny, beautiful sea animals."[313] Another passage she copied into her notes describes how "the autumn leaves," "the shell of a robin's egg" or "part of a stalactite in some dark underground cavern" can be transformed into food: "The fresh [crisp] apple that you may eat today is as old as the hills. And when you eat it, a tiny bit of those hills becomes part of you."[314] Niedecker seems to have been drawn to this book partly for its emphasis on the physical exchange of particles from rocks to vegetables to people. Its simple narrative links human beings to everything else that exists on earth.

"Lake Superior" depicts history as the scattering of particles. The sections of the poem appear to alternate between geological and human histories—stories of the rocks and stories of previous travelers—but of course each one contains both. Those devoted to the early *voyageurs* describe the mixing and dispersal of their bodies, sometimes traceable and sometimes not. Radisson loses his fingernails, "pulled out / by Mohawks" and left scattered we know not where (232). Marquette's once-coral bones are "raised up out of his grave," "sunned and birch-bark floated / to the straights" (233). After Joliet encounters "the paddlebill catfish / come down from The Age of Fishes," his own body "vanish[es]" and his funeral presumably goes on without it

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> Rock is always changing from sun's heat and freezing water. But the journey of the rock is not ended. It is never ended. In every tiny part of any living thing are materials that once were rock that turned to soil. These minerals are drawn out of the soil by plant roots and the plant used them to build leaves, stems, flowers and fruits. Plant eaten by animal. And still the journey of the rock is not ended, for nothing in the world remains unchanged forever. (1)

[313] Ibid., 171. Niedecker eventually condensed these quotations and used them as the third paragraph of her essay about the trip:

> The journey of the rock is never ended. In every tiny part of any living thing are materials that once were rock that turned to soil. These minerals are drawn out of the soil by plant roots and the plant used them to build leaves, stems, flowers and fruits. Plants are eaten by animals. In our blood is iron from plants that draw it out of the soil. Your teeth and bones were once coral. The water you drink has been in clouds over the mountains of Asia and in waterfalls of Africa. The air you breathe has swirled thru places of the earth that no one has ever seen. Every bit of you is a bit of the earth and has been on many strange and wonderful journeys over countless millions of years. ("Lake Superior Country," 1966, Niedecker Papers, 1)

[314] Schneider and Schneider, *Rocks, Rivers & the Changing Earth: A First Book about Geology*, 84. "The Rocks, Rivers of the Changing Earth," Niedecker Papers, 2.

(234). But as Herman and Nina Schneider inform their readers, "The things of the world are formed again and again, out of the same materials of the earth. Nothing is lost" (84). The "Birch bark / and white Seder / for the ribs" of the poem's third section are more than an anatomical metaphor. The divide between organic and inorganic dissolves, surely if not swiftly, and the landscape around Lake Superior becomes an assemblage of the bits and pieces of all the people, animals, and plants that have passed through.

Passing through leaves an indelible mark, and more:

> Through all this granite land
> the sign of the cross
>
> Beauty: impurities in the rock
>
> (233)

Douglas Crase points out that modern geological maps indicate the presence of granite with crosses, just as Jesuit missionaries used crosses to indicate the locations of their missions on early maps of the Great Lakes region.[315] In addition, the "sign of the cross" suggests the textual and linguistic signs of the voyageurs' crossing, as well as the hybrid forms created out of their encounters with the landscape, people, and languages of the area. In a letter to Corman right before the trip, Niedecker wrote, "I think our NW (Lake Superior region, Minn., Mich., Wisc.) is not only for the geologist, a massive, grand corruption of nature. And of language (wonder if *Bosho* is still used in speech for *Bon jour!* Indian, French, British—."[316] "Lake Superior" is attuned to all sorts of corruption. One of the mineralogical books Niedecker consulted explains that a "paradoxical feature of [precious gem] stones is that their color is the result of 'impurities' in what are otherwise rather humdrum minerals. Rubies result from the presence of chromium

[315] Crase, "Niedecker and the Evolutional Sublime," 330.
[316] Niedecker and Faranda, *Between Your House and Mine*, 91.

oxide in corundum, while emeralds are due to the presence of the same substance in beryl."[317] Carnelian, which appears in the seventh and eighth sections of the poem, is a form of chalcedony tainted with iron oxide. Niedecker's notes specify that its name comes from the "(Latin *carneus* – 'flesh-colored') but the color is closer to a ripe tomato."[318] She wrote in parentheses, "a brilliant kind of flesh-rust."[319] The eighth section of "Lake Superior" highlights the depth of her materialism:

> Ruby of corundum
>
> lapis lazuli
>
> from changing limestone
>
> glow-apricot red-brown
>
> carnelian sard
>
> (234)

Niedecker pushes her metaphors into metonymies. Carnelian and sard are two varieties of the same mineral—chalcedony with iron—sard being slightly darker. Here "carnelian" is both an adjective describing the color of the mineral and the mineral itself; the red color indicated by the adjective only arises from the contiguity of mineral to mineral. The metamorphosis of limestone to marble to lapis lazuli and the corruption of corundum to ruby make the stones coextensive. Carnelian, flesh, and apricots share colors because they share minerals, and they share minerals because they grew from the same material. "Lake Superior" depicts a natural world that has been created through the ongoing process of corruption, hence its beauty: Marquette grazing on

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[317] Reinfeld, *Treasures of the Earth*, 130.

[318] "Rocks," Niedecker Papers, 5. The original sentence appears in *Treasures of the Earth* on page 132. Another sentence from these pages (one Niedecker didn't record it in her notes) suggests a genealogy for "the cobalt / and carnelian" of "*Wild Pigeon*," the poem's ninth section: "The finest rubies come from limestone deposits in Burma. They are of the shade known as 'pigeon's blood,' which has slight tinges of blue" (131).

[319] "Rocks," Niedecker Papers, 5. Here and in other places where her notes summarize and quote from particular books, Niedecker signaled her own thoughts by inserting them in parentheses, following her initials—i.e., "(LN I think they meant to omit the comma after everywhere)," or "(LN a brilliant kind of flesh-rust)."

"hornblende granite" like a deer; his bones made from coral, floated on logs through a temperate sea; people and their languages made from Chippewa, French, and tobacco—and all of it issuing from the "common element" and the "common dark" of the planet.

Whereas "Lake Superior" maps physical relationships, "Wintergreen Ridge" explores the nature of time in Niedecker's materialist universe. The poem situates her immediate experience in relation to the scale of evolutionary time. Compared with the earlier poem's arrangement of static objects, conglomerate nuggets of material history, "Wintergreen Ridge" is dynamic and mobile. Niedecker wrote the it after a September 1967 trip to the orchid ridges of Door County, Wisconsin, "you know—that thumb-peninsula out into L. Michigan—limestone, autumn leaves, fishing villages."[320] The speaker and her companion are present throughout—they follow road signs, climb a cliff up from the lakeshore, look at flowers, and drive back home. The movement also takes place in the speaker's mind; as she moves through the landscape she leaps by association to things she has read, interactions with family and friends, war and politics, news stories, and 1960s counterculture. Jenny Penberthy writes, "the resulting shifts in syntactic direction as we are carried forward by the journey and sideways, backwards, and much further forward by imaginative currents, are themselves well adapted to the poem's thinking. Evolution has an unrelenting forward momentum within which there is room for contradictory impulses."[321] The poem's organizing principle, announced in the second stanza, is that "Life is natural / in the evolution / of matter" (247; ll. 4-6).

"Wintergreen Ridge" incorporates all kinds of life into its narrative of evolution; indeed, it repeatedly locates modern experience within the natural evolution of matter. The speaker lags behind as she and her companion "climb / the limestone cliffs":

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[320] Niedecker and Faranda, *Between Your House and Mine*, 130.
[321] Penberthy, *Niedecker and the Correspondence with Zukofsky, 1931-1979*, 92.

my skirt dragging
an inch below

the knee
the style before
the last

the last the least
to see
Norway

or "half of Sussex
and almost all
of Surrey"

(248; ll. 24-36)

The winter before her trip to the orchid ridges Niedecker, then in her early sixties, wrote to Corman of a poetry reading she attended at the University of Wisconsin, where she met a young woman wearing an above-the-knee skirt. She complained that her own skirt was already shorter than she would have liked, and left her chilled in the stone lecture hall.[322] In the poem her "dragging" skirt slows her down in a larger sense. Her feeling of being left behind is not simply a matter of growing old and out of step with current fashion; it also extends to her lack of travel.

Although much has been made of Niedecker's close connection to Blackhawk Island, a reminder of her small sphere of movement is especially relevant to the frustration she expresses in the eleventh and twelfth stanzas of "Wintergreen Ridge." Apart from a trip to New York to visit to Louis Zukofsky in the mid-1930s, and several later visits to his family, Niedecker spent all of her adult life in southern Wisconsin. She lived in Madison from 1938 to 1942 while working for the Federal Writers' Project, and spent her middle years caring for her parents and

[322] Niedecker and Faranda, *Between Your House and Mine*, 116.

working in nearby Fort Atkinson. After both parents died in the early 1950s, she stayed on Blackhawk Island and managed two rental houses that her father had left her.[323] She did not drive a car because she had limited eyesight starting in late middle-age.[324] Only when she married Al Millen in 1963 did she begin to travel. The poet, herself, never got to Norway. Her quotation comes from *The Autobiography of Bertrand Russell* (1951). Near the end of the chapter on his adolescence, after recalling his interactions with a famous British physicist, Russell describes the walks he used to take near his uncle's summer house:

> I particularly remember exploring a small road called Mother Bunch's Lane. . . . It continually diminished, and at last became a mere path leading to the crest of Hurt Hill. Quite suddenly, when I expected nothing, I came upon an enormous view, embracing half of Sussex and almost all of Surrey. Moments of this sort have been important in my life. In general, I find that things that have happened to me out-of-doors have made a deeper impression than things that have happened indoors.[325]

When Niedecker quotes from Russell's adolescent memory in her twelfth stanza, the implication is that she has been "the last the least" to experience the minor epiphanies and commanding views afforded by travel, or rather, the means to travel. The full passage also resonates with the trajectory of Niedecker's last decade, when, after an adulthood spent mostly alone in the place of her birth, her attention suddenly shifted outward. In her sixties Niedecker reached a summit like the one the philosopher discovered in his early teens—in his case, with an impressive view of two counties, and in her case, perhaps, a view of Lake Michigan from the south side of the Door Peninsula.

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[323] Ibid., 3.
[324] Penberthy, *Lorine Niedecker: Woman and Poet*, 105–106.
[325] Russell, *Autobiography*, 56–57.

"Wintergreen Ridge" insists that wild and civilized creatures are all undergoing the same process of change. This attitude is born out, albeit obliquely, by the poem's next quotation. More than a passing reference, the following lines from Thoreau point to a text that Niedecker carefully engages:

> "Every creature
>
> better alive
>
> than dead,
>
> men and moose
>
> and pine trees"
>
> (248; ll. 38-42)

The original sentence comes from the "Chesuncook" section of *The Maine Woods*. After Thoreau has struggled his way into the northern wilderness with Indians and woodsmen, he arrives at the dramatic realization that every living creature deserves to live, "and he who understands it aright will rather preserve its life than destroy it."[326] At the end of "Chesuncook" Thoreau expresses relief at being back in the countryside, which he deems more hospitable to the poet. However, his reasoning turns in the last two paragraphs, where he reconsiders the importance of wild places:

> There are not only stately pines, but fragile flowers, like the orchises, commonly described as too delicate for cultivation, which derive their nutriment from the crudest mass of peat. These remind us, that, not only for strength, but for beauty, the poet must, from time to time, travel the logger's path and the Indian's trail, to drink at some new and more bracing fountain of the Muses, far in the recesses of the wilderness.[327]

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[326] Thoreau, *A Week on the Concord / Walden / The Maine Woods / Cape Cod*, 685.
[327] Ibid., 712.

In spite of Niedecker's general admiration for Thoreau, she paints a very different picture of the poet seeking inspiration in the wilderness: "We are gawks / lusting / after wild orchids" (248-49; ll. 43-45). Likewise, the orchids in "Wintergreen Ridge" are far from the fragile specimens of beauty in Thoreau's Maine woods. The poem lumps the delicately-named Lady's tresses together with carnivorous pitcher plants and sundews, calling attention to their violence:

> Just the touch
> of a gnat on a filament
>
> stimulates leaf-plasma
>
> secretes a sticky
> clear liquid
>
> the better to eat you
> my dear
> digests cartilage
>
> and tooth enamel
>
> (251; ll. 100-08)

After this suggestion of the wolf in Grandma's nightgown, the "Lady's slipper" orchid sounds especially dubious. The poem might as well be describing a carnivorous flower, though in this case it tricks its victim merely to force him out the back, with pollen : "Lady's slipper's glue / and electric threads / smack the sweets-seeker" and leave him "befuddled" (251; ll. 114-116, 120). Jeffrey Peterson calls this "Niedecker's anti-romantic botany"—"hardly the beneficent natural world superficially constructed as 'feminine'"—and he goes on to argue that the poem blurs natural and technological machinations.[328] Niedecker's handling of the flowers in these lines is directed at a particular understanding of wilderness and the value of wild creatures. The poem seems to agree wholeheartedly with Thoreau's statement of support for all living creatures,

[328] Peterson, "Lorine Niedecker: 'Before Machines'," 253.

but not with his vision of pure, wild nature, set apart from civilization. The orchids of "Wintergreen Ridge" come out looking rather deceptive, and the motivations of their fans appear less than pure, as well.

Niedecker's inclusive attitude toward evolution highlights the disparity between the scientific perspective and the perspective of many nature writers and conservationists. Reading "Wintergreen Ridge" against the full text of "Chesuncook" reveals the poem's critical edge. Thoreau ends his account by advocating for land preserves that would protect wild places "for inspiration and our own true re-creation." He has harsh words for anyone who might oppose the protection of wild landscapes: "shall we, like villains, grub them all up, poaching on our own national domains?"[329] In his chapter on "The Orchid Ridges" in *Journey Into Summer* (1960), Edwin Way Teale praises "all the unique beauty of this region which, just in time, had been saved from destruction."[330] "Wintergreen Ridge" questions both writers' attitudes:

> Wait! What's this?—
> sign:
>
> *Flowers*
> *loveliest*
> *where they grow*
>
> *Love them enjoy them*
> *and leave them so*
> Let's go!
>
> Evolution's wild ones
> *saved*
> continuous life
>
> through change

[329] Thoreau, *A Week on the Concord / Walden / The Maine Woods / Cape Cod*, 712.
[330] Teale, *Journey Into Summer*, 97.

from Time Began
Northland's

unpainted barns
fish and boats
now this—

flowering ridge
the second one back
from the lighthouse

Who saved it?—
Women
of good wild stock

(249; ll. 46-68)

The cues are subtle. We can be fairly certain that a poem about evolution could never seriously entertain the notion that unpainted barns have been standing in the upper Midwest since the beginning of time. At the very least these lines situate the impulse to save the orchids in a narrow frame of reference which has more to do with a certain cultural nostalgia than a desire to keep a species alive. The women's "good wild stock" suggests a cultivated wildness, and their estimation of what they accomplished ("We want it for all time / they said" [250; ll. 73-74]) sounds a bit short-sighted, given the poem's evolutionary timescale. The point is not that Niedecker was opposed to conservation or environmentalism. We can rest assured that she didn't want Americans to villainously "grub up" the remaining treasures of their "national domains," but at no point does she defend the natural world in the name of cultural identity or

national value.[331] The poem is aimed beyond national concerns, and even beyond human concerns.

Instead of fitting nature into a human frame of reference, Niedecker fits modern humanity into the scale of nature. Toward the end of "Wintergreen Ridge," humanity appears natural in more ways than one. The "war / which 'cannot be stopped'" is as out-of-control as "ragweed pollen" and the human species is likened to the common weed "whose other name / Ambrosia / goes for a community" (256; ll. 254-55, 258-60). People share a range of survival strategies with their vegetable cousins, technological advance as well as crude excess. The human species is also subject to the forces of evolution, which tend toward extinction as well as progress. The end of the poem describes a series of losses—human, avian, and vegetable—which begin as the poet drives through "Ambrosia" on her way back home:

Ahead—home town
second shift steamfitter
ran arms out

as tho to fly
dived to concrete
from loading dock

lost his head
Pigeons
(I miss the gulls)

mourn the loss
of people

[331] Thoreau, *A Week on the Concord / Walden / The Maine Woods / Cape Cod*, 712. Thoreau's attitude toward wilderness as part of the "national domain" was not necessarily outdated in Niedecker's time. A number of popular nature writers appealed to national ideology. At the end of *Grand Canyon*, for example, Joseph Wood Krutch writes: "The generation now living may very well be that which will make the irrevocable decision whether or not America will continue to be for centuries to come the one great nation which had the foresight to preserve an important part of its heritage. If we do not preserve it, then we shall have diminished by just that much the unique privilege of being an American" (276).

no wild bird does

(257; ll. 261-72)

These stanzas are dense with reference. In them, Niedecker transposes a statement by one of the best-known nature writers of her time, Wisconsin conservationist Aldo Leopold.[332] Leopold delivered a eulogy for the extinct passenger pigeon at the 1947 dedication of a monument to the bird—or rather, its last Wisconsin delegate—in Wyalusing State Park. The piece was included in *A Sand County Almanac* (1949). About halfway through Leopold speaks to humans' and pigeons' capacities for mourning. He scolds that the "new knowledge" of evolution "should have given us, by this time, a sense of kinship with fellow-creatures; a wish to live and let live; a sense of wonder over the magnitude and duration of the biotic enterprise."[333] Alas,

> For one species to mourn the death of another is a new thing under the sun. The Cro-Magnon who slew the last mammoth thought only of steaks. The sportsman who shot the last pigeon thought only of his prowess. The sailor who clubbed the last auk thought of nothing at all. But we, who have lost our pigeons, mourn the loss. Had the funeral been ours, the pigeons would hardly have mourned us. In this fact, rather than in Mr. DuPont's nylons or Mr. Vannevar Bush's bombs, lies objective evidence of our superiority over the beasts.[334]

In his haste to condemn beastly sportsmen and sailors, Leopold almost loses sight of the beasts he is eulogizing. The passenger pigeon, he has to admit, "was a biological storm" whose mob-mentality did not bode well for its ability to survive changes in habitat. The bulk of the eulogy is more generous. Leopold recalls the bird's passions (the pigeon "loved his land" and "lived by

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[332] Several critics have speculated that Niedecker would likely have worked with—or at least heard of—Leopold during her years with the Wisconsin Federal Writers' Project, since he was consulted on ecological and conservation matters. Her letters, however, never mention Leopold or his writings.

[333] Leopold, *A Sand County Almanac*, 109.

[334] Ibid., 110.

the intensity of his desire for clustered grape and bursting beechnut"[335]) as well as its tenacity: "Whatever Wisconsin did not offer him gratis today, he sought and found tomorrow in Michigan, or Labrador, or Tennessee. His love was for present things, and these things were present somewhere, to find them required only the free sky, and the will to ply his wings."[336] The end of the speech renews the call for people to care a little more about other species: "To love what *was* is a new thing under the sun, unknown to most people and to all pigeons. To see America as history, to conceive of destiny as a becoming, to smell a hickory tree through the still lapse of ages—all these things are possible for us, and to achieve them takes only the free sky, and the will to ply our wings."[337] The inspirational tone makes it easy to overlook the fact that, at least metaphorically, Leopold is encouraging Americans to follow in the wake of the extinct passenger pigeon. Niedecker ironizes his eulogy by having a more evolved, common pigeon mourn the death of the suicidal steamfitter.

Nature in "Wintergreen Ridge" is more varied and tenacious than we might imagine. Niedecker asserts that lichens may survive the bomb. Toward the end of her cataloguing of flowers, Niedecker calls attention to the human spectacles absent from the nature preserve; she sees "no pelting of police / with flowers" and "no space-rocket / launched here" (254, 255; ll. 191-92, 210-11). The starkest contrast comes from her mention of a homicide in the news—"So far out of flowers / human parts found / wrapped in newspaper" (256; ll. 249-51). Yet the flowers were not portrayed as especially far from homicide in their own right, given the sundew's ability to digest "cartilage / and tooth enamel" (251; ll. 107-8). Although Niedecker juxtaposes lichens and the atomic bomb, the lichen carries out its own small-scale destruction which is mirrored in both the digestive fluids of carnivorous plants and the "mind-changing /

[335] Ibid., 111.
[336] Ibid., 111–12.
[337] Ibid., 112.

acids eaten" by people (255; ll. 212-13). Niedecker insists that the human species is natural as well, even with its bombs and machines.

The question of whether modern humans had disrupted the course of natural history was a common subject among midcentury American nature writers. Niedecker's attitude toward nature agrees most with that of writers like Shapley and Eiseley, whose ecological concerns are shaped by their understanding of geologic and evolutionary history. Niedecker's Lake Superior notes include a series of quotations from the end of Shapley's "Life and Hope in the Psychozoic Era," which adds human history to the long list of evolutionary and geologic periods. Her notes begin with a statement that puts human dominance in perspective: "We are dominant only in the current "psychozoic era", the giant lizards were dominant in the Mesozoic era a hundred million years ago, the cockroaches in the preceding Permian period."[338] Eiseley makes a similar observation in "How Life Became Natural," where, after wandering past the displays of more crabs than he knew existed, he concludes, "It was plain that they wanted the planet and meant to have it. One could feel the massed threat of them in this hall."[339] That threat of the arthropods tempers his anxiety over human destruction and violence.

Shapley weighs various aspects of human physiology, and cautiously suggests that a new "psychozoic" kingdom should be added alongside the animal and vegetable kingdoms. "Perhaps the third classification that includes the brain is justified," Niedecker paraphrased in her notes, for "'the evidence is good that the forebrain—our large time-bending cortex—is of high consequence in the animate world… But we shd. keep in mind that this psychozoic development, this glorification of the human psyche, this rising dominance of mind has probably

[338] "Shapley," Niedecker Papers, 1; Shapley, *Beyond the Observatory*, 117.
[339] Eiseley, *The Firmament of Time*, 84.

long ago been attained in other inhabited worlds.'"[340] Shapley concludes his essay arguing for an expansion of Albert Schweitzer's reverence for all life, to a reverence for "the whole of the natural world": "Why not revere also the amino acids and the simple proteins from which life emerged? Or why not go all the way and avow reverence for all things that exist, all that is touched by cosmic evolution, and reserve the greatest reverence of all for existence itself?"[341] Shapley and Eisley both warn that we have no reason to overestimate our importance, in the grand scheme of evolving life in the universe.

The end of "Wintergreen Ridge" calls attention to the limitations of our human perspective toward the natural world.

> It rained
> mud squash
> willow leaves
>
> in the eaves
> Old sunflower
> you bowed
>
> to no one
> but Great Storm
> of Equinox
>
> (257; ll. 273-82)

These lines recall Niedecker's delight at an idea she found in Diderot's "d'Alembert's Dream": "'Fontenelle's rose saying that within the memory of a rose no gardener had been known to die.' (This is the loveliest and most important thing I've read in a long time.)"[342] The poet's seasonal rain is the "Great Storm / of Equinox" that ends the sunflower's life (257; ll. 280-81). These

[340] "Shapley," Niedecker Papers, 3-4.
[341] Shapley, *Beyond the Observatory*, 123.
[342] Penberthy, *Niedecker and the Correspondence with Zukofsky, 1931-1979*, 134; Diderot, *Interpreter of Nature*, 75.

lines also recall a discussion in the first chapter of Eiseley's *The Firmament of Time*, "How the World Became Natural," which narrates the history of the geological sciences as the slow discovery of forces that work by accumulation, outside the spans of individual lifetimes:

> Time and raindrops! . . . It took centuries before the faint trickling from cottage eaves and gutters caught the ear of some inquiring scholar. Men who could visualize readily the horrors of a universal Flood were deaf to the roar of the invisible Niagara falling into the rain barrel outside their window.[343]

That inquiring scholar was James Hutton, whose primary contribution, as Eiseley describes it, was his ability to imagine the collective force of ordinary raindrops: "If a leaf fell he knew where it was bound, and multiplied it mentally by ten thousand leaves in ten thousand, thousand autumns . . . For him and him alone, the water dripping from the cottagers' eaves had become Niagaras falling through unplumbed millennia."[344] Niedecker borrows Eiseley's central images in "Wintergreen Ridge," where immediately after describing a massive autumnal leaf-dump she declares that "Nobody, nothing / ever gave me / greater thing // than time" (253; ll. 165-68). The poem echoes Eiseley's focus on the limitations of an individual's perspective toward the larger systems of nature. Niedecker's response to those limitations is to zoom in rather than out. The raindrop becomes a fatal storm, but something lives on, and our ability to see beyond the sunflower's perspective gestures toward a parallel ability to see beyond our own lifespan.

At the end of "How Life Became Natural" Eiseley comforts himself with the thought that "the many-faced animal of which we are one flashing and evanescent facet will not pass with us. When the last seared hand has flung the last grenade, an older version of that hand will be

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[343] Eiseley, *The Firmament of Time*, 10–11.
[344] Ibid., 25.

stroking a clinging youngster hidden in its fur, high up under some autumn moon."[345] Niedecker adopts a similar view of life as a "many-faced" organism. Mourning the sunflower at the end of "Wintergreen Ridge" offers a subdued comfort, in light of the fact that lichens may outlast humanity.

The last poem Niedecker wrote, "Darwin" (1970), celebrates the slowness of the scientist's process and the incomplete nature of his, and our, understanding. Darwin's "holy / slowly / mulled over / matter" ultimately leads to "carcass- / conclusions" (*CW* 295, 299; ll. 1-4, 115-16)—a phrase that echoes his mildly distasteful request to Lyell, at the end of the fourth section, to "send me the carcass / of your half-bred African cat / should it die" (298; ll. 94-95). The work of piecing together a theory is punctuated by minor epiphanies and long stretches of waiting.[346] The end of the poem emphasizes chance:

> the universe
>
> not built by brute force
>
> but designed by laws
>
> The details left
>
> to the working of chance
>
> "Let each man hope
>
> and believe
>
> what he can"
>
> (299; ll. 117-24)

Darwin's acceptance of uncertainty is clearly preferable to Niedecker's representation of Agassiz in "Wintergreen Ridge." Agassiz serves as an example of humanity's maniacal desire for

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[345] Ibid., 86.
[346] Also see "Darwin's Century – Loren Eiseley," Nidecker Papers.

control, at the other end of the spectrum from the equally misguided Beat poet, who relinquishes control so readily that he can hardly annunciate:

Great God—

what men desire!

the scientist: a full set

of fishes

the desire to know

Another: to talk beat

act cool

release la'go

(256; ll. 241-48)

Niedecker consulted the narrative of Agassiz's1848 journey around Lake Superior in preparation for her trip. The naturalist was there to collect fish; he desired a complete set in order to prove his modified doctrine of special creation, the idea that every species had developed in its own unique habitat toward a preordained end. Agassiz works up to this conclusion after reviewing the catalogue of fish he encountered:

> The circumstance that species occur within definite limits where no obstacles prevent their wider distribution, leads to the further inference that these limits were assigned to them from the beginning, and so we should come to the final conclusion, that the order which prevails throughout the creation is intentional, that it is regulated by the limits marked out on the first day of creation, and that it has been maintained unchanged through ages, with no other modifications than those which the higher intellectual powers of man enable him to impose upon some few of the animals more closely connected with

> him, and in reference to those very limited changes which he is able to produce artificially upon the surface of the globe.[347]

Niedecker knew at least one thing that Agassiz did not: that the continents had shifted radically over the course of geological history, and the obstacles and boundaries that separated distinct habitats had been continually reformed. Niedecker's attitude toward local landscapes is much more open than Agassiz's; physical contact with place connects people and things more than it divides them. Niedecker's late poems enact, in geographical terms, a statement she copied into her notes from Wells's *First and Last Things* (1908): "*One's individual existence is not so entirely cut off as it seems at first. . . .* There is not a western European palæolithic or Neolithic relic that is not a family relic for every soul alive. The blood in our veins has handled it. And there is something more. We are all going to mingle our blood again. We cannot keep ourselves apart."[348] The geological history of local landscapes gave Niedecker a concrete way to imagine her connections to people distant in time or space; in her view of nature, every particular has emerged from the planet's endless and random mixing of matter.

5. Conclusion

Niedecker and Rexroth shared a number of philosophical and aesthetic attitudes toward the natural world. They both situated their immediate experience in the context of geological history, which shifts their frames of reference beyond the scale of human life. The experiences in nature that their poems recount are often complex and understated; neither poet treats the natural world as an antidote to modern life or a source of dramatic epiphanies. Nature is bigger than modern life, and just as complex. Nature is a source of gradual, but always incomplete,

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[347] Agassiz, *Lake Superior*, 377.

[348] Wells, *First and Last Things: A Confession of Faith and a Rule of Life*, 92–94. Also see "Lake Superior Notes 2," Niedecker Papers, 11, and Small Handwritten Notes, Niedecker Papers, 36-37.

understanding in their poems. Things and people relate to each other through time and physical proximity. Their universe is not human-centered.

Rexroth's 1969 essay, "Faith in an Age of Faithlessness," sums up the shift of scientific paradigms in the middle decades of the twentieth century:

> The worldview of science has changed, not just since the days of Newton or Darwin, but of Einstein. We live in an illimitable universe in which, visible in the largest telescopes, sub-universes other than ours, galactic nebulae, are more numerous than the stars in our own nebula. We can measure phenomena coming from six billion light years away. Whether this universe is infinite and eternal, contracting and expanding, steady-state or exploding, room in it for a moral cosmogony which is man-centered on this solar system, or even this little universe, seems ridiculous and trivial.[349]

By the late 1960s concern for the natural world was becoming increasingly common in the United States, thanks to the spread of the environmental movement and the dawning of the Space Age. Rexroth's and Niedecker's poetic careers developed alongside the emergence of environmentalism as a political stance. However, lumping them into the monolithic category of nature poets—into a loose genealogy of writers from Wordsworth and Emerson to Rachel Carson and Gary Snyder—obscures the terms of their engagement with the new scientific worldview. Even though Rexroth championed the work of Snyder, a younger member of his "bear-shit-on-the-trail school of poetry"[350] and a fellow devotee of Zen Buddhism, he and the younger poet arrived at East Asian culture through different channels. Neither Niedecker nor Rexroth was primarily concerned with saving a particular landscape in the short term; nature entered their poetry because it structured their understanding of reality.

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[349] Rexroth, *With Eye and Ear*, 85.
[350] Ibid., 212.

Chapter 4: Islands

1. Introduction

The scientific worldview that Rexroth described in 1969, of our "little universe" amid a vast sea of other universes, first captured public attention through the popular scientific texts of the late 1920s and early 1930s.[351] In the early 1920s American astronomer Edwin Hubble discovered that spiral nebulae are universes unto themselves, not distant satellites of the Milky Way, and over the next several years his work with the 100-inch telescope dramatically altered the prevailing geography of outer space. Summarizing his findings in *Science and the Unseen World* (1929), Eddington wrote, "From our own island universe we can discern the other islands as spiral nebulae lying one beyond another as far as the telescope can fathom."[352] The term "island universe" was eventually abandoned in favor of "galaxy," but it shows up throughout scientific texts from the 1920s and 1930s.[353] Wells, Huxley, and Wells push the island metaphor further in *The Science of Life*, writing that "island-universes drift sparsely in space like jelly-fishes in the sea."[354] A picture of the whole universe as constituted by the Milky Way was replaced by a picture of the cosmos as a proliferation of archipelagos, stretching out to unfathomable distances. By the 1960s this worldview was made more palpable by space

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[351] Ibid., 85.

[352] Eddington, *Science and the Unseen World*, 13.

[353] The theory of "island universes" goes all the way back to Kant, though Hubble traces the term itself to the mid-nineteenth century: "The realm of the stars was once known as the 'universe of stars' and the term persisted after the isolation of the stellar system was recognized. The multiplication of stellar systems led to the term 'Weltinseln'—Island Universes—used in von Humboldt's *Kosmos* (Vol. III [1850]), presumably for the first time. In the familiar English translation by Otté (1855), the word is translated literally as 'world islands' (Vol. III, 149, 150). The transition to 'island universes' is an obvious step. . ." (Hubble, *The Realm of the Nebulae*, 25.

[354] Wells, Huxley, and Wells, *The Science of Life*, 645.

exploration. Eiseley wrote, "In a universe whose size is beyond human imagining, where our world floats like a dust mote in the void of night, men have grown inconceivably lonely."[355] Suddenly the earth felt like a far-off islet, not only to scientists but also to writers, artists, and intellectuals. This chapter focuses on the work of three such figures, Aldous Huxley, Elizabeth Bishop, and Robert Smithson, whose island-texts from the 1960s and 1970s rethink humanity's predicament in light of the new scientific picture of the cosmos.

Islands were doubly evocative as figures for the human predicament because they played a central role in Darwin's theory of natural selection, which reemerged as the primary mechanism of evolution in the 1940s. One hundred years earlier Darwin's *Beagle* diary made the Galápagos Islands famous as "a little world within itself."[356] Visiting it, he wrote, "we seem to be brought somewhat near to that great fact—that mystery of mysteries—the first appearance of new beings on this earth."[357] Nineteenth-century depictions of islands as catalysts for evolution also tended to ascribe to them an aura of mystery; in scientific discourse through the early twentieth century, writes Beer, "islands were perceived as providing closed domains in which the processes of variation and of natural selection may be observed working in a high degree of undisturbed historical continuity. They were figured not only as museums and repositories but as gardens, utopias, primal scenes."[358] The same aura is apparent in a 1959 *Life* magazine article commemorating the centennial of Darwin's publication of *On The Origin of Species*, which declares that in the Galápagos the naturalist "beheld a domain unlike any other on

[355] Eiseley, *The Immense Journey*, 161.
[356] Darwin, *The Voyage of the Beagle*, 337.
[357] Ibid.
[358] Beer, "Writing Darwin's Islands," 120.

earth, existing in isolation, unravaged by man, a miniature island cosmos where nature's processes could be clearly viewed in one small amphitheater."[359]

The modern synthesis of evolution and population genetics confirmed the importance of geographic isolation in the creation of new species, but also chipped away at those earlier idyllic views of islands.[360] Robert MacArthur and Edward O. Wilson's landmark work in island biogeography in the 1960s extended population genetics and the principles of ecology to their investigation of the survival and evolution of island creatures. To Darwin, islands were miniature worlds that give birth to new species; to MacArthur and Wilson they were equally likely to be graveyards. The only natural harmony that emerges from *The Theory of Island Biogeography* (1967) is an equilibrium between the number of species that establish themselves on an island, and get a chance to evolve, and the number of species that die out. Moreover, "*The Theory of Island Biogeography* brought the island biogeography paradigm to the mainlands," writes David Quammen.[361] MacArthur and Wilson turned islands into model ecosystems, and suggested the relevance of their model for other insular natural habitats like lakes and mountaintops. Island biogeography gave scientists a way to predict what would happen to ecosystems fragmented by expanding human populations. The theory held that the smaller and more distant the island in relation to other archipelagos or continents, the higher its rate of extinction.

The same conditions that give islands their potential also ensure their doom. Huxley, Bishop, and Smithson each considered islands from a slightly different scientific vantage, but all three of them emphasized the double nature of islands, seeing them at once as imagined sanctuaries and dead ends. In their own ways, they all explored what it means to find sanctuary

[359] Barnett, "The Enchanted Isles," 76.
[360] Bowler, *Evolution: The History of an Idea*, 314–317.
[361] Quammen, *The Song of the Dodo*, 436.

in a dead end. The differences between their approaches to islands illustrate shifting generational attitudes. Born in 1894, Huxley reserved a place for the romantic experience of nature within an otherwise material and scientific worldview. His novel *Island* (1960) responds to the problem of humanity's isolation by insisting that people can become one with the universe through Buddhism and psychedelic drugs, even if nature offers no guarantee of survival. Bishop, born in 1911, was more melancholy on the question of humanity's role in the scientific worldview. The speaker of "Crusoe in England" (1971) tries out a series of island tropes, mythical and scientific, but never finds consolation. At the far extreme, Smithson, who was born in 1938, adopted a celebratory attitude toward the inhuman dimensions of the universe. Although he was much younger than the other writers included in this chapter, he defined his work against the high modernist aesthetics of Pound, Eliot, and Hulme, and aligned himself with Williams, his fellow New Jersey native and former pediatrician; Smithson said in an interview that he was especially interested in the "part of *Paterson* where it showed all the strata levels under Paterson."[362] His essays and earthworks use the material history of the earth to denounce the romantic experience of nature. Taken together, Huxley, Bishop, and Smithson illustrate the trajectory of a modernist aesthetics that insisted on the primacy of the natural world as revealed by twentieth-century science.

2. Aldous Huxley's Hypothetical Island

Huxley's unpublished essay, "Stars and the Man" (1953), summarizes the "revolution in cosmological thought" occasioned by Hubble's discovery that spiral nebulae are actually "island universes" and space is much bigger than astronomers previously believed.[363]

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[362] Smithson, *The Collected Writings*, 285.
[363] Huxley, *Complete Essays*, 5:26.

> Will the new cosmology confirm in us that sense of personal insignificance, which is the paradoxical corollary of our collective bumptiousness? Or will the strangeness, the enormous unlikeliness of the universe, as it now reveals itself, do something to restore the conviction that there may be quite a few more things in heaven and earth than are dreamed of in any of the "nothing-but" philosophies?[364]

Huxley's emphasis falls on the second question. Taking his cue from Hubble, he affirms the virtue of both scientific observation and "Natural Piety": "Nebulae are real; but so are people. What we observe and infer about the nature of protein molecules is valid; but so also is the experience of beauty."[365] Huxley was perhaps better equipped than any modernist writer to update the literary response to natural history in light of twentieth-century scientific developments. His grandfather, biologist Thomas Henry Huxley, was the best known public defender of Darwin's theory of natural selection, and his brother Julian played a primary role in advancing the modern evolutionary synthesis. Huxley's response to the prospect of human insignificance is to supplement the "positive knowledge that is science" with "'obscure knowledge,'" the experience "of eternity in the perpetual perishing of Nature, of infinity in this spray of willow leaves, this rock, this white cloud."[366] This obscure knowledge is the same thing that "inspired Thoreau and Whitman," is "the theme of all Wordsworth's greatest poetry," and can also be found in Chaucer, Blake, Shakespeare, and Basho.[367] Huxley combines the modern scientific cosmology with romanticism, but instead of projecting transcendental unity onto the whole of nature, he treats it as one aspect of reality accessible through conscious, individual experience.

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[364] Ibid., 5:29.
[365] Ibid., 5:31, 30.
[366] Ibid., 5:33.
[367] Ibid.

Huxley wrote in the introduction to *Texts and Pretexts* (1933) that over "the course of the last half century, the conceptions in terms of which men interpret their experience have been altered by science out of all recognition. Scientifically, therefore, much of the great poetry of the past is out of date. But only superficially; for the fundamental experience remains most unaltered."[368] He goes on to "decode, as it were, the older interpretations, to translate them into our terms."[369] The chapter on "The Individual," for example, discusses poems by William Blake, Matthew Arnold, and Gerard Manley Hopkins in relation to modern psychology. It begins with William Blake's "doctrine of states," the idea that the individual self is composed of successive and discontinuous states, rather than a single, unified identity, which "frees us at one stroke from all moral responsibility whatsoever."[370] Huxley acknowledges rifts in individual experience but he tries to retain some form of continuity. He modifies Blake's theory of successive states with the help of Matthew Arnold's early sonnet, "Written in Butler's Sermons," which describes the self in terms of the geology of coral islands:

> Deep and broad, where none may see,
> Spring the foundations of the shadowy throne
> Where Man's one nature, queen-like, sits alone,
> Centred in a majestic unity;
> And rays her powers, like sister islands, seen
> Linking their coral arms under the sea[371]

This sonnet clearly relies on the language of Victorian science and politics, with its suggestion of England as queen of an empire spread across the world's oceans. Coral islands, too, were drawn

[368] Huxley, *Texts and Pretexts*, 3.
[369] Ibid.
[370] Ibid., 45.
[371] Ibid., 44, lines 5–10.

from the land- and seascape of natural history voyages, and were central to geological debates beginning in the 1830s.[372] However, instead of translating Arnold's Victorian metaphor into modern terms, Huxley uses it to revise Blake's theory:

> Our successive states are islands—but, for the most part, "sister islands linking their coral arms under the sea."; islands of the same archipelago, having the same geology, the same fauna and flora, the same climate and civilization. But here and there, in midocean, rises some isolated peak; uninhabited, or peopled by races of strange men and unknown animals; an island where life is unrecognizably different from that which we lead on the familiar atolls of our home waters. Between these and the oceanic islands, there exists, no doubt, some obscure, submarine connection. If in no other way, they are at least united in this: that they rise from the crust of the same globe. But the connection is invisible; we have no direct knowledge of it, can only infer its existence.[373]

Huxley was familiar enough with the natural history of islands to extend the metaphor, describing the geology, biogeography, and even the culture of his hypothetical islands.[374] With a few minor variations, it was a metaphor he would continue to use throughout his writing career. The island metaphor shows up repeatedly in the essays he wrote for *Esquire* in the 1950s. Instead of using islands to describe disparate states of mind, in these later writings Huxley uses

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[372] Charles Darwin's *The Structure and Distribution of Coral Reefs* (1842) was the first book to explain the formation of barrier reefs and atolls from the slow buildup of coral skeletons around sinking oceanic volcanoes, and it established Darwin's reputation as a prominent scientist following the *Beagle* voyage.

[373] Huxley, *Texts and Pretexts*, 46–47.

[374] John Gillis points out that the discipline of anthropology has also drawn on the science of islands: "The nascent study of human cultures, another progeny of the eighteenth-century human sciences, found islands attractive from the very beginning. The concept of culture as a bounded object capable of being studied in isolation was one of the founding fictions of anthropology as a science. . . . Following the laboratory rationale of the natural sciences, anthropologists were convinced that 'because of their wide diversities, small-scale dimensions, and relative isolation, the Pacific Islands can provide excellent—in some ways unique—laboratory-like opportunities for gaining deeper understandings in Human Biology, Political Science, etc.'" Gillis, *Islands of the Mind*, 116.

the figure of islands and archipelagos to describe how individuals and groups of people relate to each other.

In his essays from the later 1950s, Huxley uses the term "island universe" interchangeably with "island," as a figure for social and psychological isolation. In *The Doors of Perception* (1954) he writes that "from family to nation, every human group is a society of island universes. Most island universes are sufficiently like one another to permit of inferential understanding or even of mutual empathy. . . . But in certain cases communication between universes is incomplete or even nonexistent."[375] He uses the same analogy in the essay, "Where Do You Live?" (1956). Forced into existential crisis by the stranger sitting next to him on an airplane, he comes to the realization that "home, in a word, is home-made. Out of the raw material of given experience each of us constructs his own particular universe. . . . Each of us inhabits his own private island."[376] When he gets to cultural geography he embarks on a naturalist's breakdown: "The universes inhabited by all the participants in a given culture possess a certain number of common features. They are island universes, to be sure—but the islands are grouped in an archipelago, where the intellectual climate, the flora and fauna of customs and accepted notions are nearly uniform. Within any given archipelago, communication between the island universes is relatively easy." On the other hand, "between island universes belonging to different archipelagos"—even if they rise from the crust of the same globe—"communication is difficult in the extreme."[377] Islands become Huxley's favorite trope for talking about inter-cultural relationships, which he considers key to solving the problems of the modern West. "Science and technology have given us power and wealth," he writes, "but our societies are unstable, the insanity rate is rising and more and more individuals find themselves

[375] Huxley, *Complete Essays*, 5:159.
[376] Huxley, *Complete Essays*, 6:172–173.
[377] Ibid., 6:175–176.

inhabiting nightmare universes where everything seems pointless, frustrating, and vaguely terrifying."[378] All that might be avoided if people could learn to communicate across the three enduring traditions "underlying the cultural archipelagoes of the modern world," namely, those of the Far East, India, and the West. In that case the inhabitants of the various archipelagos could compensate for each other's weaknesses. His outlook is bleak: "All things considered, it looks as though most human beings will continue to live in their home-made purgatories for a very long time to come."[379]

Island is Huxley's attempt to imagine a solution. The novel's fictional island, Pala, is an experiment in cultural eugenics, a hybrid of Victorian-era natural history and Mahayana Buddhism. (He mused, in the planning stages, "It is interesting to try to imagine what could be done to create a good society, dedicated to eliciting all the latent powers and gifts of individuals, by consciously and deliberately adopting and combining desirable features from different cultures, Indian, modern Western, Polynesian, Chinese. . .")[380] Readers are introduced to the island's history alongside the novel's protagonist, Will Farnaby, a frustrated Englishman whose psychological damage is gradually undone as he learns what the Palanese have been able to achieve on their small island. The story of Pala begins in the 1840s, when Andrew MacPhail, a Scottish doctor, travels to the Indian Ocean as surgeon and naturalist aboard the HMS *Melampus* and finds himself stuck in India while recovering from a broken leg. He is summoned to perform a surgery on the Raja of Pala, a tiny island nation cut off from the outside world by its high cliffs and inhospitable shoreline. When he arrives, he discovers that the Raja has a tumor on the side of his face that has grown so large it is beginning to restrict his airways. With no available anesthetic, the doctor performs the surgery using hypnosis, based on an article in a medical

[378] Ibid., 6:178.
[379] Ibid., 6:179.
[380] *Letters of Aldous Huxley*, 850.

journal he had read several years earlier. The surgery is a wild success and the Raja gets through it pain-free. Thus begins their partnership. The Raja is so overjoyed that he appoints Dr. Andrew as his closest advisor, and together they redesign Palanese society.

According to Dr. Robert MacPhail, our modern guide to Pala, the Scottish doctor was a thoughtful observer of the island cultures he visited during his three years as a naturalist, all the while comparing them to the culture he grew up with: "After Perth, the islands seemed like Eden—but an Eden innocent unfortunately not only of Calvinism and capitalism and industrial slums, but also of Shakespeare and Mozart, also of scientific knowledge and logical thinking. It was paradise, but it wouldn't do, it wouldn't do."[381] He expresses his aspirations in explicitly biological language. Pala is a garden whose plants he wants to cultivate, if not genetically alter: "People, he was beginning to understand, are at once the beneficiaries and the victims of their culture. It brings them to flower; but it also nips them in the bud or plants a canker at the heart of the blossom. Might it not be possible, on this forbidden island, to avoid the cankers, minimize the nippings, and make the individual blooms more beautiful?" (154-55). The island becomes a different kind of paradise, carefully selected from "the best of both worlds—the Oriental and the European, the ancient and the modern" (155).

The Western doctor and the Eastern king pool their resources. "The Raja's was an acute and subtle mind; but he knew nothing of the world beyond the confines of his island, nothing of physical science, nothing of European technology, European art, European ways of thinking. No less intelligent, Dr. Andrew knew nothing, of course, about Indian painting and poetry and philosophy. He also knew nothing, as he gradually discovered, about the science of the human mind and the art of living" (155-56). Together they find ways to ensure that all the people's needs are met. Their method for controlling the size of the population is a typical example. Like

[381] Huxley, *Island*, 145. Further references will be cited in the text.

a good Victorian naturalist, "Dr. Andrew had read his Malthus. 'Food production increases arithmetically; population increases geometrically. Man has only two choices: he can either leave the matter to Nature, who will solve the population problem in the old familiar way, by famine, pestilence and war: or else (Malthus being a clergyman) he can keep down his numbers by moral restraint'" (97-98). The doctor and the Raja envisioned a third option, which was to instruct the populace in the yoga of love, thereby instituting birth control and increased sexual satisfaction in one fell swoop, without offending the traditional values of the Palanese people. (Conveniently, "every good Buddhist knows that begetting is merely postponed assassination. Do your best to get off the Wheel of Birth and Death, and for heaven's sake don't go about putting superfluous victims onto the Wheel" [98].) Drawing on Western values, Pala launched the Experimental Station—"Rothamsted-in-the-Tropics": "In a few years we had new strains of rice and maize and millet and breadfruit. We had better breeds of cattle and chickens. Better ways of cultivating and composting; and in the fifties we built the first superphosphate factory east of Berlin" (97). Huxley is careful to highlight Pala's limitations. "They never succeeded, of course, in making the best of all the worlds," he offers as caveat, "but by dint of boldly trying they made the best of many more worlds than any merely prudent or sensible person would have dreamed of being able to reconcile and combine" (156). In short, they have discovered a graceful solution for nearly every conceivable problem, outside the unavoidable woes of being human, and even those they have managed to deal with gracefully.

The most remarkable feature of *Island* is the way the novel handles the failure of its utopian society. Huxley planned its failure from the beginning. He specified its destruction in a 1956 letter to Humphry Osmond, the British psychiatrist who had given Huxley his first dose of mescaline several years earlier: "Meanwhile of course, the island gets overrun by one of the

colonial powers, and all its wisdom is systematically stamped out. . . . This framework should permit a full exposition of what ought to be, what could be perhaps, and what has been and what actually is."[382] The threat is present from the start of the novel. Its protagonist, after all, is an outsider. Although Will Farnaby had to beach his sailboat and climb several hundred feet of sheer rocky cliffs to get onto the island, he arrives on behalf of a global corporation that wants to gain access to the island's oil reserves. His caretakers, Dr. Robert and Susila, slowly but surely persuade him of the good sense of Palanese society. There is one person, however, whom they cannot manage to persuade. Murugan, Pala's teenage Raja who is poised to assume control on his eighteenth birthday, has slipped through the cracks of the island's well-designed society. He was sent off to be educated in Europe by his mother, and when Will arrives he has recently fallen under the influence of Colonel Dipa, dictator of neighboring Rendang. In the final scene of the novel, after Will has been fully inducted into the realm of the possible, Murugan rolls through in a procession of military vehicles. Over the loudspeaker he announces Colonel Dipa as first prime minister of the new United Kingdom of Rendang and Pala, and shrieks about progress and traitors, with the sound of gunshots ringing in the background. Dr. Robert has been shot. "The work of a hundred years destroyed in a single night," the narrator observes over Will's shoulder; "and yet the fact remained—the fact of the ending of sorrow as well as the fact of sorrow" (353). The final paragraph of the novel is mute on the question of what will happen to Will and Susila. Instead it takes stock of the ambient noise: "the roaring of the engines diminished, the squeaking rhetoric lapsed into an inarticulate murmur, and as the intruding noises died away, out came the frogs again, out came the uninterruptible insects, out came the mynah birds" (354). The mynah birds are parrots that were trained, in some early phase of Pala's social engineering, to fly about repeating the phrases, "*Attention!*" and "*Here and now, boys!*" This is part of what Will has

[382] Huxley, *Letters of Aldous Huxley*, 792.

learned on the island—to pay full attention to the present moment—and it is also a sign that something of Pala will continue.

The story of Huxley's island utopia follows the rules of biological evolution as they were understood at midcentury. The opportunity for modern Pala to exist depended entirely upon chance. Andrew MacPhail survived his parents' nasty upbringing because "the roulette wheel of heredity had stopped turning at a lucky number," and he arrived on the island thanks to a series of fortuitous events (143). The island's boundaries were critical in giving its newly-designed society a chance to grow, free from competition; they allowed Pala to funnel all its resources toward creating the perfect society. The protective bubble also means that Pala's utopia has no way to defend itself once the outside world gets in. In this sense *Island*'s portrayal of evolution is realistic: utopia is possible, but there is no guarantee of success.

Huxley softens the blow of Pala's demise by relieving his protagonist's psychological isolation just before the military takeover of the island. The final stage of Will's initiation is to take the "moksha medicine," a psychedelic drug used in Palanese rites of passage. The moksha medicine takes Will out of his private "island universe": "Behind his closed eyelids an ocean of luminous bliss poured upwards like an inverted cataract. Poured upwards from union into completer union, from impersonality into a yet more absolute transcendence of selfhood" (327). Will's psychedelic enlightenment is a modified version of romantic transcendence, one that doesn't negate the material, time-bound world. After staring at a landscape painting he quotes from Wordsworth's "Lines Written Above Tintern Abbey": "Another bubble of memory came up from the silted shallows. '"Something far more deeply interfused, Whose dwelling is the light"—of something or other'" (336). The phrase he forgets, "setting suns," points to the end of the sublime portion of his experience. Huxley's version of transcendence also requires "an

openness to terror" and the "immortality of suffering," but these don't cancel out the experience of bliss (336, 341). *Island* insists that bliss is possible. "Progress is certainly not inevitable," Huxley wrote in 1956, "but, along with stagnation, relapse, and extinction, it is one of the facts of human history and of biological evolution."[383]

3. Elizabeth Bishop's Lost Island

In the summer of 1958, the Brazilian government asked Bishop to accompany Huxley and his wife on their official visit to the new capital city and a remote Uialapiti village. The American poet had been living in Brazil for seven years. Although her scientific education was less cutting-edge than Huxley's, she was deeply interested in the natural world and Darwin, in particular. Her unpublished essay about the trip, "A New Capital, Aldous Huxley, and Some Indians," suggests an early provenance for the poem about islands that she first drafted several years later.[384] "Crusoe in England," first published in the *New Yorker* and collected in *Geography III* (1976), reconsiders island life in at least three registers—utopian, romantic, and evolutionary.

Bishop's essay touches on many of the themes that appear in her poem, including the mythology of lost islands. In describing their journey to the Indian village, she reports that they "were flying over Fawcett territory," the region surveyed by British explorer Percy Fawcett in the early decades of the twentieth century.[385] Fawcett was searching for an ancient lost city he called "Z," which he believed to have been an outpost of Atlantis.[386] The opening lines of "Crusoe in England" suggest that Crusoe's island has become a lost island, "un-rediscovered, un-

[383] Huxley, *Complete Essays*, 6:196.
[384] Bishop completed "Crusoe in England" in 1971, but composed a first draft entitled "Crusoe at Home" between 1963 and 1964.
[385] Bishop, *Poems, Prose, and Letters*, 387.
[386] Childress, *Lost Cities & Ancient Mysteries of South America*, 293.

renamable."[387] Lost islands were an important feature of the imaginative geography of Europeans from at least the sixteenth century onward. In addition to mythic places like El Dorado, seagoing explorers searched for the Isles of the Blest, Saint Brendan's Islands, and, of course, Eden itself.[388] John Gillis writes that European explorers looked for Eden on every new island they chanced upon. These newly discovered (or rediscovered) islands lost their Edenic status once European explorers and colonizers spent much time on them, but that too fell in line with the biblical narrative: "paradise found quickly turned into paradise lost when the isles that seemed so desirable on first contact were found to harbor deadly diseases, environmental disasters (including extinctions), and hostile local populations that Europeans were not prepared for."[389] According to Gillis, "each lost Eden reinvigorated the quest for paradise elsewhere. In seas filled with an endless supply of unknown islands, it seemed that the search would never run out of new possibilities.[390] The loss of the island in "Crusoe in England" does not reinvigorate Crusoe's search for paradise. By the end of the poem he has lost the ability to envision new islands:

> My blood was full of them; my brain
> bred islands. But that archipelago
> has petered out. I'm old.
> (166; ll. 156-58)

The creative power of the imagination succumbs to the degenerative force of biology. Bishop's Crusoe mourns the loss of an island paradise that never existed.

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[387] Bishop, *The Complete Poems, 1927-1979*, 162. Further references to this edition (hereafter abbreviated as *CP*) will be cited in the text.

[388] According to Gillis, "The Greeks and Romans held the view that somewhere to the west lay places of plenty and tranquility, reserved for dead heroes. They called these Elysium or the Garden of Hesperides, and they located them in the near Atlantic on what were known as the Isles of the Blest or the Fortunate Isles." Gillis, *Islands of the Mind*, 13.

[389] Ibid., 70.

[390] Ibid.

"A New Capital, Aldous Huxley, and Some Indians" underscores Bishop's departure from the optimism of Huxley's *Island*. Toward the end of the essay she describes her conversation with Huxley on the flight back from the village:

> I remember discussing "The Mill on the Floss" in a dream-like way, and then having a conversation with Huxley about Ezra Pound and T. S. Eliot, or rather, his reminiscing about them, gently as always. He then spoke about Utopia, the subject of his next novel. His is set on an island, I think in the Indian Ocean, in a mingling of the best of both eastern and western cultures. It is a society "where men are able to realize their potentialities as they have never been able to in any past or present civilization." It seemed quite natural to be hearing about it five thousand feet up in the air, deserting one of the most primitive societies left on earth, rushing towards still another attempt at "the most modern city in the world."[391]

Though she doesn't mention the fact that Huxley's island utopia drew heavily from evolutionary biology, her final comment in the passage quoted above signals her awareness of the paradoxical role that islands play in the evolutionary process. It also tempers Huxley's apparent enthusiasm. The new capital and the Indian village appear doomed, the one certain to fail in the contest for modernity and the other verging on extinction. Brasília, built far from anything, is marked by "dreariness and desolation."[392] Bishop mentions earlier that the Uialapiti Indians "own no land; there are no reservations for them to retreat to if the lands where they live should ever be sold" and "the founding of Brasília has brought the possibility nearer by six hundred miles."[393] The gentle subtext of her final comment is that it actually seemed quite absurd to entertain the possibility of utopia, strung between two such imperfect islands.

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[391] Bishop, *Poems, Prose, and Letters*, 398.
[392] Ibid., 368.
[393] Ibid., 392.

Although many critical accounts have explored Bishop's engagement with science in "Crusoe in England," they tend to focus on the poem's critique of natural history. Costello writes, "Crusoe the enlightenment scientist (he knows something about geology, zoology, astronomy) is haunted, in Bishop's inversion, by modern science—relativity, the uncertainty principle, and various other unhingings of positivism."[394] Relativity and uncertainty reinforced many modernist writers' aversions to positivism and the deterministic leanings of nineteenth-century science. However, while these principles dramatically altered the terrain of modern physics, they did not grind all scientific study of the natural world to a halt. Twentieth-century developments in astronomy and geology revealed, in their own right, that the history of the earth and the dimensions of outer space were much less stable than previously imagined. In the late 1950s plate tectonics established mainland continents to be more like "'rafts' floating on a 'sea' of denser rock" than solidly anchored landmasses.[395] Likewise, the enlightenment-era rage for organizing animals into taxonomies, which turned natural history into a sport of finding and preserving specimens, was eclipsed in the twentieth century by disciplines that emphasized the complex relationships between organisms and their environments, such as ecology and biogeography. Reading "Crusoe in England" against this background reveals much more about the poem's depiction of the natural world and Bishop's engagement with contemporary scientific attitudes.

The relevance of contemporary science is obscured by the strong presence of Darwin in "Crusoe in England." Bishop's letters suggest that the naturalist was very much on her mind in the early 1960s. Her visit to England in June 1964 included "a nice expedition alone to see

[394] Costello, "Elizabeth Bishop's Impersonal Personal," 348.
[395] Wilson, *Continents Adrift*, Preface.

Darwin's house."[396] Her letter to Anne Stevenson that January expressed great admiration for the way Darwin gathered information about the flora, fauna, and geography of the places he visited: "reading Darwin, one admires the beautiful solid case being built up out of his endless heroic *observations*, almost unconscious or automatic—and then comes a sudden relaxation, a forgetful phrase, and one *feels* the strangeness of his undertaking, sees the lonely young man, his eyes fixed on facts and minute details, sinking or sliding giddily off into the unknown."[397] A number of critics have seen an epistemological crisis at the heart of the poem, and suggest that Bishop's recasting of Crusoe as a would-be natural historian stages a breakdown in the whole project of gathering knowledge about the natural world.[398] The observations Crusoe makes in the poem echo many of Darwin's observations in the *Beagle* diary, and yet they do not add up to the same "beautiful solid case." Bishop's Crusoe inches toward the unknown with trepidation. He is perplexed by many things on the island and he yearns for familiarity. However, what is ultimately at stake in "Crusoe in England" are not the terms by which Crusoe acquires knowledge of the world, but the terms of his survival.

"Crusoe in England" focuses more on Darwin's experience than his method. Bishop owned a joint biography of Darwin and T. H. Huxley that describes the young naturalist's state of mind toward the end of the *Beagle* voyage in terms strikingly similar to her rendering of Crusoe:

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[396] Bishop, *Words in Air*, 545.

[397] Bishop, *Poems, Prose, and Letters*, 861.

[398] Frances Dickey, for example, compares the passages where Darwin counts "truncated hillocks" and "conical hills" to Crusoe's counting of volcanoes in the second stanza, and writes: "The extent to which Crusoe's words match Darwin's meticulous observations indicates what Bishop wishes to convey about the possibility and desirability of having knowledge of the world, of having facts" ("Bishop, Dewey, Darwin," 320. Bonnie Costello writes of Crusoe's nightmare that "no increase in knowledge accompanies this accumulation of data; no teleology underlies this endless archipelago. Crusoe is a desperate Darwin, trailing off into the unknown" (*Elizabeth Bishop: Questions of Mastery*, 203.

> As their sails wore thin and their tackle turned to shreds, Charles and his comrades became obsessed with dreams of home. Absence from England was a long and slow starvation. "I hate every wave of the ocean," he wrote Fox, "with a fervour, which you who have only seen the green waters of the shore, can never understand." A sailor's life is a paradox of folly. He sails the sea to tell incredible tales afterward at a comfortable fireside, and talks of nothing but the comfortable fireside while enacting the incredible tales.[399]

This paradox is the defining feature of Crusoe's experience in the poem: he pines for home while on the island, and he pines for the island while back in England. On Chatham Island Darwin remarks that "the brushwood appears, from a short distance, as leafless as our trees during winter."[400] He writes that the crater-pocked landscape "vividly reminded" him "of those parts of Staffordshire, where the great iron-foundries are most numerous."[401] Crusoe likens the waterspouts on his island to "Glass chimneys, flexible, attenuated, / sacerdotal beings of glass" (163; ll. 51-52). He struggles to define his new environment in familiar, domestic terms. He looks at the snail shells piled under the island's trees "at a distance," from which vantage "you'd swear that they were beds of irises" (164; ll. 74-75).

Bishop's naturalist tries to turn his lonely island experience into a romantic communion with nature, by reciting Wordsworth's "I Wandered Lonely as a Cloud" to his faux "iris-beds": "'They flash upon that inward eye, / which is the bliss . . .' The bliss of what?" (164; ll. 96-97). Like Huxley's Will Farnaby, Bishop's Crusoe can't seem to remember his Wordsworth. The

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[399] Irvine, *Apes, Angels, and Victorians*, 53. The contents of Bishop's personal library are held at Harvard's Houghton Library.

[400] Darwin, *The Voyage of the Beagle*, 334.

[401] Ibid.

first two stanzas of Wordsworth's poem illustrate how profoundly Crusoe fails at communing with nature.

> I wandered lonely as a cloud
> That floats on high o'er vales and hills,
> When all at once I saw a crowd,
> A host, of golden daffodils;
> Beside the lake, beneath the trees,
> Fluttering and dancing in the breeze.
>
> Continuous as the stars that shine
> And twinkle on the milky-way,
> They stretched in never-ending line
> Along the margin of a bay:
> Ten thousand saw I at a glance,
> Tossing their heads in sprightly dance.
> (Wordsworth, "I Wandered Lonely as a Cloud," ll. 1-12)

In *Science and the Modern World*, Whitehead remarks that romantic poetry's response to enlightenment science was "a protest on behalf of value" (138). He writes that Wordsworth's "theme is nature *in solido*, that is to say, he dwells on that mysterious presence of surrounding things, which imposes itself on any separate element that we set up as an individual for its own sake. He always grasps the whole of nature as involved in the tonality of the particular instance. That is why he laughs with the daffodils, and finds in the primrose 'thoughts too deep for tears'" (121). Bishop's Crusoe has no sense of "the whole of nature" because its separate parts are

totally indifferent to him. The "surrounding things" on his island fail to recognize him as an individual; they commune with him on their own terms.

Wordsworth's experience of natural abundance in the "never-ending line" of daffodils becomes a nightmare of infinite islands in "Crusoe in England." In her January 1964 letter to Stevenson, Bishop writes that dreams "catch a peripheral vision of whatever it is one can never really see full-face but that seems enormously important."[402] The dreams Crusoe describes roughly two-thirds of the way through the poem suggest that what he cannot fully face, what he fears most, is losing himself in the island's ecosystem. Instead of providing access to the value-laden whole of nature, as it does for Wordsworth, all that merging with the natural world offers to Crusoe is the prospect of continual, undirected change.

> Dreams were the worst. Of course I dreamed of food
> and love, but they were pleasant rather
> than otherwise. But then I'd dream of things
> like slitting a baby's throat, mistaking it
> for a baby goat. I'd have
> nightmares of other islands
> stretching away from mine, infinities
> of islands, islands spawning islands,
> like frogs' eggs turning into polliwogs
> of islands, knowing that I had to live
> on each and every one, eventually,
> for ages, registering their flora,
> their fauna, their geography.

[402] Bishop, *Poems, Prose, and Letters*, 861.

(*CP*, 165; ll. 129-41)

While Bishop's Crusoe fashions himself as an observer of island life, the poem directs our attention to his awkward entry into the island's ecosystem, *not* his study of it. He neither accumulates data nor gains much knowledge of his island over the course of the poem. Instead, he registers the island. He measures it against himself. His sense of scale changes when he stands among the volcanoes. The sounds of the animals ring in his ears even in the poem's present, in England:

> *Baa, baa, baa* and *shriek, shriek, shriek,*
>
> *baa . . . shriek . . . baa . . .* I still can't shake
>
> them from my ears; they're hurting now.
>
> (164; ll. 164-66)

He observes that the "island had one kind of everything"—one kind of snail, one kind of tree, and "one kind of berry" (163-64; ll. 68, 76). The process of observing these things does not turn Crusoe into a good naturalist; rather, it turns him into one of the island's kinds. The primary source of his frustration is that he never feels at home with the island's flora and fauna. He resents the goats' and gulls' apparent misidentification of him as a goat or a gull, even though he struggles to distinguish the island's living creatures (the "hissing, ambulating turtles" [164; l. 109]) from their environment (the "ground of hissing rain" [164; l. 108]).

Crusoe adapts to the island against his will. His nightmare is about having to adapt continuously: having to learn how to communicate with a new set of animals all over again, and then again; having to grow accustomed to a new kind of tree, a new kind of berry, a new philosophy; having to become a new creature on every island, the only one of his kind, so far

from his origins that he can hardly recognize another human being when he sees one.[403] Crusoe's nightmare of infinite islands is a nightmare of irreversible change; he doesn't want to evolve down a dead end. Bishop's comparison of islands to frogs' eggs suggests prolific reproduction ("islands spawning islands, / like frogs' eggs turning into polliwogs" [165; ll. 136-37]). However, as Darwin mentions in the Galápagos Islands chapter of his *Beagle* diary, frogs almost never live on far-flung islands. ("The absence of the frog family in the oceanic islands is the more remarkable, when contrasted with the case of lizards, which swarm on most of the smaller islands. May this difference not be caused, by the greater facility with which the egg of lizards, protected by calcareous shells, might be transported through saltwater, than could the slimy spawn of frogs?")[404] Frogs' eggs are too delicate for the open sea, and tadpoles cannot breathe in saltwater. By implication, the islands in Crusoe's nightmare are infinite but doomed. Like the island-universes stretching beyond the Milky Way, beyond the range of the largest telescope, the infinity of untenable islands in Crusoe's nightmare makes his own island seem even more precarious.

Bishop started writing "Crusoe in England" a few years after a highly publicized rehashing of the Robinson Crusoe myth following the volcanic eruption on Tristan da Cunha, a tiny island in the middle of the South Atlantic. The island was populated by English soldiers who stayed on after the Napoleonic Wars ended in 1815, with occasional additions of shipwreck survivors and women recruited from St. Helena or South Africa. When Tristan's long-dormant volcano came to life in 1961, its 262 inhabitants sought refuge in England, where they became something of an oddity.

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[403] Gillian Beer writes that Bishop's poem "evokes the sometimes nightmare slippage between kinds, the longing for and fear of procreation in Defoe's great work . . . [Crusoe's] fear is of the endless expansion of knowledge as well as of the collapse of boundaries between unlike beings" (Beer, "Island Bounds," 37).

[404] Darwin, *The Voyage of the Beagle*, 341.

Responses to the saga of the Tristan islanders parallel Bishop's version of the Crusoe story in telling ways. Like Bishop's Crusoe, they were melancholy for an island existence that had ruined them for the modern world, and even seemed to have pushed them close to extinction. British and American newspapers called attention to their early-nineteenth-century Cockney accents, the various ill-effects of their small gene pool, and, in particular, their utter disappointment with modern life.[405] ("In traveling 6,500 miles to safety in England, they moved nearly a hundred years forward in time."[406]) After eighteen months they voted to leave. *Life* magazine previewed an article about their return with the headline: "'Robinson Crusoe' Islanders Go Back: World's Most Isolated People Return to Tristan da Cunha."[407] An article in *Time* explained, "Mostly, they were homesick for their windswept island and wanted again to feel pride in eating what they grew, wearing what they made, and living out a life that was hard but simple and eminently suited to their spare tastes."[408] One Tristan islander said that "'TV nearly sends us mad. Cars, buses and trains roar like thunder through our brains. Way back in Tristan, a man can come to grips with his soul and his Creator.'"[409] Readers were apparently fascinated by the islanders' desire to live apart from the rest of the world, and deprive themselves of modern conveniences. After staying on Tristan with the first group of islanders to return after

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[405] See Feron, "Modern Life in Britain Awes Refugees From Remote Island"; "Cape Town Crowd Cheers Tristan Islanders"; "262 Tristan Islanders Start a New Life"; "Modern Britain Upsets Tristan Da Cunha Folk"; "Tristan's Homesick Islanders." One article in *Life* expressed typical concerns about inbreeding: "Close inbreeding had produced a degenerative process both physically and mentally. . . . A doctor warned, 'Ultimate blindness will sweep the entire island's society if new blood does not enter their community.' Said another, 'Tristan islanders stand in danger of serious biological consequences if they return to their island without taking with them fresh genetic material from which to breed.'" (Mydans, "Strange Story of a Flight From Our Century," 72–74.)

[406] "Refugees: Where Is the Simple Life?".

[407] "Coming Soon," 18. A *Time* magazine article from 1948 also compared them to Defoe's shipwrecked hero. A handful of Tristan islanders had agreed to teach South African Navy personnel how to survive on remote oceanic weather stations, and when they landed in Cape Town, the article reported "it was as if half a dozen Robinson Crusoes had been popped suddenly into Times Square." The islanders were amazed by everything from cars to ice cream to horses. (They had only known donkeys on Tristan.) One of them said—in a statement reminiscent of Crusoe's disappointment with "real" things in England—"I never think things in Cape Town is as they is." ("Us Gets Tired of Us.")

[408] "Refugees: Where Is the Simple Life?".

[409] "Paradise Enow."

the eruption, *Life* reporter Carl Mydans observed that "somewhere in their developing years, a reliance on fate became the dominant factor in the islanders' philosophy. This tended to produce an utterly passive way of life. No other community in the world has placed itself so completely in the hands of chance."[410] The Tristan islanders were model Crusoes in their creative adaptations to life on a deserted island, but that did not exempt them from the dangers of isolation.

The evacuation of Tristan da Cunha also prompted a public debate over the nature of island biogeography. A few days after the eruption *The London Times* reported that the island's administrator "has given orders that the 150 cattle, 300 sheep, and 30 donkeys should be left on the island. He said there was plenty of good pasture which had never been used and added: 'Nature and natural hazards will keep a balance.' Cats are being left to keep down rats."[411] The following day they printed a letter from ornithologist W. R. P. Bourne, expressing concern about leaving the animals on Tristan. He explained the dynamics of island populations: "it seems to be true that on the mainland where there are many carnivorous predators these prevent herbivorous animals multiplying unduly, but it has been shown repeatedly during the course of the discovery of the oceanic islands of the world by mankind that the situation is different there, and if mammalian herbivores are introduced to otherwise uninhabited islands they will tend to increase and multiply indefinitely until they have consumed all the vegetation and their numbers are limited by starvation."[412] He worried that the cows, sheep, and donkeys would proliferate to the detriment of the birds using the island as a nesting ground. Bourne's letter elicited a reply from a rather old-fashioned professor of zoology, who advised him to read Malthus' *On Population*, because, in short, nature does not allow rogue species to multiply unchecked. One E. M.

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[410] Mydans, "Strange Story of a Flight From Our Century," 74.
[411] "Tristan Da Cunha Salvage Work."
[412] Bourne, "Letter to the Editor: Animals on Tristan Da Cunha."

Wentworth came to Bourne's defense a few days later, reiterating the danger of leaving livestock on the island in the absence of its human population: "I do not think that Mr. Bourne would dispute the fact that most animals live on the edge of starvation. The point he is making is that leaving cows and sheep on Tristan da Cunha will destroy the *balance* of life on the island. The vegetation will be eaten faster than it can be replaced naturally. The soil will be eroded because of lack of trees, leaving a desert on which no animals of any kind can live."[413] A telling indication of the cultural status of islands in the 1960s comes at the end of this letter, when Wentworth suggests a broader relevance: "Where the numbers of the various animals and plants are kept roughly equal by being replaced at about the same rate at which they die or are eaten the different species can survive indefinitely. Man's own survival depends on his understanding of this fact."[414] In other words, human beings should follow the example of Robinson Crusoe in their management of the earth's biological economy.

Julian Huxley weighed in shortly thereafter, advising the zoologist to read Darwin's *The Origin of Species*, where he would discover that "many factors, besides starvation . . . help to keep down geometrical increase in numbers."[415] "In any case," Huxley went on, "the relevant fact for Tristan da Cunha is that on oceanic islands with a peculiar endemic fauna and flora the spread of introduced species, whether domestic or wild, will inevitably lead to the reduction or extermination of unique indigenous animals and plants, as well as sometimes to the deterioration or destruction of the habitat, and the consequent starvation or even extinction of the introduced population."[416] In other words, Bourne was right; Huxley confirms the livestock's destructive potential. However, his statement glosses over an even more disturbing notion: the idea that the

[413] Wentworth, "Letter to the Editor: Animals on Tristan Da Cunha."
[414] Ibid.
[415] Huxley, "Letter to the Editor: Animals on Tristan Da Cunha."
[416] Ibid.

same destruction would result from the "natural" introduction of a wild species. He informs *Times* readers that islands have no natural balance, at least not one that ensures the survival of their "unique indigenous animals and plants." Darwin's descriptions of islands were haunted by the idea of paradise, but Huxley strips that resonance. The island is as much a biological trap as a protective garden.

However Bishop encountered the contemporary scientific worldview—whether through her conversation with Huxley or through more diffuse channels—"Crusoe in England" is consistent with mid-twentieth-century attitudes about evolution and the pervasive midcentury awareness of our planet's isolation in the cosmos. The old models of the island all fail Crusoe. He can't shape his island into a productive economy. Even if he could remember Wordsworth's phrasing, the romantic "bliss of solitude" would be a fiction on his island. There is no unified Nature here, just a random collection of natural things, and none of them are especially interested in cooperating with him. If romanticism was a revolt on behalf of value, as Whitehead asserted, Bishop's Crusoe is left valueless. The ability to observe these things scientifically does not remove him from the reality of his island.

Darwin reaches a similar impasse in the expanded edition of his *Autobiography* released in 1958, which restored passages that had been omitted for the sake of Victorian propriety and his family's good name:

> With respect to immortality, nothing shows me how strong and almost instinctive a belief it is, as the consideration of the view now held by most physicists, namely that the sun with all the planets will in time grow too cold for life, unless indeed some great body dashes into the sun and thus gives it fresh life.—Believing as I do that man in the distant future will be a far more perfect creature than he now is, it is an intolerable thought that

> he and all other sentient beings are doomed to complete annihilation after such long-continued slow progress. To those who fully admit the immortality of the human soul, the destruction of our world will not appear so dreadful.[417]

As this passage makes suggests, Darwin could not fully admit the immortality of the human soul, even if some part of him wanted that consolation. Beer writes that in this "late insight in the *Autobiography*, Darwin confronts the full and troubling implications of [his] belief in improvement. . . . He holds to his theory: that natural selection unknowingly works toward good outcomes. And that extinction, until ultimately the planet cools, makes space forward in a thronging world and illuminates the backward abysm of lives fully lived long before our time."[418] Although Darwin's theory of natural selection was widely accepted by scientists in the 1960s, his belief in improvement was not. "Crusoe in England" shows us Darwin as a lonely old man, marooned on the island that is the logical extension of his careful fact-gathering: a world that offers no guarantee of progress or survival.[419] Crusoe's isolation, his struggle to hold his own among the goats and gulls, does not propel him into a better future. It leaves him outdated, waiting for his "poor old island" to be rediscovered and renamed.

4. Robert Smithson's Extinction Island

In his late essay, "Frederick Law Olmstead and the Dialectical Landscape" (1973), Smithson wrote that "the image of the lost paradise garden leaves one without a solid dialectic,

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[417] Darwin, *Autobiography*, 92.

[418] Beer, "Darwin and the Uses of Extinction," 329–330.

[419] Like Darwin of the *Autobiography*, Bishop's Crusoe can hardly remember a line of poetry ("'They flash upon that inward eye, / which is the bliss . . .' The bliss of what?"). Darwin writes: "My memory is extensive, yet hazy: it suffices to make me cautious by vaguely telling me that I have observed or read something opposed to the conclusion which I am drawing, or on the other hand in favour of it; and after a time I can generally recollect where to search for my authority. So poor in one sense is my memory, that I have never been able to remember for more than a few days a single date or a line of poetry." Darwin, *Autobiography*, 140.

and causes one to suffer an ecological despair."[420] In keeping with his general aversion to ecological despair, Smithson spurned the image of the lost garden in favor of Olmstead's approach to landscape, which was based on Uvedale Price and William Gilpin's eighteenth-century theories of the picturesque. He offers Price and Gilpin's picturesque as an alternative to the aesthetic theories of Edmund Burke that fueled romantic conceptions of nature:

> Burke's notion of "beautiful" and "sublime" functions as a *thesis* of smoothness, gentle curves, and delicacy of nature, and as an *antithesis* of terror, solitude, and vastness of nature, both of which are rooted in the real world, rather than in a Hegelian Ideal. Price and Gilpin provide a *synthesis* with their formulation of the "picturesque," which is on close examination related to chance and change in the material order of nature. (159)

The picturesque is neither "an inner movement of the mind" nor a "'thing-in-itself'" but "a process of ongoing relationships existing in a physical region" (160). Smithson admired Central Park because it acknowledges the play between human appropriations of the landscape and "the magnitude of geological change" (170). He writes that Olmstead's picturesque avoids both "the spiritualism of Thoreauian transcendentalism" and the "'modernist formalism'" of Lewis, Pound, Eliot, and Hulme, who fell under the sway of Wilhelm Worringer's *Abstraction and Empathy* (1908) (160). Smithson reads Worringer's emphasis on abstraction as a superficial attempt to sidestep the terror of nature and a gooey anthropomorphism at the same time. For the earthworks artist, "there is no escaping nature through abstract representation; abstraction brings one closer to the physical structures within nature itself" (162). Smithson rejects romantic transcendentalism and modernist formalism because they ignore the physical and temporal

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[420] Smithson, *The Collected Writings*, 161. Further references to this edition (hereafter abbreviated as *CWS*) will be cited in the text.

reality of the natural world. In that sense, he continued where Williams left off, defining an aesthetic that acknowledged the timescale of nature.

Smithson's dialectical approach to nature is apparent in two of his island earthworks, planned in 1969 and 1970. Neither island was realized before his accidental death in 1973. The latter of the two, *Floating Island to Travel Around Manhattan Island* (1970), was a tribute to Olmstead's Central Park.[421] Thirty-five years after Smithson sketched *Floating Island*, the Whitney Museum of American Art partnered with arts organization Minetta Brook to realize his vision. The island was built on a barge in Staten Island, out of hay bales, dirt from a New Jersey composting heap, rolls of sod, three boulders, a variety of shrubs, and ten living trees.[422] It made daily trips around Manhattan for one week in September 2005. The original sketch shows the island being towed against the backdrop of the New York skyline, or, as one reviewer described the picture, "a toy boat of a tug pulling a barge covered in rocks and trees, as if it were a shard of Central Park, a green and rocky iceberg."[423] Reviews of *Floating Island* emphasized its connection to the Central Park and Smithson's admiration for Olmstead. The island was described it as a miniature Central Park, and "an artificial model" of the park which is itself "an artificial model of nature."[424] *Floating Island* also offers an alternative to the "image of the lost paradise garden" that Smithson associated with romantic transcendentalism, where paradise has been replaced by the picturesque.

The other island illustrates Smithson's alternative to modernist formalism. In late 1969 he traveled to Vancouver, British Columbia to cover a small, rocky islet with shards of broken glass. *Island of Broken Glass* did not sit well with the public: "The plan to pour 100 tons of

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[421] Smithson's drawing, *Study for Floating Island to Travel Around Manhattan Island*, can be viewed at http://www.robertsmithson.com/drawings/floating_island_128.htm.

[422] Kennedy, "It's Not Easy Making Art That Floats."

[423] "Smithson's Floating Sculpture."

[424] Slessor, "Delight"; Kennedy, "It's Not Easy Making Art That Floats."

tinted glass onto the small Miami Islet, a rocky island about 50 yards long, could not be realized. A public controversy arose over the question as to whether wildlife might be injured by the broken glass" (*CWS*, 197). Smithson responded that "the *Island* is not meant to save anything or anybody, but to reveal things as they are."[425] In other words, he intended to mimic nature, not destroy it. If *Island of Broken Glass* was supposed to reveal things as they are, what was *Floating Island* meant to reveal? What accounts for the stark contrast between the picturesque garden and the pile of broken glass? Smithson's earthworks from the late 1960s and early 1970s drew on the literature and mythology of islands, but they also reflected contemporary changes in the science of islands. *Island of Broken Glass* reflected the new paradigm of island biogeography, which emphasized extinction more than creation.

Smithson was a voracious reader of science and natural history—more so than Bishop, and rivaling Huxley. His library ranged from the popular to the educational to the highly technical. He owned MacArthur and Wilson's *Theory of Island Biogeography* (1967), N. J. Berrill and Michael Berrill's *The Life of Sea Islands* (1969), and Philip J. Darlington's *Biogeography of the Southern End of the World* (1965). His books on geology included Frank Dawson Adams' *The Birth and Development of the Geological Sciences* (1938), James Dana's *The Geological Story Briefly Told* (1895), Thomas Clark and Colin Stearn's *Geological Evolution of North America* (1960), Don Easterbrook's *Principles of Geomorphology* (1969), Peter Farb's *Face of North America: The Natural History of a Continent* (1968), Marshall Kay and Edwin Colbert's *Stratigraphy and Life History* (1965), Charles Knight's *Life through the Ages* (1946), Kenneth Oakley and Helen Muir-Wood's *The Succession of Life through Geological Time*, and Jerome Wyckoff's *Geology* (1967). He owned books on mineralogy, crystallography, cartography, physics, engineering, and biology. He was reading about

[425] Untitled Notes, Smithson Papers (Roll 3835, Frame 1064), quoted in Smithson, *The Collected Writings*, 197.

continental drift in the late 1960s, and he was especially interested in the "whole history of how man views the earth."[426] His books on the mythology of islands included Seon and Robert Manley's *Islands: Their Lives, Legends, and Lore* (1970), Lewis Spence's *History of Atlantis* (1968), Willy Ley's *Another Look at Atlantis* (1969), James Mavor's *Voyage to Atlantis* (1969), L. Sprague De Camp's *Lost Continents: The Atlantis Theme in History, Science, and Literature* (1970), and James Churchward's *The Lost Continent of Mu* (1959).

While Smithson was in Vancouver between December 1969 and February 1970—trying to realize his *Island of Broken Glass*, among other things—he conducted a series of interviews with art historian and filmmaker Dennis Wheeler. At that point in his career, Smithson had achieved some notoriety for his sculptures and earthworks. He was on the verge of creating what would become his most famous earthwork, *Spiral Jetty* (1970); construction would begin just one month after he left Vancouver. In the interviews with Wheeler, Smithson discussed most of the work he had completed up until that point in terms of what he was trying to achieve in the *Island of Broken Glass*. During one of their conversations he also sketched a map entitled "A Surd View for an Afternoon," which serves as a convenient starting point for understanding his take on islands (see fig. 2).[427]

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[426] Ibid., 237. In an interview in late 1970 Smithson described his current reading: ". . . my reading just sort of stumbles into me. I have a book now on lost continents which interests me, with continental drift and the whole idea of what man's view of the Earth is. I read a book called *Mountain Gloom and Mountain Glory*, which is a history of how people have looked at the world from Biblical times right up to the nineteenth century, as the transformations, the impact of geology on ethics, and that sort of thing. Why valleys are good and mountains are evil and how that was reversed, and how people project their needs on so-called nature." Cooke and Kelly, *Robert Smithson: Spiral Jetty*, 162.

[427] Smithson derived his understanding of the "surd" in part from the work of Samuel Beckett. Hugh Kenner defines the surd in Beckett's work as "the irreducible element which no style, no clarity, no ceremony will dissolve or explain: the thing which makes itself felt, in Beckett's cosmos, as a prevailing and penetrating mystery, seeping through the walls of stage or book. This mystery, this irreducible, is generally of two sorts: (1) in the realm of existence, the implacable *'d'être là'*: as we find ourselves situated on earth ('There's no cure for that') . . . Or (2) in the domain of will, the arbitrary decision. . . . There is no looking into these sudden precipitations. In large, they make contact with the ambient terror and oppressiveness (what compels us to wait for Godot?). In small, they supply a repertory of comic effects." Kenner, *Samuel Beckett: A Critical Study*, 142–143.

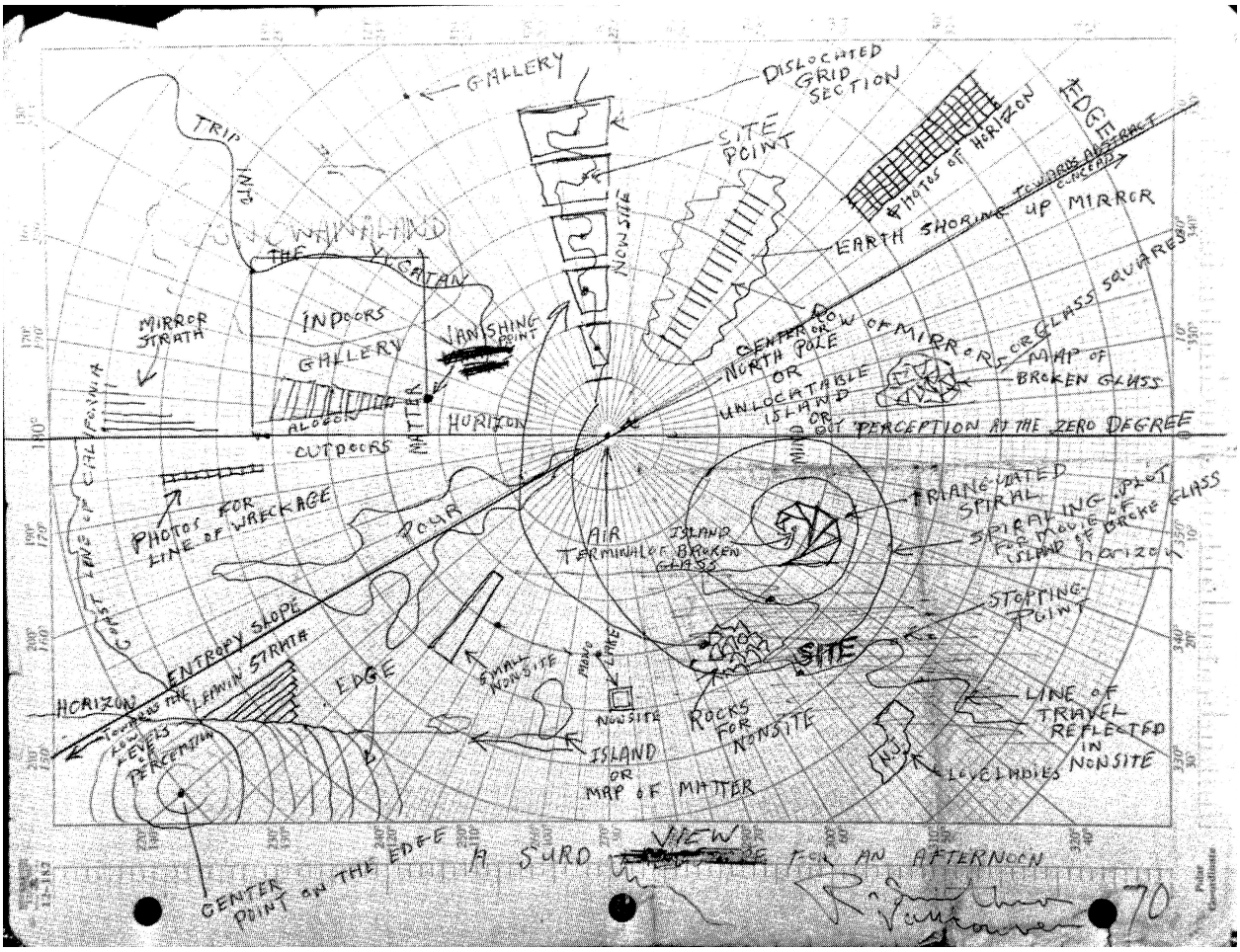

Figure 2. Smithson, "A Surd View for an Afternoon" (*CWS*, 198).

"A Surd View for an Afternoon" is a conceptual map. It plots Smithson's sculptures and earthworks in relation to a few structuring ideas. He labels its central point "CENTER OR NORTH POLE OR UNLOCATABLE ISLAND OR PERCEPTION AT THE ZERO DEGREE." This is the point where the horizon line (labeled "matter" on the left side and "mind" on the right), intersects with the diagonal "entropy slope," which travels 30 degrees below the horizon on the left, and 30 degrees above the horizon on the right. The lower left segment of the entropy

slope slips toward "low levels of perception" and the upper right segment rises toward "abstract concepts."

What is the un-locatable island at the center of Smithson's map? One clue can be found in "Incidents of Mirror-Travel in the Yucatan" (*Artforum*, Sept. 1969), his vaguely psychedelic travelogue patterned after John Lloyd Stephens' *Incidents of Travel in Yucatan* (1843). Here Smithson describes an island that "annihilates itself in the presence of the river, both in fact and mind": "Small bits of sediment dropped away from the edges of eyesight. Where is the island? The unknowable zero island." He goes on to describe the breakdown of perception: "Sight turned away from its own looking. Particles of matter slowly crumbled down the slope that held the mirrors. Tinges, stains, tints, and tones crumbled into the eyes" (*CWS*, 129). Smithson (or his hypothetical speaker) cannot locate the island because he has just lost the power of abstract spatial organization. The island exists at the midpoint of the entropy slope—in this case, at the moment when mind is on the verge of slipping down into matter.

Smithson's dual interest in imaginary and material geographies is apparent in "A Surd View for an Afternoon," which includes a faded sketch of the hypothetical continent of Gondwanaland in the upper left quadrant, and the scribbled coastline of California in the lower left. In 1969 he completed a series of projects based on sketches of hypothetical continents, including Gondwanaland, Lemuria, and Cathaysia, which were then turned into "earth-maps" or maps of matter.[428] Gondwanaland was at the center of the theory of continental drift, which was growing in acceptance but still subject to debate in the mid to late 1960s. Smithson gathered his

[428] Drawings of the hypothetical continents and photographs of the "earth maps" can be viewed on the Smithson website maintained by the James Cohan Gallery, New York. For *The Hypothethical Continent of Lemuria*, see http://www.robertsmithson.com/drawings/lemuria_280.htm, and for *Hypothetical Continent in Shells: Lemuria*, see http://www.robertsmithson.com/photoworks/hc-lemuria_300.htm. For *Hypothetical Continent of Gondwanaland-Ice Cap*, see http://www.robertsmithson.com/photoworks/hc-icecap_300.htm. For *Hypothetical Continent in Stone: Cathaysia*, see http://www.robertsmithson.com/photoworks/hc-cathaysia_300.htm.

information on Gondwanaland from Kay and Colbert's *Stratigraphy and Life History* (1965), in particular the chapter, "The Permanence or Drift of Continents": "The fact that the plants are remarkably similar in the latest Paleozoic and Mesozoic in these southern areas—Australia, southern India, south Africa, and southeastern South America—has led to the belief that they are relics of forests on parts of the great continent of Godwana."[429] The authors go on to dutifully explain that seeds could have reached the separate landmasses by wind or water. Although the existence of Gondwanaland would eventually be verified, at the time this book was written it was still very much a hypothetical continent.

The *Hypothetical Continent of Gondwanaland Ice-Cap* became part of Smithson's "Incidents of Mirror-Travel in the Yucatan." He calls it "an 'earth-map' made of white limestone" and announces that "a bit of the Carboniferous period is now installed near Uxmal" (121). The essay calls attention to the conceptual status of any history of the earth; presumably the land near Uxmal already contains the residue of other remote periods of geological history, without the form of a hypothetical continent laid over its surface. Smithson writes: "Gondwanaland is a kind of memory, yet it is not a memory, it is but an incognito land mass that has been *unthought* about and turned into a Map of Impasse. You cannot visit Gondwanaland, but you can visit a map of it" (122).

Smithson's interest in hypothetical continents extended to the scientifically invalidated. The hypothetical continent of Lemuria was "invented by certain Victorian geologists in order to account for the wide distribution of lemurs."[430] In the twentieth century Lemuria became, as Huxley put it, one of "those Lost Continents on which so many hypnotized subjects seem to have

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[429] Kay and Colbert, *Stratigraphy and Life History*, 458. Smithson refers to the book in "Incidents of Mirror-Travel in the Yucatan," which recounts the construction of the *Hypothetical Continent of Gondwanaland*: "On this same site, the Great Ice Cap of Gondwanaland was constructed according to a map outline on page 459 of Marshall Kay's and Edwin H. Colbert's *Stratigraphy and Life History*" (*CWS*, 121).

[430] Huxley, *Complete Essays*, 6:73.

spent so many, and such fascinating lives. . . . As a scientific hypothesis, this land-bridge spanning the Indian Ocean is now out of fashion. But as the one-time home of those vaguely superhuman beings who play a part in the mythology of various twentieth-century religions, Lemuria is still going strong."[431] One crack theory held that descendents of ancient Lemurians—of the human variety—were living in caves around Mount Shasta, in northern California. New revelations about continental drift and plate tectonics in the 1960s opened up the theoretical field to hitherto unknown and unimagined landmasses. Smithson's *Hypothetical Continent of Lemuria* (1969) is just as real, in a material sense, as his *Hypothetical Continent of Gondwanaland*. At the end of Smithson's account of the eighth mirror displacement in "Incidents of Mirror-Travel" he writes that outside of the "unknowable zero island"—where mind slips down the entropy slope toward lower levels of perception—there are "other islands of incommensurable dimension. For example, the Land of Mu, built on 'shaky ground' by Ignatius Donnelly in his book *Atlantis, the Antediluvian World*, 1882, based on an imaginative translation of Mayan script by Diego de Landa. The memory of what is not may be better than the amnesia of what is" (129, 130-31).

Smithson created his earth-maps of Gondwanaland and Lemuria in the spring of 1969. That summer he moved on to the most storied island in Western mythology. Atlantis was first mentioned in "Plato's account of Solon's account of the Egyptians' account of the matter," which may or may not have been hypothetical, and "upon this narrow and extremely shaky foundation modern Atlantis fans have erected the gorgeous superstructure of a kind of H. G. Wellsian world, in which all and more than all of our inventions and discoveries were anticipated."[432] Ever the realist, Huxley was interested in Atlantis and other "imaginary Islands

[431] Ibid.
[432] Ibid., 6:74.

of the Blest" for what they revealed about psychology: among other things, that people carry around with them wildly fictional geographies. Smithson's *Map of Broken Glass: Atlantis* is likewise concerned with the nature of imaginary landscapes.[433] Instead of rocks or shell, Smithson built the earth-map of Atlantis from pieces of clear broken glass. The smooth and reflective qualities of glass suggest a more basic physical structure than a large-scale land mass, and call to mind Smithson's long-term fascination with crystals. This is matter at the molecular level.

The sharpness of the *Map of Atlantis* became fully apparent when Smithson upped the ante with his proposal for *Island of Broken Glass*. He told Wheeler in that late 1969 interview that his "string of hypothetical islands . . . finally find their result in an actual island. The hypothetical islands all terminate in this *Island of Broken Glass*" (200). This final island project brings together continental drift, mythological islands, and island biogeography. MacArthur and Wilson's *Theory of Island Biogeography* is especially relevant to *Island of Broken Glass*. After wading through MacArthur and Wilson's careful exposition of their island experiments and various aspects of the theory—the relationship between the area of an island and its number of species, distance from land and rate of colonization, etc.—the upshot of the book is that "on very small islands the process of natural extinction is accelerated."[434] The *Island of Broken Glass* squares with this aspect of "things as they are" (*CWS*, 197).

Another detail that likely stood out to Smithson has to do McArthur and Wilson's methodology. Although the book's evidence comes from previous biogeographical studies of

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[433] For *Map of Clear Broken Glass (Atlantis)* and *Hypothetical Continent-Map of Broken Glass: Atlantis*, see http://www.robertsmithson.com/drawings/map_of_broken_glass_374.htm and http://www.robertsmithson.com/photoworks/hc_atlantis_300.htm.

[434] MacArthur and Wilson, *The Theory of Island Biogeography*, 181. It is worth noting that in the technical context of island biogeography "extinction" generally refers to the end of a local population, not necessarily the end of an entire species—though given organisms' tendency to evolve on islands, the extinction of a local population could very well imply the extinction of an entire species. The imaginative implications are what matter to my argument.

islands, Wilson and a graduate student named Dan Simberloff also began their own research in 1966, amid the tiny mangrove islands of southern Florida. "The idea was to pick a few of the smaller islands and census them completely, identifying every species of resident arthropod; then to empty each island of its animal life, as Rakata had been emptied by the eruption; finally, to monitor what happened next."[435] They "emptied" the islands with the help of National Exterminators of Miami. The results of the experiment came out several years after *The Theory of Island Biogeography*, but they seemed promising enough at the time of publication for MacArthur and Wilson to end the book with this statement of future prospects:

> Biogeography has long remained in a natural history phase, accumulating information about the distribution of species and higher taxa and the taxonomic composition of biotas. . . . But biogeography is also in a position to enter an equally interesting experimental and theoretical phase. There is no reason why the biotas of islands cannot be manipulated experimentally. There are many places in the world where islands are both very small and numerous: for example, the red mangrove islets of many tropical countries, the sand islets of the Caribbean, the Indian Ocean, the forested islets of the Canadian lakes, the lakes themselves, the hardwood "hammocks" of tropical grassland, the coniferous enclaves in tundra and on mountain tops. In these little places it is possible to remove elements of a biota or the entire biota, manually or by poisoning, or to add elements. Miniature "Krakataus" can be generated at will and in sufficient replication to yield statistically sound results.[436]

To be fair to the writers, they probably never imagined that a member of the general public might read their call for more research as an invitation to try this at home. Although Smithson was

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[435] Quammen, *The Song of the Dodo*, 428.

[436] MacArthur and Wilson, *The Theory of Island Biogeography*, 181. Krakatoa (or, in Indonesian, "Krakatau") is an island near Java and Sumatra which suffered a massive volcanic eruption in 1883.

never going to survey insect- and birdlife on Miami Islet following his addition of broken glass, *Island* was meant to enact the same kind of experiment on the hypothetical level. Smithson's response to the environmental concerns of the Vancouver public suggests that *Island of Broken Glass* was at least partly inspired by MacArthur and Wilson. He was downright flippant about fears of ecological destruction. In the middle of their second interview, Wheeler says, ". . . you were talking about the artist as a geologic agent before, about the element of danger involved in the glass island piece, about the intervention of people who were concerned with disturbing the ecology. . ." Smithson replies: "Yeah, well, in nature you can fall off cliffs, and you can drown in the water, and you can fall in a volcano. . . . I mean, the fact that somebody will swim out there and impale himself on that glass is not my fault" (*CWS*, 216). The three dangers he mentions are all specific to islands. The threat to animals or the ecosystem was beside the point, for Smithson. The *Island of Broken Glass* was about manipulating the way people interact with islands, by intervening in the way people imagine islands. In his interview with Paul Toner in 1970, Smithson said, "People always thought that nature is self-sufficient, and that it was going to continue. Now nature itself is threatened. The dinosaurs lived and died and ice ages have come and gone. It might just be another stage" (237). Instead of looking to nature as a separate sphere or a paradise garden, he insists on subjecting people to the dangers inherent in the earth's processes. In place of Atlantis, a pile of glass shards.

The *Spiral Jetty* (1970) grows out of the work Smithson started in *Map of Atlantis* and *Island of Broken Glass*. The relation between them is evident in "A Surd View for an Afternoon": in addition to the horizon and the entropy line, Smithson's conceptual map is structured by a spiral that coils between the un-locatable island at the center and the *Island of Broken Glass*. He referred to "elements of spirals . . . mental abstract spirals" in *Island*, and he

labels the spiral on the map "spiraling plot for a movie of island of broke[n] glass" (200, 198). The movie presumably had to be scrapped when the *Island* was called off, but he carried out the plan in his *Spiral Jetty* film (1970). The film contains a sequence in which the camera looks down on the jetty from a helicopter, rotating around it in the opposite direction as the spiral itself, and eventually zooms in as if to crash at the center of the spiral.[437] Smithson first envisioned *Spiral Jetty* as a spiraling jetty that terminates in an island. He even had it built that way—"a spiral with a bulb on the end of it, or an island on it"—but a week after it was completed he changed his mind, and had it rebuilt.[438]

What do islands and spirals have to do with each other? Smithson offered one answer when he explained that he "arrived at the scale of the Island" by thinking about crystals: "The scale of a raw crystal is abstracted to the point where you get a crystal lattice. And this crystal lattice is extended to the latitudes and longitudes of the world, so that you're drawing lines and grids over the world. And this is a certain kind of abstract consciousness which sets up a way of dealing with raw material and mental experience" (*CWS*, 197). Smithson was especially fascinated by a type of crystal formation called "screw dislocation"; this process of molecular deposition is facilitated by misalignments that allow other molecules to pile up in a spiral.[439] Jennifer Roberts discusses Smithson's interest in crystals in terms of the material accretion of history; in one of his favorite books on crystals, he underlined a sentence which likened crystal formation to the material passage of time. Roberts argues that crystal formation treats time as entropic; however, "the lay association of entropy with irregularity, abjection, or formlessness is not altogether accurate. For Smithson, in fact, the governing characteristic of entropic systems is

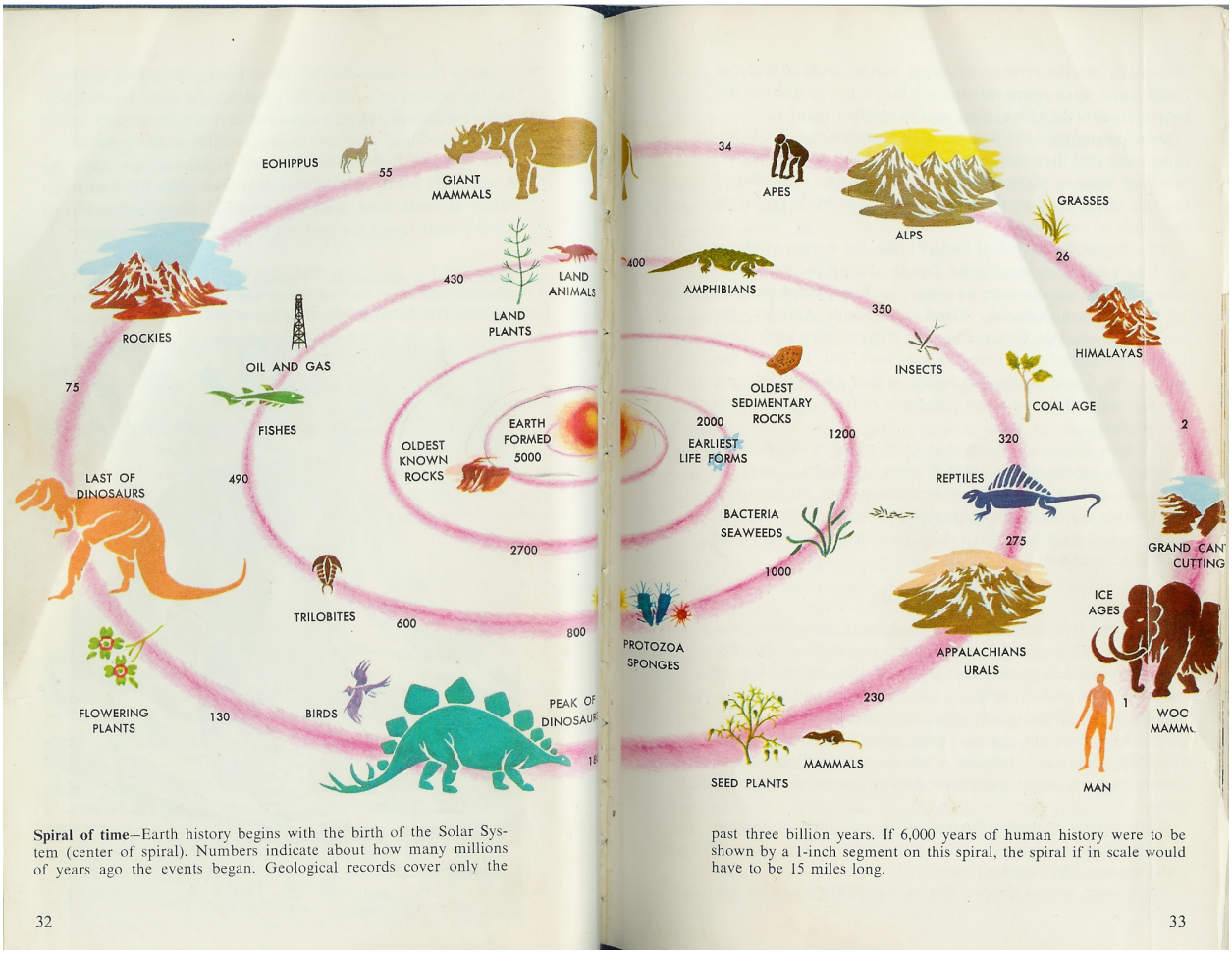
[437] Smithson, *Spiral Jetty*.
[438] Cooke and Kelly, *Robert Smithson: Spiral Jetty*, 192.
[439] Roberts, *Mirror-Travels: Robert Smithson and History*, 41.

their equilibrium, or, in other words, their absolute regularity."[440] The process of screw dislocation creates intricate structures through the accidental deposition of molecules, and entropy rearranges matter according to steady principles that end in equilibrium. In other words, entropy and crystal formation are not simply mirrors of each other; they each enact the material process of the other. At this minute, abstracted level, there is no way to differentiate between the building up and tearing down of matter. Smithson writes that the jetty "could be considered one layer within the spiraling crystal lattice, magnified trillions of times" (*CWS*, 147). At one point in the *Spiral Jetty* film, the camera lingers on a stack of books that includes Arthur Conan Doyle's *The Lost World* and Edwin Hubble's *The Realm of the Nebulae*. Islands and spirals, for Smithson, are abstract models of matter on the molecular and the galactic level.

Smithson's change to the shape of *Spiral Jetty* brought out the earthwork's relation to evolutionary history. He remarked that "the very idea of the descent of man, in a sense, could be conceived of as a spiraling in on origins" (227). The *Spiral Jetty* corresponds to an illustration that depicts the "Spiral of time" in Jerome Wyckoff's *Geology* (see fig. 3). The caption underneath the picture reads, "Earth history begins with the birth of the Solar System (center of spiral). Numbers indicate about how many millions of years ago the events began. Geological records cover only the past three billion years. If 6,000 years of human history were to be shown by a 1-inch segment on this spiral, the spiral if in scale would have to be 15 miles long."[441] The spiral in Smithson's *Spiral Jetty* was 1500 feet long, and approximately 15 feet wide at any given point (*CWS*, 143). In one important sense, then, the *Spiral Jetty* recreates the history of the earth on a more human scale (see fig. 4). Smithson takes the figure of man at the end of Wyckoff's

[440] Ibid., 44.
[441] Wyckoff, *Geology: Our Changing Earth Through The Ages*, 32–33.

"Spiral of time," turns him around, and has him walk back through a figurative map of evolutionary and geological history.



Spiral of time—Earth history begins with the birth of the Solar System (center of spiral). Numbers indicate about how many millions of years ago the events began. Geological records cover only the past three billion years. If 6,000 years of human history were to be shown by a 1-inch segment on this spiral, the spiral if in scale would have to be 15 miles long.

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Figure 3. "Spiral of time" from Jerome Wyckoff's *Geology* (32-33).

Figure 4. Smithson's *Spiral Jetty*, in Utah's Great Salt Lake (*CWS*, 143).

In staging this abstract return to origins, Smithson takes aim at romantic conceptions of nature. His essay on the Jetty revises Emerson's formulation of the "transparent eye-ball" in the first chapter of *Nature* (1849). For Emerson the transparent eye is a figure for total communion with the natural world, the kind of communion one can achieve on a solitary walk through the woods: "Standing on the bare ground,—my head bathed by the blithe air, and uplifted into infinite space,—all mean egotism vanishes. I become a transparent eye-ball; I am nothing; I see all; the currents of the Universal Being circulate through me; I am part or particle of God."[442] For Smithson the only way to achieve total communion with the natural world is through matter and material history. He writes, "Following the spiral steps we return to our origins, back to some pulpy protoplasm, a floating eye adrift in an antediluvian ocean" (*CWS*, 148). This return

[442] Emerson, *Essays and Lectures*, 10.

to origins also entails a material breakdown of the body. As Emerson undergoes his transcendent experience of "Universal Being" his body appears to be safeguarded. ("I feel that nothing can befall me in life,—no disgrace, no calamity, (leaving me my eyes,) which nature cannot repair.")[443] In contrast, Smithson's eyes are the first to go: "I closed my eyes, and the sun burned crimson through the lids. . . . My sight was saturated by the color of red algae circulating at the heart of the lake, pumping into ruby currents" (148). As he dramatizes a bad case of sunstroke, his body succumbs to its own materiality, becoming his ultimate connection to the far recesses of geological time—"I was slipping out of myself again, dissolving into a unicellular beginning, trying to locate the nucleus at the end of the spiral" (149). Smithson's formulation of Universal Being is not transcendent spirit but "essential matter . . . masses of cells consisting largely of water, proteins, lipoids, carbohydrates, and inorganic salts" (ibid). Where Huxley affirmed the possibility of psychological transcendence in order to mitigate the terror of humanity's isolation in the universe, Smithson holds fast to the terror. The only way to become one with the universe, from his perspective, is to die.

5. Earth Island

The islands that Smithson, Bishop, and Huxley imagined at midcentury were all informed by an awareness of the earth as a far-flung satellite growing increasingly cramped. Huxley was especially concerned about the fact that "the Earth is an island" (*CWS*, 239). His late essay, "The Politics of Ecology" (1963), declares that "if our politicians were realists, they would think rather less about missiles and the problem of landing a couple of astronauts on the moon, rather more about hunger and moral squalor and the problem of enabling three billion men, women, and children, who will soon be six billions, to lead a tolerably human existence without, in the

[443] Ibid.

process, ruining and befouling their planetary environment."[444] Smithson was blasé regarding human existence and the state of the planetary environment. He flaunts his misanthropy at the end of "The Spiral Jetty," writing, "these fragments of a timeless geology laugh without mirth at the time-filled hopes of ecology" (152). His concern was to expose what he called a "rinky-dink idea of nature," a "sentimental, very trite romanticism of what the balance of nature is" (230). The kind of balance embodied by his earthworks is akin to MacArthur and Wilson's biogeographical equilibrium, in that it offers little comfort. For anybody who kept up with biogeography in the 1960s, islands could no longer be seen as engines of evolutionary progress, or rather, the evolutionary change spurred on by islands could no longer be seen as uniformly progressive.

Bishop's stance toward the new scientific cosmology most resembles that of Eiseley, who was born four years before her. Writing from the vantage of the late 1960s, he acknowledged the ambivalence of islands. They speed up evolution in the absence of fierce competition; they are "apt by their seclusion to offer doorways to the unexpected, rents in the living web, opportunities presented to stragglers who might be carrying concealed genetic novelty in their bodies—novelty that might have remained suppressed in a more drastic competitive environment."[445] In this way islands produce miniature deer, giant crabs, and hominids capable of abstract reason. Although the ancestors of homo sapiens did not evolve on a physical island, Eiseley asserts that human evolution was guarded by the invisible island of the imagination, that "expanding universe which man . . . unconsciously created out of airy nothing."[446] Like other island creatures, humans are "far from being the ripe products of the war of nature" and "represent, instead, the 'inefficient,

[444] Huxley, *The Politics of Ecology*, 6.
[445] Eiseley, *The Unexpected Universe*, 159.
[446] Ibid., 166.

the unafraid and the obsolescent.'"[447] This is the hero of "Crusoe in England," dejected but sincere. Bishop walks us through the invisible island at a moment of transition, after the new scientific cosmology had sunk in and before it had revealed any particular niche for human beings.

This dissertation has argued for the importance of reading modernist and late modernist renderings of nature in conversation with the scientific cosmology that emerged between the 1920s and the 1960s. During these decades, Williams, Agee, Rexroth, Niedecker, Bishop, Huxley, and Smithson framed their conceptions of modernity in terms of their growing understanding of geological and evolutionary history. Just before World War I, scientists expanded the planet's timescale to more than a billion years, and it grew steadily larger in the 1920s and 1930s. In the 1950s they arrived at a conclusion that still stands, that the earth is about 4.5 billion years old.[448] In the meantime, popular surveys of modern science filled in those unfathomable billions of years with a story about the formation of stars and planets in a far corner of an expanding universe, and the whirling of one of those planets a certain distance from the sun, the cooling of its molten rock, the beginnings of life in its swampy seas, the evolution and extinction of multifarious creatures, and the recent appearance of a mammalian species whose highly developed brain allowed it to spread across the planet. The modernist writers I have discussed told this story again and again, from the "jellyfish to Uncle Frederick," from "shells and animalcules / generally and so to man" (*JAR*, 322; *P*, 5). They were captivated by events in the earth's history—"the seas that came and vanished, the great mountain ranges that rose slowly and then more slowly dissolved into sand and mud," and the "former birds who

[447] Ibid., 165–166.
[448] Richet, *A Natural History of Time*, 288, 320.

rested / on ice-floes" and "nested / by the streams of lava."[449] They were fascinated by the prospect of equally dramatic changes in the future:

> Species now motile and sanguine
>
> Shall see the stars in new clusters
>
> The beaches changed
>
> The mountains shifted
>
> (Rexroth, "A Lesson in Geography," *CP*, 189)

The story of the earth's history changed the way they thought about human history and their immediate physical environments; it influenced their ethics, their aesthetics, and their visions of humanity's future. The similarities in their attitudes toward nature reflect their common source in the intellectual and cultural currents of their time. Williams, Agee, Rexroth, Niedecker, Huxley, Bishop, and Smithson were not a school or a "group" so much as a cross-section of indivduals who found the implications of modern science stimulating rather than impoverishing. Their ways of thinking about nature were distinct from—and in most cases, distinctly opposed to—romanticism, transcendentalism, and other forms of aesthetic or philosophical idealism. Likewise, their interests in the natural world were not primarily motivated by the politics of conservationism, which emerged as the prevailing discourse about nature beginning in the 1960s. My examination of modernist writers' interests in the history of the earth fills a void in literary and cultural histories of modernism, and reconnects their ideas about nature to the specific historical, cultural, and discursive contexts from whence they came—in this case, the spread of modern scientific cosmology in the middle third of the twentieth century.

A critical practice that situates writing about nature in relation to its historical and cultural contexts might also offer a fuller picture of the development of modern

[449] "Grand Canyon," Niedecker Papers, 2; Bishop, *Edgar Allan Poe & The Juke Box*, 53.

environmentalism. Rachel Carson, whose *Silent Spring* (1962) is commonly understood to have innaugerated the environmental movement, was born in the same decade as Bishop, Eiseley, Niedecker, Rexroth, and Agee. Like her contemporaries, Carson began writing in earnest in the late 1930s. Her first major success, *The Sea Around Us* (1950), is indebted to the general-interest scientific surveys that proliferated between the late 1920s and the mid 1930s, books like Jeans's *The Universe Around Us* (1929). Whereas a contemporary bestseller about the world's oceans might begin with the birth of a single dolphin, *The Sea Around Us* begins with the birth of the planet: "The new earth, freshly torn from its parent sun, was a ball of whirling gasses, intensely hot, rushing through the black spaces of the universe on a path and at a speed controlled by immense forces."[450] The story of the earth's genesis captivated readers and writers of this era because it reached beyond the horizon of epistemological certainty. Jeans wrote in 1929,

> it is too much to hope that the incomplete series of pieces we have already found will disclose the whole picture, but we may at least collect them together, arrange them in some sort of methodical order, fit together pieces which are obviously contiguous, and perhaps hazard a guess as to what the finished picture will prove to be when all its pieces have been found and finally fitted together.[451]

Writing twenty years later, Carson also disclaimed the partial nature of her history: because no one was alive to observe the formation of the oceans, "it must be a story pieced together from many sources and containing whole chapters the details of which we can only imagine."[452] In fact, the absence of human observers was the most important part of the story. The modernists in this study were captivated by the earth's history because it spoke to fundamental questions about

[450] Carson, *The Sea Around Us*, 4–5.
[451] Jeans, *The Universe Around Us*, 13.
[452] Carson, *The Sea Around Us*, 3.

who we are and what we're doing, about how we should measure human achievements and understand our relation to other living things. They responded to the history of the earth with an attitude that has been eclipsed by environmentalist concerns about our future on this planet: a sense of wonder and curiosity—even dismay—that we're here in the first place.

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VITA

Megan Miller was born in Coupeville, Washington. She earned a Bachelor of Arts in English at the University of Chicago and a Master of Arts in English at the University of Washington. In 2012 she earned a Doctor of Philosophy in English at the University of Washington.