

NATURE, KNOWLEDGE, JUSTICE: THE EPISTEMOLOGY OF LITERARY FORM
IN HURSTON, ORTIZ, AND NABHAN

by

JANET ELIZABETH FISKIO

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This dissertation has been approved and accepted by:



Louise Westling, Chair of the Examining Committee

August 2, 2009

Date

Committee in Charge: Louise Westling, Chair
Alan Dickman
Paul Peppis
Scott Pratt
William Rossi

Accepted by:



Dean of the Graduate School

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Title: NATURE, KNOWLEDGE, JUSTICE: THE EPISTEMOLOGY OF LITERARY
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Approved: _____

LOUISE WESTLING

My dissertation argues for the epistemological value of formal innovation in literary texts. Through a close reading of works by Zora Neale Hurston, Simon Ortiz, and Gary Paul Nabhan, I seek to elucidate the particular capacities of literature for enriching our understanding of nature. Three themes link these authors: the text as dialogical, the hermeneutic of the community, and the decentering of the authorial voice. Each of these authors intervenes in dominant discourses--such as ethnography, colonialism, and Western science--through the construction of multivocal texts. Hurston's vernacular ethnography, Ortiz's poems and stories, and Nabhan's narrative ethnobotanical texts destabilize conventional forms and assumptions to open up new possibilities for thinking about and relating to nature.

Closely tied to the questions of nature and knowledge is the issue of justice. These texts offer a genealogy for environmental justice literature through the role of the

community in the formation of knowledge about nature. Drawing on Jason Corburn's concept of "street science," my dissertation argues for the value of literature in constituting and expressing the communal epistemology of environmental justice. This capacity is both formal and thematic: it is enacted through dialogical forms, free indirect style, the blurring of boundaries between oral and written literatures, and the destabilization of the scientific texts. It is thematized through reflection on the role of the ethnographer, the epistemology of labor, and the value of dissonance and dissent.

In the context of the emerging field of environmental studies, this study articulates the value of the humanities, not as merely an ornamental presentation of knowledge formed through empirical study, but as engaged in the interpretation of meanings, ethics, and values that are essential to understanding the natural world. It therefore contributes to the fields of ecocriticism and environmental studies by bridging "the two cultures" of literature and science, taking each on its own terms and revealing the value of the epistemological and expressive capacities of literature for interdisciplinary dialogue.

This dissertation includes previously published material.

CURRICULUM VITAE

NAME OF AUTHOR: Janet Elizabeth Fiskio

GRADUATE AND UNDERGRADUATE SCHOOLS ATTENDED:

University of Oregon. Eugene, Oregon
Earlham School of Religion. Richmond, Indiana
Earlham College. Richmond, Indiana

DEGREES AWARDED:

Doctor of Philosophy, 2009, University of Oregon
Master of Arts, Environmental Studies, 2003, University of Oregon
Master of Divinity, 1996, Earlham School of Religion
Bachelor of Arts, Religion, 1992, Earlham College

AREAS OF SPECIAL INTEREST:

Ecocriticism
Environmental Justice
American Literature

PROFESSIONAL EXPERIENCE:

Graduate Teaching Fellow, University of Oregon, 2000-2009

GRANTS, AWARDS AND HONORS:

CoDaC/CSWS Graduate Summer Research Award, University of Oregon, 2008
John and Naomi Luuvas Graduate Fellowship, University of Oregon, 2008
Oregon Humanities Center Graduate Fellowship, University of Oregon, 2008

PUBLICATIONS:

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For my grandmothers

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CHAPTER I
INTRODUCTION: THE ENVIRONMENTAL HUMANITIES
IN THE NEW MILLENIUM

In his well-known series of lectures collected in *The Two Cultures*, C. P. Snow both identifies a fundamental tension between the disciplines of literature and science and sets the negative tone for the ensuing negotiations of this relationship. While expressing concern at this rupture in the intellectual life of Western society, Snow's disparaging characterization of "literary intellectuals" as "Luddites" only serves to exacerbate the conflict, as the ensuing debate with literary scholar F.R. Leavis demonstrates.¹ Subsequent returns to this question have been similarly combative, with practitioners in the natural sciences facing off with those in cultural theory, taking what Kate Soper characterizes as "nature-endorsing" and "nature-sceptical" positions (4). The most virulent of these eruptions was perhaps during "science wars" of the 1980s and 90s with the "Sokal affair," in which physicist Alan Sokal knowingly submitted a false paper to the critical theory journal *Social Text* in order to evidence the "apparent decline in the standards of intellectual rigor in certain precincts of the American academic humanities" ("A Physician Experiments" 62).² During this same period, Donna Haraway took fellow cultural and feminist theorists to task, arguing that their critique of science had become an excuse for intellectual laziness:

We unmasked the doctrines of objectivity because they threatened our budding sense of collective historical subjectivity and agency and our 'embodied' accounts of truth, and we ended up with one more excuse for not learning any post-Newtonian physics and one more reason to drop the old feminist self-help practices of repairing our own cars. They're just texts anyway, so let the boys have them back. (*Simians* 186)

The contentiousness of this discussion points to the significance of what is at stake, which are basic questions of what we can know about the world and how we know it. Further, these epistemological questions are linked to the subsequent political and ethical questions of who has the authority to make claims and what should be done with that knowledge.

The question of the two cultures confronts the emerging field of environmental studies, which brings together the natural sciences and the humanities as well as the social sciences, law and policy, and arts and architecture. While the move toward interdisciplinary work is encouraging, environmental studies faces the problem that, since the mid-twentieth century when Snow first identified the rupture between literature and science, the divisions within as well as between disciplines have grown as research has become increasingly specialized (Collini xlv, lv-lvi). Environmental studies are further complicated by the environmental crisis of the present moment. The rhetoric of environmental crisis has framed discussions of nature in literature since at least the Romantic poets and the American Transcendentalists. But this crisis, as well as its rhetoric, has intensified under the evidence of climate change and models that predict

catastrophic consequences resulting from anthropogenic activity, including shifting global weather patterns and rising sea levels. These events will likely affect underdeveloped nations and marginalized communities most severely, making climate change an issue not only of ecology but of environmental justice. The discipline of environmental studies seeks to train students who are capable of responding to this crisis.

Within the context of the two cultures debate and the environmental crisis that confronts the twenty-first century, scholars in the humanities have struggled to articulate the contributions of their disciplines to environmental studies. While interdisciplinary inquiry is held out as a goal for the discipline, the meaning of this term, and how is it to be enacted, is much less clear. This difficulty in naming the value of the humanities derives from the way the discipline of environmental studies and the work of interdisciplinarity has been conceived. John Foster argues that the concept of interdisciplinarity in environmental studies privileges the positivistic assumptions of the natural sciences. These assumptions lead to the environment being framed as “a class of problems specifiable in physically reductionist terms, tractable in principle to scientific, managerial and economic methods of control, and to be addressed through more or less existing power structures and relationships” (360). Foster’s argument centers on the need to recognize the contributions of the humanities to environmental studies, a move that is rendered nearly impossible by the definition of the environment as a set of empirical or technological problems to be solved (361). When environmental questions are framed as problems that require factual information and technological solutions, the humanities are not likely to figure in the process except as afterthoughts. This model of environmental

studies “assumes that the world in which we encounter environmental problems is fundamentally the world accessible to natural science” (Foster 363). In this worldview, interdisciplinarity means that the various disciplines are tools in a toolbox used to solve problems defined by the natural sciences. The intensity of current environmental crises, both ecological and social, energizes this focus on practical problem solving in empirical terms and with concrete technological and economic solutions within existing institutional economic and political frameworks. In this context, the humanities have had a difficult time finding a place because, as Foster notes, they are not being taken seriously on their own terms, since the terms of the discussion are set by the criteria of the empirical disciplines (351).

Foster makes the important distinction that while problems of cause and effect may be solved within the framework of the natural sciences, “environmental problems subsist in the ‘lifeworld’--the human world of value and significance” (363). This clarification is crucial for articulating the contributions of the humanities, which deal precisely in the negotiation, historicization, and complication of questions of value, meaning, and interpretation. This is the distinction between what Ted Toadvine has termed the “empirical” versus the “hermeneutical” disciplines--a terminology that is useful in the contemporary moment, when many disciplines, such as Geography and Environmental Studies, do not map onto the older disciplinary categories of arts and sciences (“Beyond Problem-Solving”). Foster’s final argument is that the humanities must be involved in framing the problems that are identified (364).

This critique can be taken one step further: if the methods of the humanities are taken seriously, the field of environmental studies could be better conceived as posing questions (rather than “solving problems”) and as engaging with questions of nature (rather than of “environment,” a word that already implies a bias toward the positivistic world view). I use the term “nature” in the broad sense that John Dewey offers: as that which falls within the realm of experience, as opposed to the supernatural or transcendent (23-25).³ Questions of nature, Donna Haraway notes in her introduction to *Primate Visions*, are not merely about “facts” or responses to problems (3-4). Instead, she writes that “love, power, and science [are] intertwined in the constructions of nature” (*Primate Visions*1). Interpretations of nature, like the interpretation of texts like the Bible, are fraught with emotional, ideological, institutional, and personal commitments. Framing the field of environmental studies as simply an empirical discipline represses awareness of the power of the concept of nature in our lives. The hermeneutical methods of the humanities are particularly helpful in revealing the multiple meanings of the term “nature” and the impact that ideas of nature have on actions, choices, and beliefs. In this context, the practices of reading and interpretation are acts of power with ethical consequences.

The field of ecocriticism--the study of literature and environment--has also struggled with questions of interdisciplinarity and the role of literature in environmental studies. In her introduction to the early collection *The Ecocriticism Reader* (1996), for example, Cheryll Glotfelty frames the importance of ecocriticism within the context of the environmental crisis, offering a catalogue of events as a reason for the necessity of

environmental literary studies (xvi). In the context of this crisis, Glotfelty notes, literature cannot continue with business as usual because “[i]f we’re not part of the solution, we’re part of the problem” (xxi). In this statement, Glotfelty acquiesces to the causal framework and problem-solving mindset that has dominated interdisciplinary work (though she offers more nuanced approaches later in the essay). Since the publication of *The Ecocriticism Reader* more than a decade ago, a number of scholars have contributed works seeking to define ecocriticism, especially its relationship to the natural sciences and the environmental crisis. Each of these approaches has something to offer, though none fully articulates a persuasive argument for what the humanities have to contribute to interdisciplinary work.

The positivist ecocritical position privileges Western science as a basis for understanding the nonhuman world. Glen Love, for example, argues for ecocriticism to be consonant with the empirical methodology and conclusions of the life sciences (6). For Love, ideas must be tested against physical reality through the methods of the sciences: “the biological sciences [are] not just another social construction. Rather, they are the necessary basis for a joining of literature with what has proven itself to be our best human means for discovering how the world works” (8). The biological sciences--their assumptions and their conclusions--thus form the basis for interdisciplinary work. Further, the impetus for this joining of literature and science is the environmental crisis that faces the world in the early 21st century. Love affirms “biocultural” theory as the way to bridge the study of literature with environmental concerns. While Love's work models a serious engagement with the sciences that is essential for ecocriticism, it is

problematic that, in this approach, literature's worth is measured by its conformity to certain scientific theories, which privileges science as the primary means of knowing the nonhuman world. Love's *Practical Ecocriticism* fails to articulate the particular capacities and contributions of literature (and the humanities more generally) to questions of nature.

Lawrence Buell and "social" ecocritics propose environmentalist positions. In this framework, the value of literature lies in its ability to diagnose the "pathologies" of Western civilization and to suggest "alternatives" that are more sustainable (Buell 2). In *The Environmental Imagination*, for example, Buell argues that literature can make us aware of our obligations to the nonhuman world; literature thus serves a pedagogical function. His central argument about representation focuses on accountability to world outside the text (113). For Buell, an environmental text is one that acknowledges the intrinsic value of the nonhuman world and holds humans responsible for their actions, as well as representing the richness of the nonhuman world through a density of representation. In this framework, ecocriticism is fundamentally an activist pursuit, and ecocentrism is the ethical ideal to be cultivated through environmental literature.

Following this initial ecocentric focus, "social" ecocritics have argued for the importance of integrating human concerns into the agenda of ecocriticism, focusing in particular on the crucial issues of environmental justice and urban ecology, extending more recently to questions of the social construction of dis/ability and sexuality.¹⁴ Although this movement has been seen as a critique of wilderness-focused ecocriticism,

it actually extends the same mode of inquiry. Ecocriticism remains a response to environmental crisis, but now includes the concerns of women, people of color, and urban communities. Many environmental justice ecocritics focus in particular on literature's pedagogical and polemical value, that is, its capacity to educate and persuade. According the editors, *The Environmental Justice Reader* "expands the field of environmental justice studies by offering new case studies, including cultural analysis of environmental justice arts, and by providing pedagogical essays that encourage teachers to incorporate these issues and texts into their classrooms" (7). The problem with this argument for the value of environmental justice literature is that it also frames the humanities as responding to problems developed by other disciplines--though in this case the social sciences seem to be the model, with the methodology of case studies and cultural analysis. It is unclear how "more case studies" are distinctively literary contributions. What is missing is the independent value of literature to frame questions about nature and to participate in the epistemological as well as the activist work of environmental justice communities.

I will argue that environmental justice literature and ecocriticism do contribute to environmental questions in a distinctive way, by identifying how problems are framed within situations of social, political, and economic inequality. This is a crucial aspect of how the humanities can help to redefine the questions asked and therefore how problems are posed and addressed. Through its witness to these injustices, environmental justice literature argues for a reframing of environmental problems to include the knowledge, values, and concerns of politically marginalized communities. The value of literature in

reframing questions and expressing values is not merely one of communicating complex ideas in an accessible format. These processes of framing, expression, and epistemology are, instead, structured by the form of literary texts. As Wolfgang Iser argues in his theory of reader-response criticism, literary texts contain gaps and silences that engage the reader in acts of interpretation and lead the reader to critique current societal structures and imagining alternate possibilities (Goldstein).

In her recent work, *Sense of Place, Sense of Planet*, Ursula Heise describes another ecocritical orientation, which she terms "immersive" (29). Heise critiques the valorization of the local and the embodied in environmental literature and ecocriticism. She describes the way that the rhetoric of "sense of place" has dominated ecocriticism from its inception, reinvigorating the imagination of the pastoral for environmentalist groups, writers, and ecocritics alike (28-49). Linked to this new pastoral mode is what Heise calls a "land erotic," a merging of body and world that seeks to overcome subject-object dualism, drawing on phenomenological formulations for its theoretical paradigm (30-31). Heise sees the formulations of place, land erotics, and situated knowledges as detrimental and even reactionary (as in the "blood and soil" rhetoric of National Socialism) in the face of the challenges and opportunities of globalization, transnationalism, and cosmopolitanism (see Heise, Chapter I). Heise critiques the romanticization of the local and the "ethic of proximity," describing the epistemological practice of this "immersive" branch of ecocriticism as "portrayed as arising out of sensory perception and physical immersion, the bodily experience and manipulation of nature, rather than out of more abstract or mediated kinds of knowledge acquisition" (30).

Heise does not link immersive aesthetics to the question of texts, but it is here that the paradoxes of this form of ecocriticism intersect with the question of what the humanities might offer environmental studies and interdisciplinary collaborations between literature and science. In immersive ecocriticism, texts are portrayed as one of these alienating mediators between the human and the lifeworld.

The loss of primordial unity with the nonhuman world is a persistent theme in environmental texts that glorify the wilderness ideal, with reflection and writing frequently characterized as alienating forces. Immersion in nature is portrayed as a return to this preliterate and unalienated state and as an antidote to the artificiality of civilization. The shift from oral to written culture is often identified as one of the ruptures in human kinship with the natural world; in *The Spell of the Sensuous*, for example, David Abram identifies the gradual turn from immersion in an animate world to immersion in the text as the origin of abstract thought and human separation from nature. Similarly, many of the classics of the ecocritical canon, such as Edward Abbey and Terry Tempest Williams, figure the wordless immersion of the human body in nature as an “epiphanic experience” that provides a relationship to nature like no other (Heise 29). Within this conceptual system, writing is at best a record of authentic experience of being one with nature, but the act of writing is an interruption of this unity.

This theory of writing as alienation is based on nostalgia for an originary, unmediated oneness with nature, an ontology Derrida has critiqued as “the metaphysics of presence” (*Of Grammatology* 49) that privileges oral communication over writing, presence over text, and ultimately, spirit over body (*Speech* 4). Immersion and unity with

the nonhuman world assumes, first, that there can be a full self-presence of meaning to intuition. This is figured in the Western tradition by the spoken word, which has a privileged position in regards to truth and logos when it is uncontaminated by the material world, including writing, the body, and the other (*Speech* 16). The rejection of writing and turn to unitive immersion further assumes that there can be an escape from the mediation of language through a direct corporeal experience of nature. In this way the doctrine of unalienated immersion in nature paradoxically rejects the materiality of existence, seeking a transparent experience of the presence of intuition to nature without the contamination of language.⁵

Of these ecocritical theories, the positivist, environmentalist, and immersive fail to consider the positive contributions of literature to questions of nature. The critiques of these positions (environmental justice and Heise's ecocosmopolitanism) offer some resources for thinking through the contributions of the humanities to environmental questions, on which my work builds. The goal of my dissertation is to articulate the particular contribution of the humanities to environmental studies, specifically, by exploring the epistemological value of formal innovation in twentieth- and twenty-first century American authors who cross the disciplines of literature, ethnography, environmental justice, and biology. My goal is to take literature on its own terms: to examine the way that literary techniques offer not only ways of expressing but of forming knowledge about nature that is distinct from the capacities of Western science and the ontology of scientific realism.

The model for the use of literature as an experimental form in American literature is Henry David Thoreau. As evidenced by Buell's grand work, *The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture*, it is difficult to overestimate Thoreau's continued influence in American literature, particularly in the genre of "nature writing" and the discipline of ecocriticism. Both in spite of and because of this influence, I turn to Thoreau as a model for the epistemological value of literary innovation as well as the crossing of the two cultures of literature and science. These two cultures were not so sundered in Thoreau's time, and he actively resisted their separation in his own work. This is particularly evident in his later essays.

The epistemology of Thoreau revealed in the late natural history essays and the 1850s Journal is distinct from the practices and ideology of positivistic science of the time through its resistance to reductionism and objectification (Tauber 108-09; Rossi, *Wild Fruits* xix). Thoreau created a location for his work that was locally embedded and expressed his knowledge through literary nonfiction rather than the language of objective science (Tauber 105; Berger 67, 80-81). In the context of the emerging split between science and literature in the nineteenth century, the late natural history essays reveal the dynamic relationship between Thoreau's philosophies of science and expression (Berger 80-81).

In his work *Henry David Thoreau and the Moral Agency of Knowing*, Alfred Tauber argues that, following his belief that humans are a part of nature, Thoreau is proto-phenomenological in his response to the "post-Cartesian predicament," a prominent

philosophical problem during Thoreau's time that influenced the epistemology and methodological practices of scientific positivism (4). Within the Cartesian conceptual framework, the knowing subject (the human mind) is separated from the world it seeks to know (4). According to Tauber, Thoreau recognizes and critiques the split between subject and object demanded by positivistic science because he sees the potential for objectivity to fragment his experience of nature (141-42). For Thoreau, scientific objectivity is inadequate as a way of knowing. Tauber notes that "[i]n our post-positivist era, we now appreciate that the radical separation of the subject from the object of examination is a false conceit [. . .] But Thoreau lived in a period that witnessed the rapid rise of positivism, when human knowing was thought to be totally transparent on its object" (20). In response, Tauber argues, Thoreau fashions himself as a "passionate observer" who is connected to the world he seeks to know (20). These passionate observations are communicated through his writing, particularly in the late natural history essays, in which Thoreau integrates scientific, aesthetic, and spiritual experiences of nature (146, 153).

Thoreau's Journal from this same period reveals a "reciprocal deepening of perception and expression" (Rossi, "The Journal" 252). In the early 1850s Thoreau developed a routine that intertwined the practices of observation and writing through a schedule of writing during the mornings and walking in the afternoons (Rossi, "Genesis" 140-42). The practices of perception and writing took form in Thoreau's work in the 1850s, when he revised and expanded *Walden* (Sattelmeyer 429), composed the late natural history essays, and began his final (unfinished) work, *The Dispersion of Seeds*

(Berger 48), as well as writing daily in the Journal (Rossi, "Genesis" 140-42). Robert Sattelmeyer argues that Thoreau had earlier begun to develop a theory and method of composition, during which he made room for later reflection on moments of intuitive insight through the inclusion of blank spaces in the Journal (Rossi, "Genesis" 140). William Rossi suggests that experience and expression became dynamically related in Thoreau's daily life, a process in which the act of writing was not a distortion but rather a completion of experience for Thoreau ("Genesis" 141-42). Thoreau's mystical experiences can be understood as contiguous with writing and reflection: "it does not follow for Thoreau [. . .] that because inexpressibility is the necessary result of being overwhelming absorbed in the moment that the experience is thus wholly inexpressible, or that the aesthetic order by which it is expressed is alien to it" ("Genesis" 147).

Thoreau's late natural history essays are drawn from his deepening observations during this time of mutual resonance between the practices of empirical observation and writing (Berger 36). While these essays draw on and depict the practices of natural history, Tauber's insight into the anti-reductionist program of Thoreau's scientific method is crucial to understanding the essays and Thoreau's epistemology in this later period (226). In these essays Thoreau rejects the separation of observer from object, portraying himself as embedded in the landscape that was his laboratory. This practice of embedded observation is based in Thoreau's philosophy of science and results in the discovery that leads to his theory of forest succession and the dispersion of seeds. Thoreau's experience of nature is cultivated, not by abandoning texts, but precisely through the practice of writing, the mediation of texts.

"The Succession of Forest Trees," delivered at the Middlesex Cattle Show in 1860 (Berger 19n13), is typically considered to be Thoreau's most straightforwardly scientific work (Rossi, *Wild Fruits*, xix), later expanded into the study of *The Dispersion of Seeds* (Berger 48). The rhetorical presentation of the subject is infused with the rhetoric of scientific demonstration--"asserts," "burden of proof," (95) "examined," "result" (99)--and explicitly affirms the necessity of empirical proof (105). In his efforts to discern the process of succession, Thoreau employs scientific practices of repeated observation, objective measurement, and data collection (99, 102). However, these observations both literally and figuratively lead Thoreau into the forest and encounters with the squirrels who are the overlooked facilitators of forest succession:

On the 24th of September, in 1857, as I was paddling down the Assabet, in this town, I saw a red squirrel run along the bank under some herbage, with something large in its mouth. It stopped near the foot of a hemlock [. . .] and, hastily pawing a hole with its fore feet, dropped its booty into it, covered it up, and retreated [. . .] Digging there, I found two green pignuts joined together, with the thick husks on, buried about an inch and a half under the reddish soil of decayed hemlock leaves,--just the right depth to plant it. (98)

In this passage Thoreau deviates from the program of objective science through the series of literary gestures. Thoreau explicitly locates himself within the temporal and geographic situation, and depicts himself imitating the squirrel: following its trail, digging at the foot of a hemlock tree, and later tracing the habits and habitats of squirrels

to investigate the process of seed dispersal by these nonhuman “agents” (98-105). While he does not claim to see from a squirrel’s perspective, his imitation of the squirrel’s movements and activity leads to an understanding of their role in the forest. His embodied and embedded practices thus generate his scientific theory, as is even clearer in the *Journal*, where the realization that “[t]his, then, is the way forests are planted” immediately follows the description of this encounter (10.40 (1906)).

Further, through the practice of field observation, Thoreau finds himself to be the object of study. His account mixes the language of scientific hypothesis and theory testing with the awareness of his own implacement, thus inverting the relationship of observer to object as conceptualized by positivistic science: “I confess I was surprised to find my theory so perfectly proved in this case. One of the principal agents in this planting, the red squirrels, were all the while curiously inspecting me, while I was inspecting their plantation” (“Succession” 99). The first part of this statement suggests the modest language of a scientist offering a rational account of phenomena; the second sentence attributes agency and awareness to the nonhuman, while revealing the inescapable involvement of the observer in the world he seeks to understand. This inversion takes place in the field, figuring his implacement in the scene (Tauber 144). His empirical practice and written reflection in dynamic interplay draw him into the natural world as both subject and object.

In “The Succession of Forest Trees” Thoreau advances his scientific theory about the role of squirrels and other nonhuman agents in the dispersal of seeds and the process of forest succession, arguing that the agricultural planting and preservation of forests

should follow the natural model of succession (103). This imitation of nature needs to be learned through close observation that allows human foresters to mimic the practice of the red squirrels who manage the forest “plantation[s]” (99). This is not a merging of self and nature, but a deepening knowledge of the community ecology of the forest that surrounds and embraces the human habitat:

[i]n the fall, I notice on the ground, either within or in the neighborhood of oak woods, on all sides of the town [. . .] twigs [that] have been gnawed off by a squirrel, on both sides of the nuts, in order to make them more portable. The jays scream and the red squirrels scold while you are clubbing and shaking the chestnut trees, for they are there on the same errand, and two of a trade never agree. I frequently see a red or gray squirrel cast down a green chestnut bur, as I am going through the woods, and I used to think, sometimes, that they were cast at me. In fact, they are so busy about it, in the midst of the chestnut season, that you cannot stand long in the woods without hearing one fall. (101)

The structure of the passage suggests that humans are not only within but a part of nature, demonstrated through the kindred metaphors of “neighborhood” and “town,” the image of the woods surrounding the human habitat, the interspecific competition of humans and squirrels for nuts, and most vividly through Thoreau’s awareness of the squirrels’ awareness of him--and their interpretations of his action as competitive.

The passage contains a series of observations that arise out of Thoreau’s long-term observation of this place and the transformation of perception that grows out of this

practice. "In the fall" indicates observations that have been repeated through time, suggesting Thoreau's daily walks in the Concord woods. Through this practice of walking and repeated observation, his capacities for perception change; he views the nuts from the perspective of the squirrel, noting that the twigs are removed "to make them more portable." This shift in perspective changes his experience of the forest. Following this practice of observation that culminates in the encounter on the 24th of September, he is unable not to observe the activity around him and its effects: "you cannot stand long in the woods without hearing one fall." This theme of being unable to avoid observing suggests that cultivation of perception through the repeated practices changes not only how he sees and experiences the world, but what he is able to know. Further, Thoreau's language of approximation counters the positivistic optimism about the possibility of fully knowing the world (Tauber 106-07). This language exemplifies Thoreau's choice not to write as a scientist because neither the methodology nor the language of science was sufficient to express his experience (Tauber 105; Berger 67). Writing thus connects Thoreau to nature and place rather than alienating him from it; this is why he figures writing as an organic expression of his rootedness in the natural world.

This reciprocal process of observation and expression forms Thoreau's philosophy of literature. In "Walking," Thoreau articulates his desire for "a literature that gives expression to Nature" (80). "Walking," like the *Lyrical Ballads*, articulates a manifesto for a revolutionary poetics that is grounded in the experience of nature: "[h]e would be a poet who could impress the winds and streams into his service, to speak for him" (80). Thoreau uses organic metaphors to express the emergence of a literature from

the natural world (Rossi, "Genesis" 148). The words of this poet would be "transplanted [. . .] to his page with earth adhering to their roots" (80). Thoreau figures literature as a plant: "a truly good book is something as natural, and as unexpectedly and unaccountably fair and perfect, as a wild-flower discovered on the prairies of the West" (80). The wildness and unexpected growth associated with this literature is described even more vividly in the Journal of November 16, 1850, where his images are of bumpy and strange fungi and lichens rather than the pastoral Western wildflower: "[a] truly good book is something as wildly natural and primitive--mysterious & marvelous ambrosial fertile--as a fungus or a lichen--" (3.141 (1981)). Thoreau's language in this passage, with its piling up of images and description in parataxis, connected by dashes rather than conventional punctuation, suggests the unexpected growth of language and literature out of immersion in the natural world (Rossi, "Genesis" 148). This luxuriant passage can even be interpreted as the irruption of the nonhuman in the text, a spreading of the tendrils of the lichen (a living symbiosis of algae and fungus) into Thoreau's writing style. This unexpected growth of possibilities is the locus of literature's epistemological value.

Thoreau's work offers an example of how the formal structures and innovations of literature carry epistemic value. In my dissertation, I continue this examination of literature's value for knowing nature by bringing together the fields of environmental studies and ecocriticism to explore the epistemological contributions of literary form in three authors: Zora Neale Hurston, Simon Ortiz, and Gary Paul Nabhan. My project finds its starting point in Thoreau's work in bridging poetry, philosophy, and science. However, Thoreau's work leaves unexplored the possibilities of multiple human voices

based in diverse cultures. These possibilities can be revealed through an examination of the vernacular language of oral tradition in African-American and indigenous communities. Thus, in the subsequent chapters, I graft American ethnic literatures and ethnography onto the wide branches of Thoreau's work, forming a genealogy not only for interdisciplinary work but also for environmental justice literature.

In Chapter II, I argue that the ethnographic work of Harlem Renaissance writer Zora Neale Hurston constitutes a practice of science that is simultaneously feminist and African-American and embodies a series of theoretical and textual innovations that indicate the need to expand the traditional definition of science. Henry Louis Gates, Jr. has identified Hurston's use of free indirect discourse in her novel *Their Eyes Were Watching God* as a literary innovation that allows the oral traditions of the African-American community to emerge in the written text: "Hurston uses free indirect discourse not only to represent an individual character's speech and thought but to represent the collective black community's speech and thoughts" (214). Building on Gates's insight, I argue that Hurston's ethnography *Mules and Men*, through its experimentation with the genre of the modernist ethnography, enacts a scientific practice that destabilizes the division between individual knower and community and between scientific and vernacular discourses. Hurston's use of the communal voice reveals, first, that textual forms are inseparable from the construction of scientific knowledge. Second, this voice shows that knowledge is formed in community. Hurston's experimentation with the genre of ethnography and her use of communal voices reveals an implicit scientific epistemology: the "object" of her study, the oral tradition of her community, constructs

her textual form and methodology (Staub 1994). The dialogical structure of *Mules and Men* interrogates and dismantles power relations that constitute professional knowledge in favor of communally held knowledge that is situated, liberatory, and subject to the hermeneutic of the community. This reading of *Mules and Men* draws on the work of Mikhail Bakhtin, who coined the term “dialogism.” For Bakhtin, unitary language is the “historical processes of linguistic unification and centralization, an expression of the centripetal forces of language” (270). In contrast, an “internally dialogized” text contains multiple voices and is part of a system of language in which all meanings are constantly negotiated (Holquist 426-27). In *The Dialogic Imagination*, Bakhtin distinguishes between centripetal and centrifugal forces in language, literature, and culture (Bakhtin 272-73; Holquist 425). While centripetal forces homogenize, reinforcing hierarchies and system of power, centrifugal forces create alternatives (Bakhtin 272-73; Holquist 425). Susanna Pavloska notes that while “Bakhtin would characterize classical ethnography as a ‘monologic’ discourse,” Hurston’s text “picks up the most ‘dialogized’ strain of Boaz’s anthropology” to create a dialogical ethnography (83). Hurston’s innovations with the modernist ethnography, through her use of dialect and signifying forms, open the text to these centrifugal forces. Hurston’s text is a model for a new mode of scientific practice grounded in African-American culture.

Hurston’s liberatory and dialogical practice of science and experimentation with the form of the scientific text, and particularly her innovation of the communal voice, opens a new reading of environmental justice literature as a communal epistemic practice. Following my delineation of Hurston’s ethnic practices of science, Chapter III

explores Simon Ortiz's work of poetry and prose, *Fight Back*, as an example of the communal processes of the environmental justice movement. The environmental justice movement is a coalition of grassroots Civil Rights, environmental, and labor organizations, community activists, and academics. Growing out of Civil Rights activism and analysis, environmental justice critiques the institutionalized racism that places disproportionate risks on people of color through exposure to toxic living and work environments (Cole and Foster 2001). In contrast to mainstream environmentalism's focus on wilderness, the environmental justice movement defines the environment as the place where individuals and communities live, work, play, learn, and worship. The environmental justice movement is based in communities and neighborhoods. In situations of environmental injustice, knowledge is formed through community experience in opposition to the dominant discourses of science, industry, anthropocentrism, and government bureaucracy. This "coalitional consciousness" is essential to the community's resistance to environmental racism and therefore to cultural and ecological survival (Sandoval 71). Jason Corburn argues that in situations of environmental racism, local knowledge can contribute to the formation of a "street science" that contests the reductionism of professional knowledge and relies instead on "traditions, intuition, images, pictures, oral storytelling, or narratives," as well as experiences, anecdotes, and observations (60). These epistemic practices of local communities are evident in environmental justice literature: the literary form of the communal voice both embodies and constitutes communal epistemic practices.

Fight Back confronts the effects of uranium mining on indigenous lands and experiments with form to show the ways knowledge is constituted through a communal process. Through a series of formal and thematic modes--cognitive mapping, ceremony, and coalitional consciousness--*Fight Back* enables and expresses the communal knowledge of environmental justice. Like Hurston's ethnographic work, it transposes oral traditions and community voice to the written text through its mixed genres of narrative, poems, prayers, and autobiography. These poems form an environmental justice epistemic practice: knowledge that is communal and resistant, formed "Standing again, within, among, all things" (Ortiz, *Woven Stone* 290). The turn to environmental justice through this project reveals what is at stake in the two cultures debate. Far from being mere academic wrangling, the context of environmental justice shows that knowledge claims are inextricable from forms of expression, political power, and ethical decisions. The articulation of local knowledge, street science, and indigenous science requires the innovation of literary form.

In Chapter IV, I argue that the genre-crossing texts of Gary Paul Nabhan bring together each of the epistemic practices detailed in the previous chapters by opening the text as a process of multiple voices in conversation. In his use of the natural history essay, Nabhan continues Thoreau's critique of Western scientific objectivism; but he also shows how the natural history essay can make room for multiple human voices, continuing the culturally based scientific work of *Mules and Men* and the communal epistemic practices of environmental justice literature. Nabhan's texts, emerging out of ethnobotany, incorporate elements of the ethnographic narrative. This hybrid form

allows for a text that is dialogical and communally created. In the context of his cross-cultural work in indigenous and Western science, this dialogical form has ethical dimensions: it attempts to acknowledge the heterogeneity of voices from indigenous collaborators, in contrast to scientific texts that seek to speak in a neutral and unmarked voice (Nabhan, *Turtles* 4). Commenting on his own attempts to experiment with form, Nabhan writes: "Although I am the sole writer of this book, I consider my role in this work to be more that of an editor, or even a weaver, of the many voices that have contributed to this effort" (*Turtles* 9). The author is decentered; the text is a conversation, and the epistemic practice of writing constitutes a new way of knowing that is pluralistic, interrogating the monolithic categories of "human" and "nonhuman."

Nabhan's work indicates the need for a new epistemology that offers a more complete portrait of both human and nonhuman worlds. This epistemology is the literary form of the text. Nabhan's narratives bring the voices of indigenous knowledge and Western science, the experience of individuals and communities, and the worlds of the human and nonhuman into dialogical relation. The text breaks down the category of "human" through the distinct voices of indigenous and Western knowledge and is characterized by epistemological uncertainty and negotiation. Unlike a scientific report, which speaks in a neutral voice and generally represses all that is not quantifiable, the naturalist text brings human and nonhuman voices together and places them in an ontological relation that is not defined by scientific realism but instead includes all aspects of experience: affective, sensual, and axiological. Like Hurston's ethnic scientific writing, Nabhan's form and content intertwine: his study of coevolution

becomes a literary form, in which the nonhuman enters into the symbolic productions of the human and generates new possibilities for relation. The text emerges as a conversation in multiple dialects that is not the property of one person, one culture, or one species.

My project offers a conception of literature's value that contrasts with each of the ecocritical approaches I have described. Unlike positivist ecocriticism, the epistemology of literary form focuses on the contributions literature can make to our knowledge of nature, rather than accepting the results of the natural sciences. In contrast to environmentalist ecocriticism, I argue that literature's value goes beyond realist representation, pedagogical, and activist functions. Instead, literature has the capacity to reframe questions of nature and to explore them in all their complexity. Finally, my dissertation avoids nostalgia for oneness with nature and the privileging of oral traditions over writing, suggesting a new direction for ecocritical theory that focuses on the unique contributions of formal innovation.

This project is an expression of hope for a richer conception of knowledge that is articulated in the midst of epistemological uncertainty, moving beyond the sphere of ecocriticism to engage in the question of the two cultures. Uncertainty is a central motif in ethnographic literature: both *Mules and Men* and *Singing the Turtles to Sea* model the participant observer who is constantly learning how to learn, what questions to ask, and how to listen, practices that are extended to the nonhuman world in *Fight Back* and Nabhan's work. This dissertation, as it crosses disciplines and dialects, genres and sciences, cultures and modes of expression, is itself a venture into uncertainty of how to

read and what questions to ask. My reading of these literary texts offers a bridge between the "two cultures" of science and literature, one that does not involve the rejection of Western science or the subservience of the humanities but instead investigates the unexpected growth and possibilities of literature itself.

Notes

¹ See Collini xxxi-xl for an account of the Snow-Leavis controversy.

² Alan Sokal, "Transgressing the Boundaries: Toward a Transformative Hermeneutics of Quantum Gravity." Sokal revealed the hoax in "A Physicist Experiments with Cultural Studies."

³ While the term "nature" has been thoroughly critiqued for its use as an instrument that naturalizes hierarchical social ideologies and that erases its own social construction, I choose to use this term rather than "environment." The first is that the term nature (*physis*) has a long history within Western thought, and it is precisely this tangle of associations that I want to explore. In contrast, the term "environment" appears to be more objective and less value-laden. However, it is exactly this operation of the term that concerns me. In using the term "environment" rather than "nature," the realm of the life-world is reduced to an object of natural science. By framing the concerns of environmental studies as what can be known by the natural sciences, rather than the wide realm of nature, the terms of the discussion already set the humanistic disciplines at a disadvantage. The difficulty of terminology is magnified in this project, which seeks to articulate how literature can be a medium for the expression of indigenous knowledge and a bridge between indigenous and Western sciences. In this cross-cultural dialogue, the very term "nature" breaks down.

⁴ See Rachel Stein, *New Perspectives on Environmental Justice: Gender, Sexuality, and Activism*.

⁵ Although Heise sees the immersive branch of ecocriticism as including the phenomenology of both David Abram and Maurice Merleau-Ponty, a case can be made for a distinction between their conceptions of textuality and consciousness. See Ted Toadvine, "Limits of the Flesh: The Role of Reflection in David Abram's Ecophenomenology."

CHAPTER II

THE HERMENEUTIC OF THE COMMUNITY IN *MULES AND MEN*

Zora Neale Hurston's significance as a theorist of ethnography, literature, race, and gender is evident in the multiple disciplines that currently claim her: black and feminist anthropologies, literary theory, modernist, American, and African-American literature, and folklore (Gates 180). These multiple claims are all valid: Hurston's work is genre-bending, blurring the boundaries between literary and scientific writing and between ethnography and autobiography and fiction, moving beyond the reflexive ethnographic narrative to autoethnography (Deck 1990). During her life, Hurston's relationship to the multiple movements, disciplines, and debates she participated in--such as the Harlem Renaissance and controversy over dialect literature and Franz Boas's school of anthropology at Columbia University--was complex and often conflictual. Hurston's significance as a theorist is located in this tension between movements and disciplines, a tension made thematic through her formal experimentation that questions the boundaries of the disciplines of literature and science.

Through its formal innovation with the genre of the modernist ethnography, Hurston's *Mules and Men* reveals the construction of knowledge as dialogical and relational. Hurston's lifelong commitment was to illuminate the aesthetic and epistemological value of black vernacular. In conjunction with the choice to return to her

home village as a “native” ethnographer, the formal dimensions of *Mules and Men* reveal tensions between literature and science, ethnography and autobiography, and self and community, and uncover the complex ethical questions involved in the formation of knowledge. Through these textual innovations, *Mules and Men* argues for an ethics of science that is based in the hermeneutic of the community. This understanding of the role of the community in forming and interpreting knowledge opens a new approach to environmental justice literature as a communal epistemic process. *Mules and Men* thus serves as the entry into the question of the epistemology of literary form for my dissertation. *Mules and Men* blurs the boundaries of literature and science, linking to Thoreau’s late natural history essays. *Mules and Men* then offers three crucial developments for my project: it exemplifies the power of formal innovation to enable new modes of knowledge, particularly communal knowledge. It demonstrates the value of cultural forms of knowing, such as dialect and oral tradition, and the particular capacity of literature to figure these modes of knowledge. Finally, *Mules and Men* helps to create a genealogy for understanding the epistemic contributions of literature for environmental justice. This connection between communal voice and environmental justice will be further developed in the discussion of Ortiz’s *Fight Back* in Chapter Three.

Hurston’s position contrasted with that of the anthropological establishment of her time, including her mentor, Boas, who questioned whether African-Americans could lay claim to a culture of their own, rather than simply being a collation of fragments derived

from white culture (Gordon 158). This attitude persisted through various pseudo-scientific analyses in the 1920s and 1930s, including ethnographies by white scientists. Staub notes that "Stripped of its African roots, at least in the eyes and ears of 'science,' black culture and, by extension, black consciousness were thought to lack genuine originality or humanity" (82). Earlier theories of anthropology had endorsed theories of evolutionary racialization (Elliot 9), while neo-Darwinian discourses argued for the concept of culture as proceeding from lower to higher forms, with Western civilization at the apex and non-Western cultures located earlier on a linear continuum (Clarke 45, 48). Hurston's work in ethnography was located at the intersection of these attitudes; Hemenway notes that "even the sophisticated social science of anthropology was a part of 'high' culture, a discipline whose methods suggested periodic sorties among primitive folk followed by a return to the Heights for analysis and evaluation" (100). This dynamic is subverted by Hurston's choice to return to her home community for her ethnographic research. Thus, when Hurston chose to do a scientific study of her home community, and in particular the oral traditions of rural African-American culture, she was intervening in two discourses: the shift in attitudes toward "the folk" and folk culture in the Harlem Renaissance, and the question of African-American culture, language, intelligence, and humanity in anthropology. Both of these contexts are significant in understanding *Mules and Men*.

Dialect

The use of dialect in all of Hurston's writing--fiction, drama, and ethnography--is located at the convergence of these two discourses. Hurston sought the recognition and preservation of African-American folk culture, particularly its expressive forms. Hurston biographer Robert Hemenway writes that "Moving between art and science, fiction and anthropology, she searched for an expressive instrument, an intellectual formula, that could accommodate the poetry of Eatonville, the theories of Morningside Heights [the location of Barnard/Columbia University], and the esthetic revolt of *Fire!!*" (63). The fieldwork for and publication of *Mules and Men* was circled by the demands of Hurston's patron, Mrs. Osgood Mason, and by her publishers who wished for a popular, accessible book (Hemenway 124-25). But in spite of these strictures, Hurston's work in *Mules and Men* simultaneously records the originality of African-American oral traditions, intervenes in anthropological theories of African-American culture, and develops a new form of ethnography based on the oral traditions of the Eatonville community (Staub 89). As documented by Hemenway, Hurston critiqued white anthropologists Guy Johnson's and Howard Odum's assessments of African-American culture and wrote to Langston Hughes that she wished to "present the material with all the life and color of my people [. . .] I want to leave no loop-holes for the scientific crowd to rend and tear us" (89, 126). Thus, even as Hurston sought to adhere to standards of scientific objectivity to placate Boas and the anthropological community, her purposes were continuous with her

goal of demonstrating the aesthetic significance of African-American forms of expression. Her ethnographic work was in service to this greater project. However, what is most significant about *Mules and Men* is not simply that Hurston's ethnography records the oral traditions of the Eatonville community and recognizes their aesthetic value. Rather, what is most original is the way that these traditions shape the literary form of the ethnography, intervening in the discourse of anthropology to demonstrate an alternative epistemology based in African-American culture and expression. That is, Hurston's recasting of the formal techniques of modernist ethnographic writing to incorporate the narrative structure and signifying practices of the black community shifts the framework from the constitution of knowledge and the authority by which it is deployed. The first step in this process is Hurston's use of dialect.

The controversy among Harlem Renaissance scholars and writers about the use of dialect is well known. Henry Louis Gates, Jr. observes that, within the context of slavery, "What was at stake for the earliest black authors was nothing less than the implicit testimony to their humanity" (171). This responsibility to testify to the humanity of the black community while searching for an authentic literary voice framed debates about aesthetic theory for Harlem Renaissance authors. At the turn of the century, black dialect was seen by white America as an indication of biologically based inferiority, an inability of the "African race" to progress intellectually, culturally, and evolutionarily (Gates, *Signifying Monkey* 176; also see Elliot 2002, Staub 1994). For some of the early

figures in the Harlem Renaissance, such as James Weldon Johnson, dialect was associated with Uncle Remus and vaudeville blackface productions that perpetuated myths of African-American intellectual inferiority (Staub 85). For this first generation of Harlem Renaissance scholars and artists, the only hope for African-American literature to be taken seriously was to use standard English and conventional literary forms, even when these classical forms were subverted by unorthodox imagery and themes. Johnson dismissed dialect as a legitimate form of expression in the two prefaces to *The Book of American Negro Poetry* (1921 and 1931); in 1931, he stated that "the passing of traditional dialect as a medium for Negro poets is complete" (3). For the younger generation of Harlem Renaissance artists, however, including Hurston, Hughes, and Sterling Brown, the folk and black vernacular were the greatest sources of vitality, aesthetic originality, and linguistic innovation. In her essay "Characteristics of Negro Expression" (1935), Hurston wrote that she wished to "let him [the black man] speak for himself," arguing that the aesthetic sophistication of black vernacular would prove the intellectual abilities of black folk (73). This statement reveals Hurston's fundamental commitment both to racial justice and to the method of achieving it through literary work, by transposing the multiple voices of her community, both individual and communal, into the text.

Wrapped up in the question of dialect and culture is the very status of African-American culture and intelligence. For Hurston, mimicry was evidence of African-

American genius, as linguistic play brought new and unexpected meanings to conventional expression and forms: "What we really mean by originality is the modification of ideas [. . .] So if we look at it squarely, the Negro is a very original being. While he lives and moves in the midst of white civilization, everything he touches is re-interpreted for his own use" ("Characteristics of Negro Expression" 67-68). This idea of dialect as an original form of expression is essential to Hurston's work. In *The Dialect of Modernism*, Michael North details the complications that white modernists' appropriation of black dialect created for black writers of the same time period. Some African-American writers came to see dialect as a "trap" that inevitably reinforced stereotypes and thus lost its political efficacy (North 23-24). Although aware of this tension, Hurston continued to employ dialect as an experimental form, and her use of black vernacular in her ethnographic text is a key element in its disruption of the standard dichotomy of the ethnographic expert and the community as the object of study.

Folded into the project of dialect, mimicry, and aesthetics is an epistemological dimension: the signifying rituals of Hurston's community construct the ethnography and thus her method and results (Staub 86-89). Through its documentation and enactment of signifying rituals, *Mules and Men* offers a theory of knowledge based in dialect and culture of the African-American community. *Mules and Men* is, in Gates's terms, a "speakerly text," a text whose rhetorical strategy is designed to imitate oral speech and narration (181). Gates writes that this "narrative strategy signals attention to its own

importance, an importance which would seem to be the privileging of oral speech and its inherent linguistic features" (181). This rhetorical strategy brings "the voice of the black oral tradition" into the written text, making possible another formal innovation: that of the communal voice (181). Hemenway interprets Hurston's entire career--academic and literary, fieldwork and writing--as an attempt to find a form capable of communicating black folk culture, which is intimately bound up with this linguistic play.

Signifying

Gates traces the multiple modes of narration employed in Hurston's novel *Their Eyes Were Watching God* (written after her fieldwork for *Mules and Men*) to communicate this black vernacular tradition. The most apparent is direct discourse, which performs the Signifying rituals of the community on "the porch" (191). The porch is the literal and figurative center of the community and its practices of signifying, displaying one mode of the communal voice--that of the community in dialogue and disagreement (196). Gates demonstrates that one of Hurston's foremost innovations as a writer of fiction is her use of free indirect discourse to communicate a black communal voice. Free indirect discourse allows a third-person narrative to speak from a first-person point of view. In *Their Eyes Were Watching God*, the diction of black characters influences the narrative voice, so that it becomes impossible to distinguish the narrator's voice from that of the main character, Janie, whose quest to become a speaking subject structures the novel (Gates 191). However, Gates notes that free indirect discourse

represents not only individual characters--a common modernist technique--but also, in Hurston's formal innovation, the voice of black community as a whole (214).

Gates notes that the earliest definition of the concept "signify" to appear in print is in Hurston's *Mules and Men*, where it is simply defined as "to show off" in a footnote (193; *Mules and Men* 124). This spare ethnographic definition is enriched by the context of the use of the term. In this scene, the character Big Sweet publicly confronts her unfaithful partner, Joe: "And speakin' bout hams," cut in Big Sweet meaningly, "if Joe Willard don't stay out of dat bunk he was in last night, Ah'm gointer sprinkle some salt down his back and sugar-cure *his* hams" (124). The preceding conversation is actually about cats and dogs, so Big Sweet's interruption of the men's storytelling becomes part of her assertion of her power to signify. Joe responds by "snatch[ing] his pole out of the water with a jerk and glar[ing] at Big Sweet, who stood sideways looking at him most pointedly" (124). On a figurative level, Big Sweet's signifying has an immediate effect: Joe removes his "pole" from the water, while Big Sweet's look is "pointed"--a transfer of phallic symbols and the power they represent through the linguistic exchange. Gates notes that this scene "is a classic Signification, an exchange of meaning and intention of some urgency between the lovers" (197). Joe tries to fend her off by saying "'Aw, woman, quit tryin' to signify'" (124). Big Sweet defends herself and in doing so further illuminates the process of signifying: "'Ah kin signify all Ah please, Mr. Nappy-chin, so long as Ah know what Ah'm talkin' about [. . .] Ah got de law in my mouth'" (124). In

this context, “to signify” is speaking the truth; in addition, it is a process of contesting power relationships and negotiating gender roles. Staub defines signifying as “an indirect way of speaking in which that which is spoken encodes one message or meaning even as it more explicitly states something else entirely” (86). Hurston’s brief definition of signifying in the footnote points to the inadequacy of the language of professional knowledge. Defining what it means to “signify” requires the dramatic context of the oral ritual. Hurston’s choice to barely define the term in a note while showing what it actually means through the context of the exchange between Big Sweet and Joe indicates the strategy of the entire ethnography: to decenter the importance of the ethnographer’s professional assessment while drawing attention to the principal voices of the text, those of the community.

The significance of the communal voice as a formal innovation has a new dimension in *Mules and Men*, where it allows Hurston to disrupt the standard ethnographic text. Gates’s elucidation of Hurston’s formal innovations in *Their Eyes Were Watching God* opens a way to read the communal voice in *Mules and Men* and to illuminate the significance of this formal innovation within the context of an ethnographic text and discourse on anthropology. While the literary aspects of the text’s multivocality have been carefully investigated, the epistemological significance of these formal innovations has not been analyzed. The communal voice organizes the innovations in Hurston’s text. The variations of the communal voice in *Mules and Men*

include the staging of many dialogues on the store porch. Hurston stages Zora's ethnographic arrival scene on the porch; it is the first sentence of the first chapter: "As I crossed the Maitland-Eatonville township line I could see a group on the store porch" (7). In Hurston's novel *Their Eyes Were Watching God* (written after Hurston's fieldwork for *Mules and Men*), the freedom to join in with the signifying rituals of the community becomes central to the main character, Janie, in her quest for selfhood, symbolized by the claiming of a voice in the community (Gates 196).

The porch is a forum for linguistic play, arguments, and negotiation of relationships among community members (Gates 196). This is evident in Chapter Two, which repeats the staging of storytelling on the porch in the first sentence: "The very next afternoon, as usual, the gregarious part of the town's population gathered in the store porch" (19). The narrator comments that, in one evening, "they told stories enough for a volume by itself" (19). As the chapter progresses, the storytellers comment on the church and then gender relations, at which point the discussion becomes tense:

"Aw, yes it 'tis," Gold said. "Dat's all you men is good for--settin' round and lyin'. Some of you done quit lyin' and gone to flyin'."

Gene Brazzle said, "Get off us mens now [. . .] De trouble is you women ain't good for nothin' exceptin' reading' Sears and Roebuck's bible and hollerin' 'bout, 'gimme dis and gimme dat' as soon as we draw our pay." (24)

This exchange demonstrates the linguistic play of the porch--such as Gold's spontaneous rhyme of "lyin'" and "flyin'"--and, further, reveals the constituting medium of language. In this exchange, the terms for speaking multiply: "lyin'," "flyin'," "hollerin'," "astin'," "crackin'," "have words" "jokin'," "blowin' it" (24). Words are then used to ameliorate the tension and allow the storytelling to proceed:

Armetta sensed a hard anger creepin' into the teasing so she laughed to make Gene and Gold laugh and asked "Did y'all have any words before you fell out?"

"We ain't mad wid one 'nother," Gene defended. "We jus' jokin'."

"Well, stop blowin' it and let de lyin' go on," said Charlie Jones."

(24)

As shown in the above passage, Hurston employs direct quotation as a means of integrating the multiple voices of the community into her text (Pavloska 89). This multiplicity extends to internal differences in the voice of the narrator, Zora. In the opening lines of Chapter One, Zora's voice is initially in standard English: "As I crossed the Maitland-Eatonville township line I could see a group on the store porch. I was delighted" (7). In the last line, Zora draws a distinction between her language and that of the community: "All those who were not actually playing were giving advice--"bet straightening" they call it" (7). Both through her definition of the term and use of the

word “they,” Zora indicates the separation between her ethnographic voice and the voices of the community. Cheryl Wall notes that this moment in the text, Zora’s actions in driving figure her professional stance: “‘Hello, boys,’ I hailed them as I went into neutral” (*Mules and Men* 7; Wall 663). This neutral position allows Zora to slide from standard English into dialect in conversation with the community members: “Ah come to collect some old stories and tales and Ah know y’all know a plenty of ’em and that’s why Ah headed straight for home” (8).

The epistemological significance of these formal innovations is multifaceted. In *Mules and Men*, the communal voice is not unified, but instead displays the conflicts within the African-American community, revealing the unstable process of the formation of knowledge. Further, these multiple and conflicting voices show that knowledge is negotiated, contestable, and must be measured against experience. Michael Staub notes that “[m]ost meanings in *Mules and Men* remain incomplete, indeterminate, and ambiguous. Indeed, significantly, the meanings derived also often depend on the reader’s position in relation to the subjects” (81). In short, Hurston’s interpretation of participant-observer methodology shows that ethnographic knowledge is subject to the hermeneutic of the community. Pavloska describes *Mules and Men* as “characterized by this ‘communal’ model of textual production” (87).

Mules and Men demonstrates that form is a mode of scientific theorizing. Hurston’s textual forms constitute her scientific method and epistemology: the dialogical

form is both a means of constructing knowledge (a method) and a statement about the nature of knowledge (an epistemology). As Staub argues, *Mules and Men* appropriates the rhetorical strategies of black vernacular as the proper method for its study, converging form and content:

Mules and Men becomes a narrative that self-reflexively invents literary strategies for documenting black speech by adopting, or adapting, the very rhetorical language that is its subject. In this way, black vernacular strategies, particularly varieties of 'signifying,' not only are the subject, but simultaneously become the means through which the forms and the messages of 'talking black' are documented. (80)

Staub further argues that *Mules and Men* is "a mock(ing) ritual reenactment of standard fieldwork methods" (81). Staub's central insight that black oral traditions construct the text of *Mules and Men* is crucial. However, in addition to being a mocking ritual, *Mules and Men* is an intervention into ethnographic theory through the form of the text, collapsing the hierarchy between ethnographer and community and between scientific and vernacular languages. The collapse of this dichotomy of form and content leads to the deconstruction of a series of other dualisms in science, including subject/object, self/other, modern/primitive, and fact/fiction.

These moves are themselves a form of signifying--now directed toward the construction of scientific knowledge. Gates has proposed signifying as the central

interpretive concept for a black literary theory, one that is drawn from the back tradition's theorizing about itself (xxii). According to Gates, black literature is in relation with the white canon through the process of repetition with difference:

Our task is not to reinvent our traditions as if they bore no relation to that tradition created and borne, in the main, by white men. Our writers used that impressive tradition to define themselves, both with and against their concept of received order. We must do the same, with or against the Western critical canon. To name our tradition is to rename each of its antecedents, no matter how pale they might seem. To rename is to revise, and to revise is to Signify. (xxiii)

For Gates, black vernacular brings into play all of the vertical associations that are repressed by the dominant language in order to create a stable meaning (50). In this way black vernacular disrupts and restructures the process of signification in standard English, decolonizing and appropriating language to insert a new set of meanings and relations (48-51).

Mules and Men enacts this signifying dynamic in relation to ethnography in two key ways. First, Hurston's choice to return to her home ground as a "native" ethnographer highjacks Boas's participant-observer methodology, bringing the voices of the native ethnographer and her community into the discourse of anthropology at a time when "Anthropology itself, although a liberal discipline, was not ready for 'the natives'"

to study themselves or anyone else” (Bolles 31). Like the Western literary and critical canons, anthropology has been mainly the domain of white academics, while the objects of the study have been communities of color: “Any review of the history of the discipline reveals that the overwhelming majority of those who practiced it (as opposed to those upon whom it was practiced) were white” (Cole ix). This dynamic of white observer and native object is dismantled and restructured through Hurston’s choice to return to her home ground as an anthropologist. Second, by creating an ethnography in the vernacular, Hurston renames and revises the science of anthropology. This textual innovation is liberatory: it both affirms the knowledge of African-American communities and the formation of this knowledge through linguistic play, and it opens up the language of science to particular dialects.

While *Mules and Men* has received a great deal of attention from literary critics since the anthropological turn (see Clifford 1988; Clifford and Marcus 1986), the significance of Hurston’s intervention in scientific discourse has not been fully explored, which may explain why the epistemological implications of her formal and methodological strategies have been overlooked. Hurston’s work continues to be marginalized within contemporary anthropology: “Hurston has yet to be critically analyzed as an anthropologist [. . .] by someone in the discipline. Most works on Hurston seem preoccupied with her personality and literary production, giving little attention to a deep analysis of her ethnographic work and her alterative research methods” (Bolles 31).

This uneasy reception reveals the ways that *Mules and Men* calls into question the disciplinary boundary between literature and science, illuminating the constitutive role of language and form in scientific knowledge and the resistance to the blurring of these boundaries from both the sciences and the humanities.

The context of anthropology illuminates a further significance of Hurston's use of dialect in a scientific work, namely, its contribution to the formation and expression of communal knowledge. Through the use of dialect, direct quotation, and free indirect style, *Mules and Men* enacts a communal epistemic process. This knowledge is formed through the dialogue, disagreement, and narratives in the vernacular language of the community. Consequently, this communal epistemic process requires a shift in the position of the ethnographer in relation to the community. Beginning in the preface and repeatedly throughout the text, "Zora" shows that knowledge of the African-American community is gained only with the consent and cooperation of community members. Thus the formal innovations in *Mules and Men* are linked to the destabilization of the authoritative voice of the ethnographer. Through performance of a communal epistemic process, *Mules and Men* critiques modernist anthropological practices and theorizes an alternative practice that levels the relationship between ethnographer and informant.

Hurston's innovations with form and genre anticipate current postmodern insights about the constructed nature of ethnography (Boxwell 608-09, Staub 80). Her texts function as self-reflexive commentaries about the practice of ethnographic research and

writing. In his introduction to the collection *Writing Culture*, James Clifford describes how recent criticism has argued that ethnographic writing is intertwined with the poetic, political, and ethical, embedded within power relations, and shaped by social, historical, and linguistic forces (2). The literary form of the ethnography thus is neither ornamental nor a means of transparent representation of the anthropological experience (Clifford 2-4). In the fieldwork account, the ethnographer becomes a character in the ethnographic "fiction," speaking in the first person (Clifford 14). Further, these fieldwork accounts often take on a dialogical form, requiring the writer to "find diverse ways of rendering negotiated realities as multisubjective, power-laden, and incongruent" (Clifford 15).

"Zora" as a Situated Ethnographer

In this discussion of ethnographic writing, Clifford surprisingly argues that "Feminism had not contributed much to the theoretical analysis of ethnographies as texts" as of the time *Writing Culture* (1986) was published and that "Where women had made textual innovations [. . .] they had not done so on feminist grounds" (20). Clifford's strange omission of Hurston's work has been critiqued by African-American feminist anthropologists (McClaurin 50-52). Bolles argues that this marginalization is part of the continuing hegemony of the field of anthropology, in which "Black women remain invisible and silenced" (33). Textual innovation is in fact central to the scientific work of *Mules and Men*. An essential characteristic is Hurston's insertion of herself as a central character in the narrative, the ethnographer "Zora," a textual move that interrogates

power relations. Through the dialogical structure of the text, Hurston deconstructs the power relations of scientist and object and suggests that the formation of knowledge is inescapably relational and communal. Feminist epistemology of science offers a way to understand these textual innovations as a form of scientific theorizing. This textual innovation is visible on both formal and thematic levels, the most evident being the conversations between women that run throughout *Mules and Men*.

Donna Haraway argues that a feminist practice of science is characterized by the metaphor of “conversation” rather than “discovery” (198). Hurston’s figure for the formation of knowledge is similarly one of conversation: conversations on the store porch and among community members at work or play, conversations that the narrator Zora “overhears” and transcribes for the reader. Gates notes that the trope of intimate conversation between women that frames *Their Eyes Were Watching God*:

On the broadest level, *Their Eyes* depicts the search for identity and self-understanding of an Afro-American woman. This quest for self-knowledge, which the text thematizes through an opposition between the inside and the outside of things, directs attention to itself as a central theme of the novel by certain narrative strategies [. . .] The tale of Janie Crawford-Killicks-Starks-Woods is narrated to her best friend, Phoeby, while the two sit together on Janie’s back porch. We, the readers, “overhear” the tale. (184)

The porch is the central place, in the novel and in black oral tradition, for storytelling and signifying (Gates 196). Through its use of the narrative persona, "Zora," whose quest for African-American folk culture is a series of conversations, and through the transposition of oral signifying rituals, *Mules and Men* enables us as readers to "overhear" as well.

This strategy employs a feminist practice in two ways: it relies on relationship, negotiation, and multiplicity, and it foregrounds the voices and presences of women in the text and therefore in the reader's perception of women's place the community.

Women participate both in constructing knowledge and in constructing the text.

This relational epistemology is evident in Hurston's relationships with powerful women in the text: Big Sweet, who becomes her guide and protector in Polk County, and in New Orleans the spirit of the hoodoo priestess Marie Leveau (Wall 661-62). In this way Hurston's text dismantles--or at least reveals and complicates--the power relations that constitute ethnographic writing and acknowledges the power of the community both to signify on science and to disrupt the process of knowledge creation. In her reading of *Mules and Men*, Graciela Hernández argues that the closing scene of Part One, in which the character Lucy attempts to murder Zora, is an act of resistance by the observed against the ethnographic observer that simultaneously reveals the violence of ethnography and the triumph of oral knowledge over the written text (360). In this way the text enacts a liberatory movement: the objects of knowledge literally seize control of the process of knowledge production and interrupt the narrative. The arrangement of

events in the framing material reveals their significance: whether or not Hurston literally fled Polk County the night of the attack, what the text reveals is the power of the character Lucy to shape the narrative (Hernández 361).

Hurston's theory of knowledge as relational and communally constructed is further illustrated by the dialogical form of the text. The multivocal structure of Hurston's texts has been extensively discussed in the critical literature: Susanna Pavloska argues that the use of direct quotation in *Mules and Men* avoids an omniscient authorial voice (89-91, 93). Similarly, Deborah Gordon argues that in *Tell My Horse* (Hurston's account of her ethnographic research Haiti and Jamaica), the multiplicity of positions inhabited by the narrator means that there is no claim to a unified, dominant authority or to full expertise about the other (155). The multivocal structure of *Mules and Men* is evident in the interplay of framing material and folktales, in the dialogues, and most clearly in need for more than one language in the text. The folktales and dialogue could not be communicated without the use of dialect. Donna Haraway briefly suggests the importance of form and genre in feminist science: "No wonder science fiction has been such a rich writing practice in recent feminist theory. I like to see feminist theory as a reinvented coyote discourse obligated to its enabling sources in many kinds of heterogeneous accounts of the world" (199). Hurston's dialogical form indicates that a univocal text cannot hope to communicate knowledge of heterogeneous others. Hurston's text enacts both a political and an epistemological feminism. She privileges

subjugated standpoints by giving the voices of the community far more space than the ethnographer's, and through this dialogical form argues that knowledge cannot be created without these multiple voices. The narrator herself needs to utilize the voices of insider and outsider to communicate her methodology and insights. Thus *Mules and Men* embodies Haraway's call for knowledge to be created in conversation with the other. Hurston's text functions as a feminist theory and epistemology of science both in its inclusion of the voice of the other and through its structure and language. This is why Pavloska calls *Mules and Men* "a truly intersubjective ethnography" (96).

Deborah Gordon (1990) has illuminated the importance of Hurston's experimental ethnographic voice in *Tell My Horse*, contrasting Hurston's textual strategies and multiple positions to the Western ideology that requires the authorial voice to be "neutral, unique, and transcendent" (162). *Mules and Men* offers related but distinct insights into Hurston's scientific and literary projects because it is set (in Part One) in her home state of Florida, while *Tell My Horse* recounts her research in the Caribbean. Hurston's position as "native ethnographer" in *Mules and Men* offers confirmation of Gordon's reading of Hurston's situated knowledge while complicating Hurston's position. In Eatonville, Hurston is both a native of the community and separated from it by her position as ethnographer; she is both knower and known. This anticipates the critique of traditional notions of objectivity by contemporary feminist critics.

In her essay "Situated Knowledges," Haraway critiques masculinist science and suggests how a feminist science would operate differently. Haraway's central critique (and that of feminist epistemology of science in general) is of the claim to disembodied objectivity and the construction of subject-object relations in science that derives from this objectivist ideology (183). Haraway suggests that feminist objectivity should not dismiss all knowledge claims as entirely socially constructed but that instead "feminist objectivity means quite simply *situated knowledges*" (188). The location of the knower is central to this epistemology (195). Feminist science as situated knowledges rejects the view from above in favor of a scientific practice that is embodied, situated, and partial, as well as the ideal of transcendence and the illusory separation of subject from object (190). A situated knower is one that can be held accountable for her claims, given her acknowledgement that questions in the sciences (natural and social) are embedded in ethics and politics (193). For Haraway, a multiple, split, and contradictory self that is able to enact a "mobile positioning" is the subject of a feminist science (192, 193-95). Finally, in feminist epistemology, "objects" of knowledge are understood themselves as "subjects," as actors and agents who participate in the construction of knowledge (197-98). In this formulation of the agency of objects Haraway notes the influence of the social sciences on her thinking: she believes that the natural sciences need to follow the social sciences in their realization that "the agency of the people studied itself transforms the entire project of producing social theory" (198). Haraway's recognition of the agency

of objects in ethnography was prescient, suggesting that Hurston should be recognized as an early feminist epistemologist of science.

Each of the elements Haraway identifies as crucial to a feminist epistemology of science is evident in Hurston's ethnography *Mules and Men*. This is particularly clear in the Part One of the text, the focus of this chapter, where Hurston is a "native" ethnographer in African-American communities in Florida.¹ *Mules and Men* demonstrates that the writing of feminist science is inseparable from its epistemology. Further, Hurston shows that not only the question of gender but also of race, ethnicity, and vernacular language is at play in scientific texts, thus exceeding the insights of contemporary feminist epistemologists.

Literally from the first line of the introduction, the knower in *Mules and Men* is situated. The ethnographic persona the community calls "Zora" speaks directly and autobiographically: "I was glad when somebody told me, 'You may go and collect Negro folklore'" (1).² In contrast to the neutral, disembodied voice of the scientific observer, this voice is personal and expresses a full range of values: her affect (gladness) is not elided to create the illusion of objective neutrality. The view from above of the sovereign scientific knower is fundamentally destabilized by Hurston's choice to return to her "native" ground:

And now, I'm going to tell you why I decided to go to my native village first. I didn't go back there so that the home folks could make admiration

over me because I had been up North to college and come back with a diploma and a Chevrolet. I knew they were not going to pay either one of these items too much mind. I was just Lucy Hurston's daughter [. . .] If I had exalted myself to impress the town [. . .] they'd stand flat-footed and tell me that they didn't have me, neither my sham-polish, to study 'bout. And that would have been that. (2)

This methodological choice is grounded in a liberatory politics: Hurston's construction of her scientific project is one that destabilizes the power hierarchy between subject (ethnographer) and object (the community of Eatonville). By choosing to return to her home town, Hurston enters a situation in which she is already implicated in a relationship and context where she is not only the knower but is also *known* (signified by the power of the community to name the ethnographer/narrator (Hernández 354-55)). Further, it is the particular strengths of her African-American community--the interrogation of authority, the refusal to be impressed by status symbols like degrees and wealth--with which Hurston engages with in order to construct a more equitable ethnographic relationship. Gordon describes the classic ethnographic narrative as one of the journey into the pre-Western primitive (153). Zora's journey, however, is not one of the modern ethnographer to document the primitive other, an attitude Hurston satirizes through the language of "native village" (2). Cheryl Wall argues that *Mules and Men* chronicles Hurston's journey into "the matrix of the culture": as she journeys south, Hurston moves

deeper into African-American culture and in doing so discovers herself (676). Through this dual journey she is transformed and gains the power to signify (Wall 676). Hurston's choice of her native village as the site for her research thus destabilizes the dichotomies of subject/object, ethnographer/informant, and even self/other: Zora both is and is not part of the community.

Mules and Men does not enact a dialectical movement toward synthesis of these destabilized categories, but rather reveals what Haraway calls a "split and contradictory self" (193). Hurston's choice to position herself as a "native ethnographer" exposes the multiplicity of the ethnographic subject and how her location both enables and limits what she is able to know. This is suggested through the metaphor of birth in the first paragraph. Returning to collect folklore engages multiple aspects of Hurston's self: "In a way it would not be a new experience for me. When I pitched headforemost into the world I landed in the crib of negroism" (1). Hurston's first birth is into her culture as an African-American. However, this self is not static or essential; Hurston compares it to an article of clothing: "It was only when I was off in college, away from my native surroundings, that I could see myself like somebody else and stand off and look at my garment. Then I had to have the spy-glass of Anthropology to look through at that" (1). Anthropology thus creates a split in Hurston's self, a distance that allows for detachment, a form of objectivity (Johnson 285, Meisenhelder 14). What keeps this view through the spy-glass from becoming the unlocatable and unaccountable view from above is

Hurston's methodological choice to return to her home for her first research project, where her Eatonville self will be hailed by her community. Through the intervention of her community, this new, scientifically trained self is held in tension with her first identity.

Hurston's community "births" her once again as an ethnographer: it is in Eatonville that Hurston learns to simultaneously inhabit her multiple selves, to use this split subjectivity as the location from which to do her scientific work and to claim her voice as an ethnographer. Hurston acknowledges her need for community support in becoming an ethnographer: "I realized I was new myself, so it looked sensible for me to choose familiar ground" (1). Commentators have argued that the shifts in narrative voice throughout the text from first to third person and from standard American English to African-American dialect signify the destabilization of Franz Boas's methodology of "participant-observer." Beth Harrison argues that in *Mules and Men* Hurston "ultimately subvert[s] Boas's method of participant-observer methodology" by shifting perspectives and thus constructing Zora as an unreliable narrator who "implicitly asks her readers to question the accuracy of the material she collects. To become an 'insider,' Hurston the narrator hints, an observer must surrender 'objectivity,' revealing a problem within Boas's participant-observer method" (90-91). Similarly, Graciela Hernández argues that Hurston effects an "epistemological erosion" through her use of shifts in narrative perspective and voice (352). While in the first eight chapters of the text the voices of

participant and observer coexist in the Boasian mode, according to Hernández, Hurston discards the anthropological persona in the latter part of the text (357-58). Ultimately, Hernández argues, "Hurston rejects the authority of an insider/outsider position, and suggests that ethnographers cannot carve spaces for themselves in societies where anthropologists define people as objects or others for view through the lenses of the spy-glass" (360).

Rather than reading these shifts as a dichotomous opposition between objectivism and subjectivism resolved in favor of subjectivism, a more recuperative reading of Hurston's relationship to anthropology suggests that Hurston strategically inhabits different "selves" or viewpoints, a more radical intervention. This is revealed in the introduction, as Hurston discusses the challenges to collecting folklore in the African-American community: "They are most reluctant at times [. . .] And the Negro, in spite of his open-faced laughter, his seeming acquiescence, is particularly evasive. You see we are a polite people and do not say to our questioner, 'Get out of here!' We smile and tell him or her something that satisfies the white person because, knowing so little about us, he doesn't know what he is missing" (2). In this passage the shift from third to first person point of view is evident: she begins the passage describing the habits of "the Negro" in an ethnographic mode, but the narrator shifts to the pronoun "we." Immediately following the description of the strategic evasiveness of African-Americans, this slippage suggests a trickiness in the narrative voice: Barbara Johnson argues that at

this point “it is impossible to tell whether Hurston the narrator is describing a strategy or employing one” (286). Although it is Hurston who is “the questioner” in *Mules and Men* (emphasized by Hurston’s language of “him or her,” drawing attention to the gender of the questioner), it is the reader who is suddenly placed on the outside, the “you” addressed by the “we,” the white person who does not know how to read this sign system. This move to exclude the reader enables Hurston to speak both as an ethnographic authority and as an insider of African-American culture. Hurston thus moves back and forth between insider and outsider positions to reveal the methodology and strategy involved in the gathering of folklore. This multiple self allows Hurston to embody these contradictions and reveal them through her literary forms. This does not indicate a rejection of the discipline of anthropology or the practice of fieldwork, but rather a new methodology and theory that makes both epistemic and ethical interventions in the methodology of “participant-observer.”

At the same time, the ethics of this movement back and forth is questioned within the text itself. In the beginning of Chapter Two, a quarrel between Gold and Gene threatens to derail the storytelling. In this passage, the narrator’s voice slides into dialect through the term “creepin’”: “Armetta sense a hard anger creepin’ into the teasing” (24). Armetta defuses the situation with her words, and Charlie Jones calls for the storytelling to continue:

“Well, stop blowin’ it and let de lyin’ go on,” said Charlie Jones.

“Zora’s getting’ restless. She think she ain’t gointer hear no more.”

“Oh, no, Ah ain’t,” I lied. (24)

The use of the term “lie” in its standard meaning, rather than to mean storytelling, reestablished Zora’s outsider position. However, the narrator’s voice is influenced by the linguistic games at the same time that it comments on them, and on the ethnographer’s own position. ““Ah ain’t,’ I lied”” has a parallel structure and sound, and raises the possibility that the narrator’s “lies” are not only in her claim that she was not worried but in her disassembling through the masks of language.

This split and contradictory self corresponds to Hurston’s theory of “traveling culture” as described by Marc Manganaro. Manganaro reads *Mules and Men* as formed by a “less than whole (less than authoritative or trustworthy) methodology and a less than whole textual structure” in contrast to Ruth Benedict’s seamless *Patterns of Culture* (175-76). Manganaro proposes understanding Hurston’s theory of culture, in contrast to Benedict, as one of ““traveling culture,”” in which culture is understood as fluid and mixed rather than stable and integrated (178). Hurston’s multiple and split self is not a unified and integrated subjectivity and thus corresponds to the hybrid African-American culture that she participates in and observes. Haraway argues that the split and contradictory self of feminist science should be understood as a strength rather than a disadvantage for an ethical and liberatory practice of science (193-96). Similarly,

Hurston depicts the heterogeneous cultures of Eatonville and Polk County as resilient in the context of racist oppression. Just as her split subjectivity produces critical capacities, the hybridity of the culture is a strength.³

Hurston portrays the richness of this culture, in which oppression has resulted in strategies of signification that are forms of resistance and enable the survival of her informants (Meisenhelder 20). Thus the legacy of slavery and the adaptation to white American culture and power do not result in an inauthentic culture but rather generate critical capacities. Susan Meisenhelder argues that the between-tales framing material supplied by Hurston, as exemplified by the depiction of a day of work in the swamp, delineates how folktales operate to enable psychological resistance (19). In this scene, Zora has followed the men of the lumber camp in Polk County to work in order to gather folktales, but work is cancelled for the day. However, the men then are ordered by the white boss to work at the mill instead, where they are also turned away. In the context of white power and economic oppression, Zora stages a retelling of the folktales of "Ole Massa" and the trickster slave John (Meisenhelder 18). This framing material reveals how storytelling and signification enable resistance: "'Go 'head and tell it, Cliff,' shouted Eugene Oliver. 'Ah love to hear tales about Ole Massa and John. John sho was one smart nigger'" (*Mules and Men* 69). As the men are forced to endure oppression in the present, these tales about John fooling Ole Massa figure the subversive power of storytelling (Meisenhelder 19; also see Lawrence 126-27).⁴

The folktales from this scene are arranged so as to interrogate the dual oppression of African-American women as well (Meisenhelder 26-27; see also Wall 666). The character Jim Presley states ““God made de world and de white folks made work”” (74). This analysis of institutionalized racism is followed by a folktale that depicts the burden placed on African-American women: ““Dat’s de reason de sister in black works harder than anybody else in de world. De white man tells de nigger to work and he takes and tells his wife”” (74). The arrangement of the folktales from John and Ole Massa to the intertwining of racism and sexism in oppression enacts an interrogation of gender inequality in the African-American community. It is Hurston’s multiple selves--the native who recognizes the strengths of her community, the ethnographer who frames the folktales in the context of economic oppression, and the African-American woman who both inhabits and interrogates her culture--that enable her to reveal the interplay of signification and resistance. In this way *Mules and Men* embodies the subject positioning Haraway calls for in feminist science. Hurston presses Haraway’s theory further in her conception of knowledge construction as both relational and textual, an epistemology revealed through the dialogical structure of the text.

Throughout the text, Hurston emphasizes that the success of her project depends entirely on the agency and actions of the community. Hurston chooses her hometown of Eatonville because she knows the people there will help her (3). But when she arrives in Polk County, Hurston initially meets resistance: “There was a noticeable disposition to

fend me off. This worried me because I saw at once that this [. . .] was a rich field for folk-lore, but here I was figuratively starving to death in the midst of plenty" (60). While Hurston manages to negotiate her status as an insider by claiming to be a bootlegger's woman (thus explaining the wealth that had marked her as an outsider), what is clear from this interaction is that the ethnographer's success depends on the community's choice to participate in the construction of knowledge (60-61).

In *Mules and Men*, Zora is not a solitary and heroic scientist entering the world of the primitive and returning to the West with the knowledge he has discovered. Instead, she is returning home, embedded in relationships and dependent on the community for assistance and the success of her project. *Mules and Men* thus enacts an epistemology that is situated, relational, and accords agency to the "objects" of knowledge, who in turn construct the text with the narrator, Zora.

The Hermeneutic of the Community

On August 29, 2005, Hurricane Katrina hit the Gulf Coast of the United States. It severely impacted communities in Louisiana, Mississippi, and Alabama--especially those communities already marginalized and underserved. This included New Orleans on the Mississippi Delta, the historic city that is the heart of the environmental justice movement and the end of the line for Cancer Alley, which extends north up the Mississippi River to Baton Rouge. This natural event quickly developed into an unnatural disaster, as economic and social injustices converged with environmental effects: the levees broke,

not because of the power of the storm, but because of the legacy of neglect. The images of the predominantly African-American residents struggling to survive the storm without help from the government still haunts the collective U.S. conscience. Katrina revealed the continuing failure of the nation that prides itself on being the most powerful in the world to protect its citizens who are most vulnerable. This was a moment when the long history of environmental racism suddenly became visible to the general public. Marc Morial notes that the particular injustices of this event continue to accumulate, from the initial diaspora of the residents in the days following the storm to the ongoing failure to ensure basic rights, including the rights to vote, to return, and to rebuild (xvi-xvii).

Part of what made New Orleans vulnerable is its location on low ground: the elevation drops to sixteen feet below sea level in places. Bullard and Wright observe:

In the real world, all communities are not created equal. If a community is poor, black, or on the wrong side of the tracks, it receives less protection than suburbs inhabited by affluent whites. Generally, rich people take land on higher elevations, leaving the poor and working class more vulnerable to flooding and environmental pestilence. Race tracks closely with social vulnerability and the geography of environmental risks. We saw this pattern during Hurricane Katrina in 2005 and the levee breach that flooded New Orleans. These events shone the national spotlight on government ineptness, incompetence, and severe gaps in disaster

preparedness, but for decades African-Americans have been complaining about differential treatment, about being left behind, and about outright racial discrimination. (1)

Decades before Katrina, Hurston describes a hurricane in *Their Eyes Were Watching God* that strikes fieldworkers on the shore of Lake Okechobee. After trying to survive on their own, Janie and Tea Cake (the lovers who are the main characters) leave the “muck” (the low ground) as the lake rises to seek high ground: “they reached the bridge at Six Mile Bend and thought to rest. But it was crowded. White people had preempted that point of elevation and there was no more room” (156). Hurston’s description evidences the landscapes of power and discrimination that continue into the present. Further, the text makes evident that life-and-death stakes of questions of nature, knowledge, and justice.

Earlier in the day in *Their Eyes Were Watching God*, as the African-American workers decide whether or not to leave the muck, Janie asks a group of Seminoles where they are going, and they explain that they are heading east to escape the storm (146). Debating whether to leave is a matter of economic necessity for the black workers: “Beans running fine and prices good, so the Indians could be, *must* be, wrong. You couldn’t have a hurricane when you’re making seven and eight dollars a day picking beans” (147). Gates notes that this free indirect discourse “represents the collective black community’s speech and thoughts” (214). Later, these workers who have stayed behind face the storm in their cabins. Gates writes that “[t]his idiomatic voice narrates almost

completely the dramatic scene of the hurricane, where ‘six eyes were questioning God’ [. . .] communal free indirect discourse [is] a narrative voice that is not fused with Janie’s but which describes events in the idiom of Janie’s free indirect discourse” (212). This collective voice then shifts into what Gates calls a “dialect-informed” diagesis (214):

“They huddled closer and stared at the door. They just didn’t use another part of their bodies, and they didn’t look at anything but the door. The times was past for asking the white folks what to look for through that door. Six eyes were questioning *God*” (150-51).

Even as the white community blocks access to safety, the black community circumvents white authority and communicates directly with the divine. This moment of existential questioning makes the collective black community into a Job figure, demanding an accounting from both God and nature.

Gates argues that Hurston’s formal innovation with this collective voice--using the form of indirect discourse to represent a communal thought-process--emphasizes the capacity of this diction for the tradition, as well as the text’s goal of representing oral forms of narration (214). In addition, this textual moment, and the eerie resonances it strikes with Hurricane Katrina, suggest the epistemological capacity of collective voice, figured first by the collective debating of options and later by the dialect-informed questioning of God. Questions of race, economics, nature, geography, and justice converge at this moment when the collective black community speaks in the text.

Hurston's ethnographic and fictional work offers a new way of reading environmental justice literature as a communal epistemology in which knowledge, nature, and justice are intertwined. The environmental justice movement and its literature indicate the need for a new epistemological theory that recognizes both the local knowledge and theoretical contributions of local communities in the formation of "street science" (Corburn 2005). *Mules and Men* contributes to a theoretical framework for understanding environmental justice communities as sites of knowledge that are excluded by professional scientific authority, revealing the contribution of the communities to the formation of knowledge through cultural traditions, communal dialogue, interrogation, and negotiation. Further, in reading Hurston's work as a communal epistemology that forms a theoretical frame for understanding the process of environmental justice communities, we can construct an alternative scientific, intellectual, and literary lineage through which to understand these ways of knowing as ethnic practices of science. While the environmental justice movement has traced its lineage to activist movements like Civil Rights and anti-toxics, this theoretical lineage has not been developed (see, for example, Cole and Foster 2001). Significantly, the environmental justice movement has been studied for its pragmatic applications for policy but has not been theorized as a basis for understanding how environmental knowledge is formed. Hurston's communal epistemology reveals the theoretical and epistemological contributions of non-

professional communities to knowledge. Further, *Mules and Men* discloses the inseparability of culture, vernacular language, and text from knowledge.

Hurston's key innovation with the form of the modernist ethnography is her creation of a communal voice. The "porch," the public forum where linguistic games, arguments, and relationships are negotiated within the community, is central to the text, both constituting its form and serving as the stage for many of the dialogues. *Mules and Men* is essentially an extended view of the porch, an entire text built around the signifying rituals of the black community. The use of dialect and signifying rituals, with the central process of disagreement, is a form of theorizing both about ethnography and the form of the ethnographic text. By including community disagreement and allowing these disagreements to stand within the text (rather than attempting a resolution in the field or to harmonize the views in retrospect), *Mules and Men* reveals that the process of ethnographic knowledge formation is constituted by disagreement and debate. There is no single opinion from "the black community"--even one as small as Eatonville. Further, an accurate rendering of the community's voice is necessarily plural, including the ongoing process of dissent and negotiation. Staub notes that "in keeping with the practice of signifying, the folklore studies in *Mules and Men* do not convey only one straightforward message" (96). In this way the signifying rituals of the community construct the form of the text (Staub 80). The form of the text communicates an epistemological theory: knowledge is a process that takes place in community, and the

suppression of disagreement and dissent, or the dominance of the voice of the ethnographer, would be a false claim.

In her essay "Characteristics of Negro Expression," Hurston depicts African-American culture as essentially communal. In the black community, according to Hurston "Discord is more natural than accord" (68). Using the language of evolutionary adaptation, Hurston argues that facility in verbal contests, in the linguistic games and signifying rituals, is of value to the community: "Hence the holding of all quarrels and fights out in the open" (68; see Clarke 2003 for an extended treatment of this topic). Courting rituals are similarly performed in public space. Hurston's descriptions implicitly contrast the communal and performative characteristics of folk culture with the respectable mannerisms of mainstream white culture and of the assimilated black middle class as described in Hughes's "The Negro Artist and the Racial Mountain." Hughes argues that the black poet who wishes to be "a poet--not a Negro poet" is one who has never been taught to interpret "the beauty of his own people. He is never taught to see that beauty. He is taught rather not to see it, or if he does, to be ashamed of it when it is not according to Caucasian patterns" (964-65). For Hurston, dissent and debate are part of the aesthetics and adaptability of African-American culture (Clarke 2003).

In *Mules and Men*, the communal space is one of dissent, disagreement, and finally of interpretation: a hermeneutic of the community. This process is depicted in the framing material for the folktales:

Gene rolled his eyeballs into one corner of his head.

"Now Gene calls herself getting' even wid me--tellin' dat lie.

'Tain't no such story nowhere. She jus' made dat one up herself."

"Naw, she didn't," Armetta defended. "Ah been knowin' dat ole tale."

"Me too," said Shoo-pie.

"Don't you know you can't get de best of no woman in de talkin' game? Her tongue is all de weapon a woman got," George Tomas chided Gene. "She could have had mo'sense, but she told God no, she'd rather take it out in hips. So God give her her ruthers. She got plenty hips, plenty mouf and no brains."

"Oh, yes, womens is got sense too," Mathilda Moseley jumped in. "But they got too much sense to go 'round braggin' about it like y'all do. De lady people always got de advantage of mens because God fixed it dat way."

"Whut ole black advantage is y'all got?" B. Moseley asked indignantly. "We got all de strength and all de law and all de money and you can't git a thing but whut we jes' take pity on you and give you."

“And dat’s jus’ de point,” said Mathilda triumphantly. “You do give it to us, but how come you do it?” And without waiting for an answer Mathilda began to tell why women always take advantage of men. (30-31)

This exchange multiplies speakers and points of view, performing the process of disagreement and negotiation that characterizes not only Hurston’s vision of the black expressive aesthetic but also the epistemological process that forms *Mules and Men* as an ethnographic text. Mathilda Moseley apparently surprises her husband as they argue with each other in the midst of the communal debate; the women argue with the men, and the appeal to folktales enriches but does not resolve the discussion, which continues following Mathilda’s story (34-37). The folktales themselves are voices in the conversation, and no one story is authoritative. The question of the authenticity of Gold’s folktale remains unresolved, but it seems that the question of whether Gold made up the tale or simply creatively retold an older story is less significant than the final evaluation of the group of the positions at hand in the debate. Zora, the ostensible ethnographic expert, does not go seeking the origin of Gold’s tale, but instead allows the communal debate to establish its authenticity and authority. The chapter ends with these questions unresolved and the argument continuing. Zora sides not with any position but in favor of another folktale: “‘Zora, you want hear dis story?’ / ‘Sure, Shug. That’s what Ah’m here for.’” (37). Both women ignore Bennie Lee’s protests until he falls asleep under the influence

of coon dick (a homemade alcoholic beverage (15-16)) and the stories continue in Chapter III.

The centrality of the community in interpreting the folktales, arguing with these stories and with each other through the stories, and in authenticating the claims of other speakers, shows that knowledge of African-American folk culture is formed not from facts discovered by the ethnographer but by the community itself. This epistemic theory runs against the role of the authoritative ethnographer in the modern era and poses challenges to the authority of scientific claims in the present in situations of environmental injustice. What *Mules and Men* offers is a new way of understanding, interpreting, and acting on knowledge claims in situations of environmental racism.

In his insightful study, *Street Science*, Jason Corburn argues that the distinction between knowledges in situations of environmental racism is not between 'scientific' and 'unscientific' but, drawing on the anthropological theories of Clifford Geertz, between 'professional' and 'local' knowledges. Local knowledge is held by members of a community, often associated with a place, and is characterized by heterogeneity and hybridity (57-63). Local knowledge does not claim to be objective, detached, or apolitical, but rather attempts to relate narratives "in which people [. . .] give meaning to their experiences and events" (62).

In environmental decision-making, the central question of environmental justice is 'who is at the table,' that is, who has the power to be heard. Most often local

knowledges, which are seen as subjective and unscientific by those in power, are dismissed. However, this is a false dichotomy. Local communities do not reject scientific knowledge but rather interrogate who has the authority to make knowledge claims. What local knowledge offers, Corburn argues, is ways of knowing excluded by professionals, ways that include uncertainty, social values, and a plurality of legitimate perspectives (62-64). Corburn argues that environmental justice communities have the power to transform science by requiring that it accurately describe experience (66-72). This happens when local people interpret scientific data in light of their own experiences 'on the street,' in informal experiments in their daily lives. This process involves contestation of reductionism in science and a demand for distributive justice and procedural democracy that brings in excluded voices (75-77).

The characteristics and potential offered by local knowledge are modeled in *Mules and Men*, revealing a literary form for articulating environmental justice knowledge. *Mules and Men* demonstrates that the form of the text is essential to what can be known: it is through textual innovation that Hurston communicates community dialogue and disagreement, multiple voices, communal knowledge, and ongoing questions. Environmental justice literature holds this same potential. Unlike scientific or policy documents, environmental justice literature can communicate the experience and communal knowledge of communities, through formal innovations that can speak with a

communal voice and through the diverse dialects with their multiple and ever-shifting meanings.

These textual innovations further argue for an ethics of science and for environmental decision-making that is based in the hermeneutic of the community. Hurston's emphasis on the authority of communal interpretation, inclusion of dissenting voices, and willingness to leave questions unresolved is a model for collaboration between professional and local knowledges. In championing her use of dialect, Hurston stated that she planned to "let him [the black man] speak for himself" ("Negro Expression" 73). Hurston's statement corresponds to the environmental justice movement's central tenet: "We speak for ourselves" (Cole and Foster 1). The liberatory politics of this statement are simultaneously aesthetic and scientific: Hurston's intention was to demonstrate the value of black vernacular and folk culture in the face of racism. In engaging in this process in the context of ethnography, Hurston disrupts the language of science and opens the ethnographic text to richer forms of knowledge, offering a model for an environmental justice epistemology.

Notes

¹ Although Part Two of *Mules and Men* also takes place in U.S. African-American communities, Hurston's research was on Hoodoo (or Voodoo), a religious system she did not grow up with, and therefore she does not have the same status as a "native" ethnographer in this context.

² I will sometimes refer to the narrator as "Zora" when the subject is clearly the narrative persona of *Mules and Men*. For clarity in conversation with other critical essays, however, I will generally use "Hurston." However, the argument that "Zora" the narrator is a fictionalized creation of the author Zora Neale Hurston is significant.

³ I would like to thank the members of ENG 670: Sciences of Modernism at the University of Oregon (Spring 2006), whose insights into *Their Eyes Were Watching God* inspired this reading of *Mules and Men*.

⁴ Whether these tales were actually told on this day and at this time is unknown; Hurston's "framing material" has held a controversial place in evaluations of the scientific validity of her work because it blurs the line between fact and fiction, suggesting that scientific narratives are fictions as well. See David Todd Lawrence, "Folkloric Representation and Extended Context in the Experimental Ethnography of Zora Neale Hurston" for a discussion of the importance and ethnographic validity of Hurston's framing materials.

CHAPTER III

THE POETICS OF ENVIRONMENTAL JUSTICE IN *FIGHT BACK*

Simon Ortiz's *Fight Back: For the Sake of the People, for the Sake of the Land* brings together the questions of nature and knowledge in the context of environmental justice.¹ *Fight Back* is a hybrid work of poetry and prose, written in commemoration of the 1680 Pueblo Revolt against Spanish imperialism, that documents the history of indigenous resistance to colonization and, in particular, to the radioactive pollution of native land by the uranium industry. *Fight Back* articulates an episteme grounded in Acoma language and tradition, as well as in the experience of labor. This way of knowing is composed of three elements that are both formal and thematic: a re-mapping of the landscape, a decolonization of English, and the formation of what Chela Sandoval calls "coalitional consciousness" (71). Through these elements, *Fight Back* links questions of environmental justice to a communal epistemology, one that includes the voices of nonhuman world. *Fight Back* reveals the inextricability of questions of nature, knowledge, and justice, and, further, illuminates literature's role in creating new forms of consciousness that enable resistance. This coalitional consciousness is essential to the community's resistance to environmental racism and therefore to cultural and ecological survival. In *Fight Back*, the literary form both embodies and constitutes communal epistemic processes through poetry and story. However, the work of communal

knowledge and environmental justice is not simple; *Fight Back*, through the use of Acoma Keres--the language of the Acoma people--also places the non-Acoma reader in a position of epistemological uncertainty. This positioning reveals the need for a new practice of reading that negotiates this terrain of uncertainty without requiring resolution.

Simon Ortiz's work links back to and expands on the epistemological modes delineated in Hurston's *Mules and Men*. Like *Mules and Men*, *Fight Back* speaks in multiple and conflicting voices, disrupting standard English. In the context of continuing colonization, Ortiz's poetry and prose draw on the aesthetics of the collage to communicate both these multiple voices and the ways they constitute the fragmented subjectivity of the speaker. These formal techniques create a poetics of environmental justice, expanding the operations of literature in figuring and enabling resistance to environmental racism. Further, Ortiz adds two new dimensions to Hurston's work: the nonhuman voice and the explicitly political work of literature in forming coalitions of resistance. Finally, *Fight Back* links back to Thoreau's ontology of nonhuman agency and forward to Nabhan's cross-cultural scientific work. In Ortiz's poems, the central image of the map figures the inseparability of knowledge of the landscape from the ontological assumptions of the knower. This theme of intertwined epistemology and ontology in this dissertation culminates in Nabhan's contrast between Western and indigenous sciences, as Nabhan seeks a text capable of communicating these different ways of knowing and at the same time establishing a dialogue between them.

Fight Back is divided into two sections: "Too Many Sacrifices" and "No More Sacrifices." The first section narrates the history of the discovery of uranium and

subsequent exploitation by the mining industry of indigenous lands, cultures, and bodies through a series of poems, with a particular emphasis on the experience of labor and the potential for alliances among workers. The second section, "No More Sacrifices," describes a microcosm of this experience (Cheyfitz 97). Here, Ortiz offers two parallel narratives: one is a series of poems about his journey back from Srhakaiya, the mountain three days to the west of his home. The other is a prose history, "Our Homeland, a National Sacrifice Area," which is composed of oral traditions, Ortiz's memories, and family stories, that begins with the origin story of the Aacqumeh people and comes into the present moment of uranium mining and environmental racism. In both of these sections, knowledge of the landscape is mediated through embodied experience and oral literature.

In addition to mixing the genres of prose and poetry, the collection is further complicated by languages, memories, narratives, invocations, and prayers. *Fight Back* begins with a kind of invocation in Acoma Keres and continues "The songs, stories, poems and advice will always remember / my father, mother, and my people" (287). This preface uses the active voice (the words "will remember") to describe the ways that language and oral literature operate: they are alive and participatory in the collection. This preface is followed by a prayer and then three prose paragraphs that describe his father's death, his own work in the uranium mines, and Ortiz's purpose on writing the work: "The following poem and story narratives speak for the sake of the People and for the sake of the land" (293). The collection is thus a participation in the resistance that

moves toward the victory promised in the last lines of the opening invocation: "The People shall go on. / We shall have victory" (287).

In this way Ortiz's epistemology is tied to the history of conquest, to ongoing colonization, and to the future. The key to the restoration of ecological health is the formation of coalitions of resistance. The vision of "restoration ecology" in this poem therefore includes not only reparation of the landscape scarred by uranium mining, but also a restoration of sustainable human relationships to the environment. Thus the health of the environment is grounded in social justice, in political as well as scientific solutions. This restoration of cultural and ecological health is tied to two themes that are developed through *Fight Back*: the decolonization of mind and landscape, and the emergence of new forms of subjectivity. The central figure in this process is the map.

Simon Ortiz begins his work of mixed poetry and prose "Our Homeland, a National Sacrifice Area" with a contrast between two ways of describing the desert landscape of Acoma:

I was raised in McCartys which is one of the small villages in the Acoma community. The people say Aacqu. Aacquemeh hanoh, we call ourselves. New Mexico and U.S. maps say Acoma, The Sky City [. . .] U.S. and New Mexico maps and tourist bureaus do not know the Aacquemeh hanoh's name for the local community. It is Deetsayamah--The North Door. Looking northward from Aacqu and the tall rock monolith on which the mother pueblo sits, there is an opening, like a gateway, between two mesas. Looking northward, too, from Aacqu, one can see Kaweshtima--

Snowed Peaked--a dark blue misted mother mountain. Those Aacqumeh names do not appear anywhere except in the people's hearts and souls and history and oral tradition, and in their love. But you will find the easy labels: Mt. Taylor, Elevation 11,950 ft., and Acoma: The Sky City. (337-38)

There are a series of contrasting voices embedded in this passage. The most evident is the contrast between the languages of English and Acoma Keres. Here multiple voices speak in these different languages: the voice of the narrator, Ortiz, describes the landscape as he journeys through it on foot and in memory, and, in a poem that weaves in and out of the prose essay, the voice of oral tradition names the mountains and the Aacqumeh Hanoh as a people.² There is also, briefly, the voice of the map: "Mt. Taylor, Elevation 11, 950 ft and Acoma: The Sky City." This voice is not set off by italics or quotation marks, and it is this very subtlety of the change in diction that signifies Ortiz's critique: the way the map functions as a naturalized sign. Within Western systems of thought, maps have been understood as both scientific and objective, devoid of ideology (Harley 1). This understanding of the map naturalizes it as a presentation of reality rather than as the product of a specific culture at a particular moment in time (Harley 8, 11). In Ortiz's opening paragraph, it is as though the reader is hearing how the map would sound inside a tourist's head while driving along Interstate 40, looking for the exit to The Sky City. Ortiz comments on this phenomena in an autobiographical essay published after *Fight Back*, "The Language We Know": "I grew up in Deetseyamah, which is the Aacqumeh name for McCartys, which is posted at the exit off the present interstate

highway in Western New Mexico" (423). In this way Ortiz reminds us that the problem with maps is that they obscure their own operations. Maps appear to be value-neutral representations of the landscape, giving facts and figures like elevation that seem objectively true. They offer "easy names" because they are easy to access--through official government documents, such as tourist brochures--easy to pronounce, and easy to understand because they are part of a whole way of thinking that is accepted without thinking. This is the logic of colonization.

In contrasting the voice of the map with the voices of the narrator, the oral tradition, and the Acoma Keres language, Ortiz figures the central conflict between epistemes. *Fight Back* disputes the meanings assigned to this place, in a contestation that is inextricable from the languages used to speak about and with the landscape. Through the frame of this contrast between the map and the multiple voices of the Acoma community, Ortiz is decolonizing the landscape from the multiple forces that have inscribed it: ideology, land appropriation, and radioactive pollution. This passage reveals the limits of the knowledge that we can get from the outside and articulates the positioning available through his community's knowledge through a contrast between maps and narratives. Ortiz takes advantage of what Catherine Rainwater calls the "semiotic instability" of the map to decolonize the landscape from the naturalized ideology of American imperialism (Rainwater 119). The written text of the colonizers contains silences and gaps, in spite of the apparent scientific accuracy of its survey and measurement.

Ortiz counters the map with a relational ontology. That is, the relationships between the people and the land, formed through history, narrative, and poetry, which are most fundamental.³ This is figured by the Acoma names, which are given in sequence from the situated perspective of his home: "Looking northward from Aacqu and the tall rock monolith on which the mother pueblo sits, there is an opening, like a gateway, between two mesas. Looking northward, too, from Aacqu, one can see Kaweshtima--Snowed Peaked--a dark blue misted mother mountain" (337-38). His description includes both the geographical relation of the mountains to each other and the relationship of the people to the mountains. What is most essential is not the objective description of the map that charts distances, roads, and elevations, but how these relationships constitute the landscape. This is indicated by the repetition of language such as "mother pueblo" and "mother mountain." In contrast, the point of view of the map is the view from above, which is unlocatable. This is what Donna Haraway calls the "god-trick," which claims to see "everything from nowhere" and in so doing avoids responsibility (Simians 189). Ortiz's poem describes the knowledge gained from standing within the territory charted by the map. This relational ontology orients Ortiz as he travels through the landscape.

But Ortiz is not only engaging in a critique of U.S. policies toward indigenous peoples. He is offering an epistemological approach to this landscape that is based in the themes he introduces in these first pages: in language, oral literature, and labor. *Fight Back* traces a movement reflected in Ortiz's wider work: a decolonization of landscape, memory, and identity. This movement intersects with personal and communal ways of

knowing, forming a coalition of resistance to current forms of ideological and material imperialism.

Just as he first translates Acoma Keres for the reader--“Aacqumeh hanoh, we call ourselves”--Ortiz offers a way of translating the landscape by reading it through an iterative conversation with his community’s oral tradition and his lived experience. This concept is figured by the image of Deetseyamah, a natural feature infused with meaning: “Deetseyamah--The North Door. Looking northward from Aacqu [. . .] there is an opening, like a gateway.” *Fight Back* functions as a gateway into understanding a different way of looking at the landscape. This is not to say that Ortiz assumes an easy translation; elsewhere in Ortiz’s writing, especially his essays, the incommensurability of epistemes is explicit. However, *Fight Back*’s work of resistance calls for the creation of coalitions across cultures, and it is in this spirit that Ortiz invites the reader into a new way of understanding the landscape.

The history of the map is particularly important to understanding *Fight Back*. Western cartography began in the Enlightenment and crystallized as a form during European imperialism in the New World (Harley 16n15). Maps were necessary to the process of colonization, especially to the Indian Wars and the forced removal of indigenous people from their homelands (King 146-47). The mapping of indigenous lands in the United States took place in concert with a series of policies, including relocation, the institution of the reservation system, and the Dawes Act of 1887, that undermined tribal land systems through forced privatization and fragmentation (King 146-47). This imperial power of the state did not end in the nineteenth century. In the

twentieth century, the Pueblo Lands Act of 1924 "converted lands titled to the Pueblos by the Spanish crown into Indian trust lands" (Cheyfitz 98). While this to some extent protected the Pueblo peoples against the incursion of white settlers, it also established a new paternalistic relationship between the U.S. government and the Pueblo nation as wards of the state (Cheyfitz 98). Maps are a tool used by the colonizer to lay claim, literally and conceptually, to colonized lands: "[t]he power to map or to narrate, or to keep other forms of mapping at bay, is a key element in the ability to claim a territory" (King 139) and to maintain state control of borders and populations (Harley 12). The discourse of the map silences different understandings and experiences of landscape. As Geoff King notes, "[t]he Western colonial map is an abstraction that tends to extinguish other dimensions of reality in an act of violent appropriation" (King 145). The imperialism of the map is both material and ideological. When Ortiz writes about maps, he is referring to this history, and also to the ongoing colonization of native peoples in the U.S. Thus, as argued by Arturo Aldama, the history of the United States needs to be understood as a history of empire that has produced internal colonies (7-18).

Ortiz's reference to "The Sky City" invokes another set of literal and conceptual colonizations of native land through the national park system. William Cronon notes that the protection of wilderness in national parks was an effort "to protect the nation's most sacred myth of origin" (77). This myth of origin involved the "removal of Indians to create an 'uninhabited wilderness'" through Indian Wars and the reservation system (Cronon 79). The myth of wilderness and the version of American history propagated by the national park system is, Cronon reminds us, entirely a cultural construction: "Indeed,

one of the most striking proofs of the cultural invention of wilderness is its thoroughgoing erasure of the history from which it sprang" (79). The contemporary national park system of the United States Federal government enacts an ideological colonization, figured in maps that erase the history of conquest and create "'Indian Country'" as a commodity for tourist consumption (King 147). National parks simultaneously serve to generate what Shari Huhndorf calls "a racially inflected vision of Americanness" and, through their elegiac tone, to enforce the myth of the "vanishing Indian" (5).⁴ Ortiz highlights this impact in his description of the national park system established on native land near Aacqu. This description echoes the structure of his opening description of Aacqu, using directions to orient the parks to each other:

Pueblo Bonito in Chaco Canyon
is maintained by the U.S. Park Service.

Northwards, 65 miles away,
is Aztec National Monument.

To the northwest, another 85 miles,
is Mesa Verde National Park. (339)

However, the initial similarities between the two passages describing the landscape of Aacqu and the national park system according to direction and orientation dissolve under a closer reading. The distances in the national park description are given in road mileage, echoing the diction of the map. The situated perspective of Aacqu ("from Aacqu, one can see") contrasts with the repeated passive constructions of the national parks description: "is maintained," "is Aztec," "is Mesa Verde." These passive

constructions gesture to the operation of the map and the park service in eliding the history of genocide and dispossession that underlies that creation of these parks. A further contrast is that the names of the locations are not in Acoma Keres and English, but instead in Spanish; they are the “Indian” names given by Spanish colonizers: “Pueblo,” “Aztec.” “Indian country” is filtered not only through the history of U.S. colonization but also through the history of Spanish imperialism. The use of Spanish names and repeated references to the past in the National Park literature invoke the haze of what Renato Rosaldo has called “imperialist nostalgia,” a phenomenon in which “the agents of colonialism long for the very forms of life they intentionally altered or destroyed” (69). Rosaldo notes that the peculiar characteristic of this nostalgia is its capacity “to transform the responsible colonial agent into an innocent bystander” (70). This dynamic is evident in Ortiz’s description of the “ruins,” a motif that recurs in the poetic landscape of *Fight Back*:

You couldn’t find a better example
of Americanhood anywhere.
The monuments, or ruins
as they are called, are very well kept
by the latest technology
in preserving antiquity. (339)

“Americanhood” as a national identity is propagated through celebration of an Indian past while erasing the contemporary presence of indigenous people: the language of “monuments,” “ruins,” and “antiquity” play on the trope of the vanishing Indian, while

ignoring the present political and economic situation of Native Americans in the region. In an earlier poem from *A Good Journey* (1977), "A Designated National Park," Ortiz notes "This morning, / I have to buy a permit to get back home" (235).⁵ The present tense of "This morning" and "have to," the imperatives of native life under the national parks regime, contrasts with the official description that locates indigenous inhabitation of the landscape in the past: "BUILT SOMETIME BETWEEN / 1200 AD AND 1350 AD / ABANDONED BY AD 1450" (236). The capitalization of the national parks discourse may reflect the actual signage of the park, but the effect within the poem is a blaring voice that drowns out all others.

Not only indigenous lands and structures, but even indigenous bodies are commodified as tourist attractions under the national park system. In "A Designated National Park," the speaker presses a button, as ordered by the signage, and sees

painted sticks and cloth fragments
in a child's hand,
her eyelashes still intact.

Girl, my daughter, my mother,
softly asleep.

They have unearthed you. (236)

The precise details of the child's body and use of familial language establishes the connection between the present-day speaker and the body on display. Through this description, the body becomes a little girl rather than an object. The word "unearthed,"

with its echo of “unearthly,” connotes both the beauty of a sleeping child and the eerie atmosphere of the park service’s display of this body. The juxtaposition of daughter/mother loosens the historical trajectory propagated by national park discourse. Instead of a history that depends on the vanishing Indian to establish an American identity in the present, Ortiz’s play with relationships suggests a temporal web that complicates any linear conception of historical progress. However, eleven of the last thirteen lines of the poem are excerpts from the national park display, indicating the continued dominance of the park service in interpreting indigenous history and over indigenous bodies. “Unearthed” thus communicates the sense of a broken connection to both the landscape and to the historical continuity between generations.

The themes of “A Designated National Park” are further developed in *Fight Back*, but, in these poems, the resistance to the exploitation of indigenous bodies in museums becomes central. Ortiz details the use of the mummified body of “Esther” as a macabre mascot:

At Mesa Verde, not long ago,
 they had Esther in a glass case.
 She was a child, born
 from a woman, 1000 years ago
 [. . .]
 For years, they sold
 postcards of Esther.
 Maybe they still do.

By pushing buttons, thousands
 of yearly tourists to these places
 can get an audio-taped narration.

See Museum For More Information. (339)

The section on Esther has a loosely chiasmic structure, inverting “1000 years ago” to “thousands / of yearly tourists,” a figure for the replacement of the deep memory of this place for the tourist version of history, and of continuity between indigenous ancestors and descendants with the flickering visitation of tourists.

The question of Esther’s remains introduces another set of laws that operate in this landscape and on the bodies of indigenous peoples, the Native American Graves Protection and Repatriation Act of 1990. When *Fight Back* was originally published in 1980, this Act was not yet in effect; Ortiz writes that the Park Service “was reluctant to let her go / when some Indian people / demanded her freedom” (339). In her book *Grave Injustice*, Kathleen Fine-Dare notes that

Native Americans and their allies have changed federal laws, state laws, local practices, “American culture,” and both public and private morality by speaking out against one of the most taken-for-granted aspects of living in America, which is the acquisition, desecration, dispossession, and display of the cultural property and human remains of the first inhabitants of this hemisphere. There were many reasons for this, especially in North America, where the shallow time depth of European habitation made it

necessary--psychologically, militarily, and otherwise--to collect the aboriginal past as a show of power, birthright, and organic connection to a new land. (xv)

Esther's story illuminates the multiple forces of colonization that continue to operate in Native American life today. The commodification and display of indigenous bodies serves to bolster a sense of American identity while dispossessing indigenous peoples of their land. And although NAGPRA seeks to return human remains and cultural items to the tribes, it reinforces the regime under which indigenous people live. Even those laws intended to protect Native American culture and history have the effect of increasing control and regulation of Native life.

Cognitive Maps

As these poems demonstrate, the "natural" landscape described by Ortiz is inescapably cultural, political, and historical. The concept of the map is both literal and metaphorical: it is the imposition of a narrative on the landscape that also defines the indigenous communities who inhabit this territory as artifacts. In opposition to this form of colonization, *Fight Back* offers what Frederic Jameson calls a "cognitive map": a way of negotiating the terrain of late multinational capitalism, of orienting oneself and finding a position from which to resist (90-93). In his essay "The Cultural Logic of Capital," Jameson argues that postmodern subjects are disoriented and unable to enact resistance. Postmodernism is produced by the current stage of "late" or "multinational" capitalism (78), in which the subject is fragmented and schizophrenic (63). Because of this paralysis, Jameson suggests, there is a need for cognitive mapping that will allow the

subject to negotiate the postmodern world and, potentially, to enact resistance (92). A cognitive map is not a form of mimesis but rather “a situational representation on the part of the individual subject to that vaster and properly unrepresentable totality” (90). Drawing on Kevin Lynch’s work on the postmodern city, Jameson argues that this cognitive mapping, unlike Western cartography, is better understood as “itineraries rather than as maps; diagrams organized around the still subject-centred or existential journey of the traveler” (90). Cognitive mapping is not a return to a naïve understanding of mimesis of reality or a “transparent national space,” but is rather a method for the individual subject to orient herself within “the world space of multinational capital,” using cartographic metaphors as a way of locating ourselves in social space (91-92). Cognitive mapping may thus enable us “to grasp our positioning as individual and collective subjects and regain a capacity to act and struggle which is at present neutralized by our spatial as well as our social confusion” (92).

Fight Back constructs a cognitive map that allows the speaker to navigate through the terrain of ongoing colonization. This capacity is figured by the three-day journey back to Deetseyamah, a journey narrated through the multiple voices of autobiography, oral tradition, history, and fragments of national parks discourse, shifting in time and space and between poetry and prose without warning. The aesthetics of fragmentation and collage may appear at first to be a sign of incapacity, but instead these multiple voices guide the speaker through the landscape and enable him to form a differential subjectivity (5). Chela Sandoval’s *Methodology of the Oppressed* critiques and expands on Jameson’s concept of the cognitive map, theorizing the fragmented subjectivity of the

oppressed as a site from which to enact resistance to “neocolonizing postmodern global formations” (2). While Jameson argues that ““forms of resistance, oppositional consciousness, and social movement are no longer effective under the imperatives of [. . .] postmodernism,”” Sandoval offers her *Methodology of the Oppressed* as a “cognitive map for guiding practitioners toward a dissident and coalitional consciousness” that makes decolonization and resistance possible (Sandoval 2, 5). Sandoval argues that it is the colonized and marginalized subjects of Western imperialism who have developed an “oppositional consciousness”--the “methodology of the oppressed”--that can function as a site of resistance under postmodern globalization (9). Thus, while Jameson believes that positioning and resistance are impossible in the disorientation of late capital, Sandoval takes up Jameson’s proposal of ““cognitive mapping” as a way of both negotiating and creating a position of agency within postmodernism (Sandoval 19-20, 24, 27). Sandoval sees the decentered subjectivity of the colonized as the source of skills, methods, and technologies that can enable negotiation of the postmodern terrain and generate oppositional consciousness (27-28). According to Sandoval, cognitive mapping is the “skill of knowing how to chart or map social and cultural territories in consciousness or imagination as one is moving across them” (29). Sandoval argues that under Western colonization, the oppressed have developed “a new kind of rationality” that provides the ability to engage in cognitive mapping under postmodernism (30). This is a “differential form of oppositional consciousness” that allows mobility, the creation of itineraries (30). Thus, the “decolonizing oppositional practices” developed by the

oppressed provide the skills needed to develop the cognitive maps necessary for enacting resistance within multinational capitalism (33).

Chela Sandoval's differential consciousness, a consciousness that is split and fragmented, is produced by situations of oppression. In Ortiz's story, the trauma of colonization, the Indian school system, the Vietnam War, and systematic underdevelopment all lead to a fragmentation of the subject. Ortiz's education at the Albuquerque Indian School took place during the 1950s, which was the period of Termination and Relocation, federal programs that sought to end federal services to reservations and relocate indigenous people to cities (*Woven Stone* 15). Reflecting on this time, Ortiz writes that the effect of these policies was "even more powerlessness, further fracturing and weakening of communities, and the loss of more people [. . .] There was a sense of despair that even the elders' urging for the upkeep of tradition and heritage could not dispel easily. I recall at Aacqui that fewer and fewer people were taking part in religious activities, and those few were mostly older people" (*Woven Stone* 15-16). Ortiz depicts the fracturing of the community and the self as intertwined. The federal policies fractured both the fabric of the community and individual subjectivities; Ortiz notes that the legalization of alcohol sales at this time, preying on the despair on indigenous communities, brought a whole host of "personal, social, health, and legal problems" (*Woven Stone* 16).

Sandoval argues that this fragmentation can become a place from which to enact resistance. For Ortiz, both the journey and the narration of this journey are essential to healing his sense of "otherness" and to locating a place from which to resist. In "No

More Sacrifices” --the second section of *Fight Back* that includes “Our Homeland, A National Sacrifice Area,” the history of ongoing colonization is composed of multiple threads that unravel in all directions rather than following a linear progression. The present tense narrative of journeying through the landscape is told through a series of narrative poems. This form is complicated by the voices of oral tradition, family and friends, memory, and history that are interspersed in prose passages. The subjectivity of the speaker, moving back and forth between individual and communal memories, past and present positions, is constituted by these multiple voices. Although these threads may initially disorient the reader, it is by drawing these elements together that Ortiz is able to understand the continuing colonization of the people and the land, and so to form a cognitive map. Ortiz’s journey thus reflects his experiential knowledge of place but is not a simple, unmediated experience of “nature.” His personal experience is embedded in a web of narrative, language, and tradition.

The poems that intersperse with the prose history of uranium mining begin in the middle: on the second day of the journey. This movement through the landscape is not a recreational backpacking trip; it has a ritual significance.⁶ The speaker is “on my way home” from the mountain, but is “sick, / feeling a sense of ‘otherness’” (337); further, his journey retraces that of the Aacqumeh hanoh as a people to Aacqu (338). This sense of otherness engenders what Sandoval would call “differential consciousness,” the ability to make connections and form critical awareness of the forces of imperialism at work in the apparently natural landscape:

“Otherness”

I can't describe it.

And perhaps there is such a sensation.

I had drunk some water the evening before

on the northside of Srhakaiya.

The spring was scummed over.

A Garden Deluxe wine empty lay nearby. (338)

This passage links the experience of otherness to two forms of colonization: the pollution of the springs and the destructive effects of alcohol (337). The name of the empty wine bottle, “Garden Deluxe,” ironically comments on the effect of colonization on the valley of Aacqu, which has been changed from a garden where the grass grew waist-high to an endangered landscape. The motif that links the poems to the prose passages is desert springs. As the poems and narratives trace the impact of colonization on the water ecology of the desert valley through both personal experience and oral traditions, the springs serve as a literal and metaphorical measure of the health of the landscape and the speaker.

The speaker drinks from the soured spring and looks back to the west: “I was cold and alone. / The lights of Grants, / the Uranium Capital of the World / splashed and shimmered” (341). In these lines, the splashing and shimmering of the springs is replaced by the lights of the city, alluding to the radioactive glow of the uranium mined from native land. The poems trace the industries that have succeeded one another in Grants: logging, a box factory, mining. He remembers his mother's stories of drinking

from the river before these industries polluted it, and his experience of drinking from the spring as a child, when it was still fresh. His increasingly despairing reflections are momentarily interrupted first by the dawn, then by his prayers, and finally by the intercession of a deer and the rain (344-45).

But this brief respite from the sense of otherness returns as he contemplates landscape from the top of the cliffs. He looks out at the landscape through the lens of relational ontology, seeing to the west the lava fields that are “the Monster’s blood. / Aacqumeh hanoh and Dineh will tell you” (346). To the south are “Qoweena springs / which formerly ran abundant” (346). This reminder of the destruction of the springs, as well as the view of European American towns and Highway 117, interrupt Ortiz’s recitation of story and names from oral literature; it is as though the colonizer’s map has cast a shadow over the landscape: “Above the springs is a place / some ranchers named Robbers Roost. / It is an old Aacqumeh home. / Ruins” (3463). The dense repetition of “s” and “r” sounds hiss and growl, enclosing the long vowels and aspiration of “h” sounds in “old Aacqumeh home” that sound a sonorous contrast. The name “Robber’s Roost” imposed by the colonizers has erased the Aacqumeh name (which does not even appear in the poem) and ironically names the actions of the “Mericanos” “what kind of name is that? / The thieves. / The thieves” (346). At the same time, the single word “Ruins” falls from the unnamed Aacqumeh home: ruins connotes both the ruin that has been visited on the landscape and culture by colonization, and the designation of native homes as “ruins” by the park service.

As he climbs down from Srhakaiya, the speaker encounters a government geologic survey marker, and feels “like Srhakaiya / was pushing me away” (349).

Exhausted by the heat, the speaker follows a path traced by story:

I'd always been told
that water could be found.

I walked downstream
in the dry bed.

Hot stone.

[. . .]

Under rock overhangs,
in depressions, under.

Stone.

Blue blue dry sky

Finally, I found water. (350-51)

The speaker's thoughts become increasingly incoherent as he searches for water. Heat and thirst are matters of life and death in the desert, and the fragmentation of his thoughts suggest dehydration and heat stroke, emphasizing his embodied experience and the inseparability of bodies, language, and land. The lines echo those in Eliot's *The Waste Land*, both in their subject and in the way the fragments build into a coherent image:

If there were water

And no rock

If there were rock

And also water

And water

A spring

A pool among the rock

[. . .]

But there is no water (lines 346-52, 358)

Significantly, while the brief imagist interlude in *The Waste Land* ends with the speaker still seeking water, in Ortiz's poems the oral tradition guides him to the springs, allowing him to continue his journey home. This indicates a fundamental divergence in the mythic and material landscapes of the two poems. The landscapes of *The Waste Land*--gardens, deserts, cities--are archetypal, and the drought is a symbol of the fundamental imbalance of modern life. In contrast, Ortiz's poem shows the convergence of poetry and oral literature in *Fight Back*. In this instance, oral literature provides a map that guides Ortiz through an actual, particular landscape that has been stolen, renamed, and polluted. The spring itself is an agent, first in creating the oral tradition in conversation with the Aacqumeh hanoh, and then in rejuvenating the speaker. The oblique reference to "The Wasteland" and the success of the speaker in finding water indicates that the desert of *Fight Back*, though colonized and polluted, is not a wasteland.

In addition to helping the speaker to locate a living spring, the oral tradition helps to locate the moment in time when the springs became polluted:

In the oral tradition of storytelling the chuna swirls and is vigorous and healthy. But since the time of the railroads, the logging town, the carrot

fields, and the construction of Blue Water Dam in the 1930's, the people have watched the river. Very anxiously, the people kept going to Ghoomi and Gahnippa springs, and they thought about the northwest direction toward Ambrosia Lake. (342)

This passage is an example of indigenous scientific knowledge: "The Aacqumeh hanoh speak in the oral tradition about the certainty of life and growth and change. And just as certainly, they note there came a change that was bent upon a kind of destruction that was total and undeterred and over which they seemed to have no control" (346).⁷ This oral tradition forms part of the fragmented subjectivity of the speaker, offering a diachronic narrative of the landscape that enables him to distinguish between change and destruction.

In the disorienting situation of environmental racism, the voices of oral tradition enable the speaker to form critical awareness of both contemporary problems and their origins. *Fight Back* thus becomes a participation in the continuing oral literature of the Acoma community, exceeding the concept of the cognitive map. While the cognitive map enables positioning and resistance, *Fight Back* moves beyond political dimensions. Just as the three-day journey from Srhakaiya back to Deetseyamah is a healing ceremony for the speaker's sense of "otherness," the collected poems and prose of *Fight Back* enact a ceremony.

Ceremony

The use of oral tradition and of multiple languages in *Fight Back* raises a fundamental question of how to read Ortiz's work in the dual context of indigenous

culture and ongoing imperialism. This question is tied up with the primary themes of *Fight Back*: colonization, knowledge, resistance, and the creation of what Sandoval calls “coalitional consciousness” (71). In a recent volume of *Studies in American Indian Literature* dedicated to Ortiz, P. Jane Hafen notes that literary criticism still struggles with how to approach indigenous literature and that Ortiz’s work requires “a critical approach apart from traditional methodologies” that breaks from the imposition of theories that re-colonize Native thought (62). Hafen concludes that the best critical lens for Ortiz’s work derives from his own voice: “Simon Ortiz gives readers the keys to understanding his writing” (66). In seeking an approach to Ortiz’s work, his writings about language are crucial. Robert Allen Warrior stresses Ortiz’s place as a theorist of colonial literature: “He belongs in the company of Ngugi and Aimé Césaire as a writer who has plumbed the depths of the colonial experience and found in language--his own use of it as well as others’--responses to the existential realities that colonialism imposes” (*The People and the Word* 162-63). A central concept in understanding the multidimensional relations between oral tradition, knowledge, language, and literature is articulated in Ortiz’s essay, “Towards a National Indian Literature” (1981), that of ceremony.

“Towards a National Indian Literature” is a formative statement about the question of language and Native literature and, in particular, the question of the use of colonial languages by indigenous peoples of the Americas (Weaver, Womack, and Warrior xviii). In this essay, published one year after *Fight Back*, Ortiz describes the Acoma use of Spanish language and Catholic saints in a ritual that commemorates the

entry of the Spanish into the New World and Pueblo history. This example illustrates the connection of language to oral tradition, of oral tradition to literature, of literature to ceremony, and of all of these elements to memory, knowledge, and resistance.

Many writers living in situations of colonization and of neo- and post-colonialisms have argued against writing in English and for the use of native languages as the sole medium of expression to enable resistance to imperialism in its various forms. This is exemplified by Ngugi's *Decolonising the Mind: The Politics of Language in African Literature* (1986). In this critical work, Ngugi argues that writing in English is part of the "cultural bomb" of imperialism that turns colonized people against themselves:

The effect of a cultural bomb is to annihilate a people's belief in their names, in their languages, in their environment, in their heritage of struggle in their unity, in their capacities and ultimately in themselves. It makes them see their past as a wasteland of non-achievement and it makes them want to distance themselves from that wasteland. It makes them want to identify with that which is furthest removed from themselves; for instance, with other people's languages rather than their own (3).

Writing at almost the same moment as Ngugi, Ortiz approaches the question of colonial languages--English and Spanish--in the context of oral tradition, which he also terms "oral literature" (TNIL 10, Dunaway 15). Ortiz describes oral tradition as "prayer, song, drama-ritual, narrative or story-telling, much of it within ceremony--some of it outside ceremony--which is religious and social" (TNIL 9). Ortiz argues that the Acoma

community has creatively appropriated Catholic rituals and made “these forms meaningful in their own terms” (TNIL 8). In the same way that European forms have been transformed into Native cultural traditions, Ortiz explains, indigenous people have also taken up “the languages of the colonialists and used them for their own purposes” (TNIL 10). Ortiz is cognizant of the dangers posed by the use of English. But in contrast to Ngugi’s concern about whether the use of foreign languages “continu[es] the neo-colonial slavish and cringing spirit” (26), Ortiz argues that:

it is entirely possible for a people to retain and maintain their lives through the use of any language. There is not a question of authenticity here; rather it is the way that Indian people have creatively responded to forced colonization. And this response has been one of resistance; there is no clearer word for it than resistance [. . .] It has been this resistance-- political, armed, spiritual--which has been carried out by the oral tradition [. . .] Its use, in fact, is what has given rise to the surge of literature created by contemporary Indian authors. (TNIL 10)

The operation of indigenous oral and written literature as a form of resistance is perhaps best understood through the concept of ceremony. This concept frames the discussion of literature and language in “Towards a National Indian Literature.” The essay centers around the explication of a Catholic ritual enacted by Ortiz’s uncle. In the first words of the essay Ortiz signals the forces at play in the ritual: “Uncle Steve-- Dzeerlai, which was his Aacqumeh name” (TNIL 7). The doubling of names, simultaneously connected and separated by a dash, signifies the complexity of the

internal borders and border-crossings in identities and language. These complexities are amplified in the next paragraph, which encloses a third set of names in Spanish within the play of his uncle's names: "On fiesta days, Steve wore a clean, good shirt [. . .] and he would holler, Juana, Juana! Or Pedro, Pedro! [. . .] It was a joyous sight to behold, Uncle Dzeerlai expressing his vitality from within the hold of our Aacqumeh Indian world" (TNIL 7). In framing the question of indigenous literature with the event of the fiesta, Ortiz is not merely describing literature as a ceremony; he is enacting the process of the oral tradition, as he describes it in an interview: "The oral tradition is not just speaking and listening, because what it means to me and to other people who have grown up in that tradition is that whole process, that whole process which involves a lifestyle. The whole process of that society in terms of its history, its culture, its language, its values, and subsequently, its literature" (Coltelli 104). Commenting on this same passage, Weaver, Womack, and Warrior write that Ortiz shows "how Acoma people have *transformed* Catholicism into something Indian" (xix). This evaluation and interpretation of the Anglo-American impact on the Pueblo world is already begun in the work of contemporary authors like Ortiz and Laguna writer Leslie Marmon Silko.

The definitive expression of literature as ceremony is Silko's novel of the same name. Silko's work is appropriate as a theoretical and textual interlocutor for Ortiz for several reasons. One is a shared history, language, and situation. *Ceremony* and *Fight Back* resonate for reasons internal to the texts, such as shared themes of indigenous trauma under colonization and critique of uranium mining. In fact, Ortiz cites *Ceremony* in his essay as an exemplar of the "affirmation of knowledge of source and place and

spiritual return [and] what it means in terms of Indian resistance" (TNIL 11). Most importantly for the question of literature as ceremony, both works cross the boundaries of oral and written literatures, enacting a continuation of the ceremony of oral tradition through their dialogical forms. The concept of ceremony as developed in Silko's novel offers a more complete way of understanding *Fight Back* as a work of communal epistemology. *Fight Back*'s value as environmental justice literature is not merely polemical: it institutes a new story, one that links back to the Pueblo Revolt of 1680 and creates new possibilities for communal agency.

In Silko's novel, the main character, Tayo, is involved in a struggle for survival in the wake of the death of his brother Rocky while serving together in the U.S. Army. Tayo's story is a microcosm of his people's experience of colonization, despair, and descent into alcoholism. Through the course of the novel, Tayo's story becomes macrocosmic. His journey enacts a healing ceremony for the cosmos against the forces of witchery, simultaneously figured by the malevolent character Emo and the Jackpile uranium mine. Tayo's ceremony brings healing, figured by the return of the rain. Silko's novel draws on oral traditions, poetry, and stories as well as modernist literary forms such as interior monologue, forming a text that is not a representation of but instead a participation in the ceremony that gives the novel its name, utilizing both indigenous and Western textual forms. This participation in the wide and deep living oral tradition is recognized within the text by Tayo's grandmother. When told about Tayo's journey, the completion of the ceremony that stays, at least for a time, the powers of witchery,

Grandmother says: “‘It seems like I already heard these stories before...only thing is, the names sound different” (260).

Ortiz’s poetry and prose, like Silko’s novel, is a ceremony. His work does not merely represent the oral traditions of his community but is an extension of it, linking oral literature to written forms. Ortiz’s recent poem, “A Picture” (2002), exemplifies poetry as ceremony.⁸ This poem appears in the essay “Our Language: Poetry, Story, Community” (2004), where it is contextualized within and simultaneously amplifies a discussion of native language. Ortiz begins this essay with another chiastic construction: “Language is poetry. Poetry is language” (143). This chiasmus is followed in the second paragraph by one of Ortiz’s signature poetic devices, that of rhythmic repetition:

“Staidzee. Everything. Staidzee. Everything. Staidzee starts from there. Staidzee heh tshe-nee dzehshi skuwaah-dyaawah-nishee sishti goh-muustuh. Everything about the language we use comes from there as a source” (143). This brief prose poem draws attention to the sound of the words through repetition; the exact, word-for-word translation is unclear or perhaps impossible. “There,” the starting place, is not clarified, but following on the statement about language and poetry, it seems that “there” is not only a place but also an event, the event of language.

“There” as both location and event is further suggested by the description of Ortiz’s father telling stories, an event that combines language and song into ceremony. This enfolding relationship of meaning is signified by the line that introduces the first verse poem: “There is a story I remember which is a poem I wrote called ‘My Father Singing’. It goes,” (143). The last words introducing the poem, “it goes,” are followed

by a comma, which signifies a pause, like an intake of breath: it creates a suspension of time, an anticipation of the event of the story, song, poem, memory that is always unfolding and being told again in the present act of reading, or, to use Ortiz's terminology, of "perception and expression" (144). Once again, Ortiz places another voice in the primary position, this time his mother: "Twenty years or so ago my mother said this." It is her voice speaking through the poem; the poem is an act of memory and re-creation.

This poem offers a pattern for how to read Acoma Keres in Ortiz's work. "A Picture" describes the men of the community leaving for California to find work and offers a portrait of this departure and of the women's grief. Unlike the earlier *Fight Back*, Ortiz leaves the words and lines of Acoma Keres untranslated in this poem. This move gestures to the incommensurability of Acoma and U.S. epistemes and requires the non-Acoma-speaking reader to develop a new practice of reading. In the absence of translation, Acoma Keres enters the text as sound effects. Glimpses of the picture that gives the poem its title, and thus of understanding, come through these sound effects when they are read within the context of the poem and of indigenous literature. For example, in describing the men's journey, the poem says "but most of them amoo-uh were on foot" (144). The Acoma Keres breaks through the English words, unmarked by italics of punctuation, with a sound of grief. Some understanding of this word can be gained from Silko's novel *Ceremony*, when Tayo's grandmother cries with him in the aftermath of loss, grief, and trauma from the war: "She sat down on the edge of the bed and she reached out for him. She held his head in her land and she cried with him, saying

‘A’moo’oh, a’moo’ohh’ over and over again” (33). As these examples show, Laguna and Acoma, two Western dialects of Keres, are mutually intelligible, and this intertextual reference makes a necessity of what Robert Warrior mandates as standard practice: the reading of indigenous literature in the context of other indigenous writers and thinkers (*Tribal Secrets* 1994). In his most recent collection, *Out There Somewhere* (2002), Ortiz includes several “Acoma poems,” written first in Acoma Keres and then translated into English. Kimberly Blaeser notes that this new development strengthens the connection with the oral tradition in Ortiz’s work as well as extending the project of decolonization on a new level by publishing poems entirely in a Native language (211).

The rupturing of English sentences by Acoma Keres extends to a decolonization of the English language in “A Picture.” The second and third stanzas are untranslated Acoma songs the men sang as they left, showing the particular formation of Acoma language and poetics through word and repetition:

Kaalrrahuu-ree-neeyaa-tsee

Kaalrrahuu-ree-neeyaa-tsee

Kaalrrahuu-ree-neeyaa-tsee

Kaalrrahuu-ree-neeyaa-tsee

Kaalrrahuu-ree-neeyaa-tsee

Kaalrrahuu-ree-neeyaa-tsee-ee

Shteh-eh-yuu-uuh (145)

The final two stanzas are Ortiz singing back across the years in English that has been made to look and sound like Acoma Keres:

Califor-ni-ya-aa

Califor-ni-ya-aa

Califor-ni-ya-aa

Califor-ni-ya-aa

Califor-ni-ya-aa

Califor-ni-ya-aa-ah

Let us go. (145)

This transformation of the English word and American name “California” into a song enacts the subversive practice described in “What I Mean” from *Fight Back*. In this poem Ortiz describes memories of Indian School and of his friend Agee, who

[. . .] was always laughing and fooling around

and talking Indian

(you couldn’t do that)

and making English sound like Indian

(you couldn’t do that either.)

English had to be English. (326)

Ortiz’s poem, “A Picture,” makes English sound like Indian, and thus English, as the poem states, is no longer English. It is a language that has been pulled from the position of dominance through linguistic play that requires the reader to read the poem aloud, and

thus to participate in the ritual of song and story, to understand the poem's meaning. English, in this poem, does not "[have] to be English." That is, English does not have to be the imperial language that silences all other languages and modes of expression, and thus it does not automatically engender the detrimental effects warned against by Ngugi. This poem demonstrates the creative taking-up of colonial languages and forms in a way that transforms them into modes of indigenous expression, a process that simultaneously destabilizes the ideological and linguistic dominance of Western thought and creates new modes of expression for indigenous knowledge. Ceremony, Ortiz explains, "is the only way in which the event and experience, such as the entry of the Spaniard to the Western Hemisphere, can become significant and realized in the people's own terms. And this, of course, is what happens in literature, to bring about meanings and meaningfulness" (TNIL 9). This poem, "A Picture," is a ceremony of remembrance, grief, and resistance. Further, the linguistic play is not just with a word but also with a place--the landscape of California--that enters into the conversation as the sounds are incorporated into the Acoma Keres language. The poem employs apostrophe to address the land and it is as though the words echo back across both time and space.⁹

The poem "That's the Place Indians Talk About" similarly enacts a ceremony of memory and resistance, but further introduces the voice of the nonhuman world. A prose passage prefaces the poem, in which Ortiz, as a first-person narrator, explains that this is the voice of a Paiute man speaking about Coso Hot Springs. Coso Hot Springs was enclosed within the China Lake Naval Station, a weapons facility, and the Shoshone people were barred from visiting this sacred site:

And now

they have a fence around the Coso Hot Springs

We go up there, but they have a fence around the Coso Hot Springs.

They have a government fence all around Coso Hot Springs.

Since World War II, the Navy of the government

has a fence around that place. (323)

Ortiz writes the poem in the voice of the Paiute man, and another layer is added when the

Paiute man explains "The Coso Hot Springs would talk to us / And we would talk to it"

(321). This "talking" involves the full spectrum of oral tradition: ritual, song, prayer:

You take a flint like this,

a hard stone in your hand,

and you give it like this.

When you pray.

When you sing.

When you talk to the hot springs.

You talk with it when it talks to you.

Something from there,

from down in there is talking to you. (322)

Although the title of the poem is about "talking," the imperative repeated throughout the poem is to listen:

You could hear it.

You listen.

Listen.

You can hear it.

The stones in the earth rattling together. (322)

Ortiz's poem participates in the forms of oral literature, employing rhythmic repetition that echoes the sounds of the stones in the spring: "The stones in the earth rattling together." The "s" and "th" sounds are hissing and sibilant, like the springs, while the "t" sounds onomatopoeically echo the rattle of the stones; the "ing" suggests the bright, pinging sounds of the smaller rocks. These poetic devices bring the voice of the spring into the poem. In this way the poem becomes part of a living conversation that calls for the reader to listen for this voice. The sounds of the words call attention to the aural dimension of experience, while the repetition of words shifts the focus from the meaning of the words to the sounds, and so to the act of speaking and listening. The meaning of the words becomes less important than the insistent sound of the spring.¹⁰

This poem thus avoids the debate about whether language interrupts our immersion in nature; it becomes clear that language, understood as part of a way of life and knowing, is essential to communicating with and understanding the nonhuman world--which speaks back. Robin Fast describes this poem as a form of "communal dialogism" in which "family members, ancestors, neighbors, even the land itself, speak together, each voice implied, empowered, and contextualized by the others" (91). This poem is not simply a description of a past ritual. It communicates a contemporary practice of resistance: the people's insistence on enacting tradition in spite of the literal and figurative barriers established by the U.S. government. And through communal

dialogism, as noted by Fast, the poem is not merely a record but is instead a participation in this ceremony. The poem ends with a promise that

pretty soon it will come
the moving power of the voice,
the moving power of the earth,
the moving power of the People
That's the place Indian people talk about. (324)

The final lines of the poem envision a coalition of human and nonhuman agents acting together to reclaim control of the landscape from the domination of the naval base. The active fault line of the hot springs figures the participation of the nonhuman world in rupturing existing hierarchies of power, as well as introducing a geologic time frame. It is significant that the power of the springs is one of healing ("you drink that water, it makes you well" (321). The rumbling of the hot springs suggests a literal rupture, a volcanic event. But the longer-term imagination is one of the restoration of relationship. Just as the Paiute have been blocked from visiting and speaking to the spring by the Navy fence, so the spring has been imprisoned and denied the opportunity for interlocation.¹¹ The "place" expands beyond the literal Coso Hot Springs to include a temporal location: a future moment when this relationship will be restored through a revolution of human and nonhuman agents acting together. This is not a nostalgic retelling of a past ritual but a present practice of resistance, forming the last element of Ortiz's formal epistemology. The multiple voices of the poems and narratives, past and present, human and nonhuman, form a coalitional consciousness.

Coalitional Consciousness

Early in *Fight Back*, Ortiz makes a brief autobiographical statement: “for a while I worked in the uranium mines that opened up near home” (293). This statement establishes the ground of his analysis: throughout *Fight Back*, work and the effects of radioactive colonization on the bodies of workers is the central epistemological position. Arturo Aldama argues that the process of colonization proceeded both through discourse and material practices: “[c]olonialist discourses of inferiority are oppressive violent forces that engrave subjects [. . .] The epistemic violence that determines subjects in absolutist and inferior terms mirrors and works to rationalize the material violence committed on the bodies of colonial subjects. Bodies, as much as territories and resources, became the site of colonial dominance” (16). In *Fight Back*, this colonization is depicted through the exploitation of the bodies of workers and indigenous peoples in the military-industrial complex of uranium mining. In “Ray’s Story,” the indigenous worker Lacey is confined to the dangerous job of the “Primary Crusher,” the lowest level of the mine (299). When Lacey is literally crushed because of the unsafe working conditions, his blood mixes with the mined ore, and what remains is only spoken about through not naming it:

[. . .] what was left of Lacey,
 who he didn’t recognize at all
 except for the only thing
 that had been noticeable about Lacey before (302)

The “only thing” that had been noted about Lacey by the white (“Okie”) workers was the size of his penis. Lacey’s remains emphasize his literal dismemberment and recall the way he is animalized by the Okie workers, emphasizing the shared crushing of the land and the worker. It is this commitment to the embodied epistemology of the worker that makes possible the oppositional consciousness enacted later in the text. The shared experience of work, the violence inscribed on the worker’s and soldier’s body, and working the land become meeting points for groups divided by race, class, and ethnicity.

The need for organization across lines of race and ethnicity is a recurring theme in *Fight Back*. Ortiz wrote *Fight Back* as a commemoration of the 300th anniversary of the 1680 Pueblo Revolt against Spanish colonization.¹² In this Revolt, Ortiz explains, the Pueblo were joined by “the mestizo and genizaro, ancestors of the Chicano people, and the Athapascan-speaking peoples whose descendants are the peoples of the Navajo and Apache nations, and descendants of Africa who had been brought to the New World as slaves. They were all commonly impoverished” (347). For the Pueblo, this impoverishment derived in particular from the *encomienda* system, in which land grants were made to soldiers and colonists to encourage settlement (Sando 59). Just as significantly, this system involved a taxation system and grazing rights for cattle that caused soil erosion and persistent water shortages for Pueblo farmers (Sando 60). Further, the *encomienda* land grants were accompanied by the system of *repartimiento*, or forced labor (Sando 59). The impoverishment Ortiz identifies proceeded on all levels of experience, through the colonization of land, water, labor, and bodies, as well as through a spiritual imperialism, that, along with typical imposing evangelical practices,

forbid Kachina Dances (Sando 61). Joe Sando argues that it was the accusation of sorcery leveled against forty-seven Pueblo people, with consequent imprisonment, torture, and murder, which united the Pueblo in the momentum to revolt (63). On August 10, 1680, the Pueblo expelled the Spaniards. Sando notes that "Their main political weapons [were] organization, effective tribal policies, and good faith" (65). The Spanish returned twelve years later (Sando 70).

In spite of the 1692 reconquest by the Spanish, the Revolt serves as a model of resistance in *Fight Back*. Ortiz shows that the memory of this event through the ceremony of oral tradition is vital to the ongoing survival of the Pueblo people. Recalling "the darkest and most despairing era when disease, famine, loss of land and spirit burdened the Aacqumeh people from 1880 to the 1920's," he notes that the people experienced a strange quiescence (348). There was no second Revolt because "most of the memory of the courageous liberation struggle had been erased from them" (348). In the absence of this memory, the people were unable to name an enemy and to fight back. By remembering and retelling this story, *Fight Back* unites oral tradition and contemporary politics, as well as translating the oral tradition into a written form (Cheyfitz 99). The deep temporal memory instantiated by the poems in *Fight Back* becomes an agent to combat the "stasis" that holds the people paralyzed (348). In this way, the poems become a cognitive map to organize a new resistance movement among workers, indigenous communities, Chicano, Hispano, and Mexicano peoples, African Americans, Okies, and soldiers.

Labor in the mines, the site of exploitation and violence, becomes a site for resistance. Joni Adamson notes that throughout *Fight Back*, work is figured as the epistemological site for knowing the land (61). This is another coalition between human and nonhuman agents, as both parties--marginalized humans and marginalized landscapes--seek to create a relationship and mode of inhabitation. In contrast to European American mythologies of indigenous harmony with the land or of virgin wilderness, Adamson argues that Ortiz locates nature in the trailer parks, in uranium mines, and in the bodies of the workers (61, 68). In this way Ortiz's focus on labor refutes two forms of primitivist nostalgia. The first is the myth of virgin wilderness that erases the indigenous history of inhabitation (Cronon 79). The second is the myth of indigenous harmony with nature.

William Cronon's essay "The Trouble with Wilderness" describes the erasure of indigenous inhabitation of the most cherished National Parks, like Yosemite, to create the "virgin wildernesses" that serve as a locus of national identity, the sacred, and the last remnants of the frontier (77-79). This erasure of indigenous history is modified in a paradoxical way by the Edenic mythology associated with the National Park system to include the myth of the "Ecological Indian" (Krech 1999). In this version of primitivist nostalgia, parks become a refuge from the exploitation practiced on every other landscape. As Rebecca Solnit describes the creation of Yosemite:

it serves as a world of recreation in contrast to the world of work, a compensation. To say that Yosemite is Eden is to say that everywhere else is not [. . .] So the national parks counterbalance and perhaps

legitimize the national sacrifice areas, which in the nineteenth century meant mostly mining and timbercutting and now has grown to include waste disposal and military-use areas and places drowned by dams (246-47).

Setting the parks apart as an Edenic landscape of leisure and harmony requires the erasure of historical and contemporary indigenous work. The historical erasure of indigenous work is most evident in the complete erasure of indigenous inhabitation of the landscape.

Less obvious but perhaps more problematic is the romanticization of indigenous relationships with the landscape as a kind of monistic harmony. This version of Rousseau's "Noble Savage" is not only problematic because of its inaccuracy and stereotypes, but also because it creates a narrative in which the contemporary use of the environment by indigenous peoples that does not fit this narrative is denounced as illegitimate. The contemporary erasure of indigenous work is evidenced by the refusal of usufruct rights and subsistence practices in the national parks. Ortiz writes that "[i]t is not only a matter of preserving and protecting Indian lands as some kind of natural wilderness or cultural parks; rather it is a matter of how these lands can be productive in terms which are Indian people's to make" (360). This ecological and social restoration depends on the restoration of political sovereignty to indigenous communities, including the right to work the land. The restoration of the land from exploitation is inextricably intertwined with the freedom of indigenous people and workers from oppression (Adamson 88).

In *Fight Back*, the movement toward restoration of human relationships to the land within a framework of sovereignty is extended to include worker's rights. *Fight Back* reveals that the "national interest" of the United States is enacted through the exploitation of the workers, whose bodies are "as maimed as if they had been wounded in wartime" (358): the indigenous people are living in a war zone, designated as a "National Sacrifice Area" in 1974 because of contamination by nuclear testing and mining (Tarter 107). The indigenous people are sacrificed "to serve a U.S. national interest which has never adequately served them" (*Woven Stone* 360). Against this imperialist ideology of "national interest" Ortiz opposes the interests of "the poor and workers of this nation [...] [who] will have to be willing to identify capitalism for what it is, that it is destructive and uncompassionate and deceptive" (*Woven Stone* 360-61).

Workers are the foundation for the resistance envisioned by Ortiz, what Sandoval describes as "global transcultural coalitions for egalitarian social justice" that depend on the formulation of oppositional consciousness (64). This necessary coming to consciousness is poignantly depicted in the poem, "To Change in a Good Way" (308-17). This poem occurs midway through the collection, after a series of poems that describe the systemic racism that structures every aspect of contemporary indigenous life. In this poem, the friendship between a Laguna couple, Mary and Pete, and a displaced "Okie" couple, Ida and Bill, is a model for the possibility of coalitional consciousness and resistance. Adamson writes that "Just as poverty and oppression drove seventeenth-century Pueblo people to form an alliance with the *mestizo* and the Diné in order to overthrow the Spanish, low wages and unsafe working conditions in the twentieth

century led to friendships at Keer-McGee that might not have occurred outside the workplace" (63). Pete and Bill work in the uranium mine. Bill has a younger brother, "Slick," who is serving in Vietnam (310). The friendship between the couples forms through shared experiences of work and marginal environments: first through the men's experience of labor in the mine, and then through Mary's mentoring of Ida as she seeks to garden in the trailer park.

Slick is killed in Vietnam by "stepping/ on a mine, an American mine--" (312). The double meaning of "mine" gestures to both the military imperialism of Vietnam and the domestic imperialism of the mining industry, drawing together the different "mines" in their destructive power. Pete and Mary offer a ceremony of healing and regeneration in the form of corn and a cornhusk bundle that Pete tells Bill should be put "somewhere you think / you should, someplace important / that you think might be good, maybe / to change life in a good way" (314). Bill places the bundle in the mine and asks Slick to help: "holding up / the roof of this mine that the damn company / don't put enough timbers and bolts in" (317). The 1680 Pueblo Revolt was successful because of the coalition of peoples who were linked by their experiences of oppression under colonization. This is the model that Ortiz offers for contemporary resistance. In this context, the image of the bundle being planted deep in the earth, in the mine shaft, is not only a ceremony of grief but an image of hope for renewal, as Pete explains: "It's to now that life will keep on / [. . .] / Slick will be planted again. / [. . .] like a seed planted, / like corn seed, the Indian corn" (313).

This vision for contemporary coalitions of resistance to global forms of capital and imperialism distinguishes Ortiz's political analysis from the essentialist celebrations of the local and senses of place critiqued by Ursula Heise. Heise applauds the materialist analysis offered by many in the environmental justice movement, but critiques what she sees as a "New-Age inflected rhetoric of spirituality" that opposes globalization to place-based formulations of identity (32). Heise argues that the focus on place-based identities, including those formulated by the environmental justice movement with its focus on community activism, involves a naturalization of identities that are in fact "painstakingly established and safeguarded through multiplicity of political, social, and cultural practices and procedures" (46). Deriving norms from "nature" is dangerous, Heise warns, as the example of the National Socialist rhetoric shows (47). The central problem with this essentialist conception of place, for Heise, is that it fails to engage with theories of globalization and current critiques of nation-based concepts of identity (51, 57). This prevents ecocriticism, and environmentalism more generally, from understanding the ways that local systems are related to global networks (59).

Ortiz's work resists this type of essentialism. Though his work draws on the history and moral authority of long-term indigenous inhabitation of place, these claims are not naturalized. The coalitions that Ortiz envisions are not based on what Heise critiques as an "ethic of proximity" but rather on shared experiences of exploitation (Heise 28). This is figured by relationship between the couples in "To Change in a Good Way." Pete and Mary retain a connection to ancestral land through the reservation system (and thus the relationship to the land is already disrupted by the paternalistic

power of the U.S. government). Bill and Ida, as displaced “Okies,” are migrants within the borders of their nation, recalling the “Okies” of the Great Depression who were the first industrially exploited migrant workers. Bill’s coming to consciousness of what Slick “died of, for,” is a process of making connections between environmental injustice and the military-industrial complex (*Woven Stone* 315). At the funeral for Slick, Bill’s family espouses the rhetoric of patriotism and national identity, linking the Vietnam war to the imperial expansion of the frontier and arguing that Slick has “done his duty for America” (*Woven Stone* 315). Bill’s critical thinking about nationhood and identity evolves through the poem in relationship to his experience in the mines and his friendship with Pete and Mary, as he tries to understand why Slick died: “The reason was something else, and though / Bill wasn’t completely sure about it yet / he felt like he was beginning to know” (*Woven Stone* 316). It is both a process of the “bodily experience” and “abstract [and] mediated” forms of knowledge that Heise sees opposed in much environmental literature (Heise 30).

Ortiz’s coalitional consciousness is both invoked and constituted by a series of formal devices throughout *Fight Back*. A final device is the use of the third person plural, which extends this coalition of resistance to include the reader. In the opening of *Fight Back*, Ortiz offers the “Mid-America Prayer.” Transgressing the boundaries of written and oral poetry, Ortiz draws the reader into the speech-act of the poems: “we acknowledge ourselves / to be in a relationship that is responsible / and proper, that is loving and compassionate, / for the sake of the land and all people” (289 lines 21-24). This poem calls for a commitment on the part of the reader to form what Arturo Aldama

calls a “relational subjectivity”--a sense of self that is formed in relationship to others and to the nonhuman world--and to join in the work for a more egalitarian society (24). Both Sandoval’s “coalitional consciousness” and Aldama’s “relational subjectivity” help to illuminate the political work of *Fight Back*. This political work is accomplished through the formal innovations of the poems and prose: the use of multiple voices, of the third person plural that draws the reader into a commitment to action, and the ceremony of oral literature as it is transcribed into the written poems.

Ortiz closes *Fight Back* with reflections on his experience in the Kerr-McGee mines. After traveling through the landscape in search of water and to escape from “[t]hat feeling/ of ‘otherness’” (361, lines 1-2), drawing together the threads of history, autobiography, and oral literature, Ortiz is able to construct a cognitive map which he offers to the reader as a method of positioning in the struggle against oppression: through the formation of coalitions of resistance. This cognitive map shares elements with a literary Western genre, the *Bildungsroman*, which envisions attainment of individuality through separation from community. In contrast, the subjectivity of the speaker in *Fight Back* is constituted by relationship and reciprocity with human and non-human communities.¹³ Ortiz’s formal experimentation enacts a ceremony of resistance. This resistance is based in a faith in coalitional consciousness, in the communal knowledge and dialogue facilitated and expressed by formal innovation. These texts call for a practice of reading that is not only epistemological but also political and finally ethical, one that ventures into the terrain of uncertainty in order to listen and learn how to participate in this coalition of resistance.

Notes

¹ All citations to *Fight Back* are from the version in *Woven Stone* (1992). *Fight Back* was originally published by the Institute for Native American Development in 1980.

² The autobiographical nature of *Fight Back* complicates the usual distinction between the “speaker” or “narrator” and the author. For simplicity’s sake I have chosen to use “Ortiz” to identify the persona that shifts between the speaker of poems, the narrator of prose sections and oral literature, and the “I” of the autobiographical sections.

³ This process is similar to what Keith Basso describes as “place-making” in Apache culture, an activity that is simultaneously personal, history, social, and cultural (6-8).

⁴ I would like to thank Sarah Jaquette Ray, whose critiques of the rhetoric of Organ Pipe National Park have taught me so much about the ideology of “green nationalism” in national parks discourse. See “The Ecological Other: Indians, Invalids, and Immigrants in U.S. Environmental Thought and Literature.”

⁵ All citations to *A Good Journey* are from *Woven Stone*.

⁶ My thanks for Louise Westling for inspiring this reading of the following sequence of poems.

⁷ Robin Wall Kimmerer describes indigenous scientific knowledge as holding diachronic knowledge of place based on long term, empirical observations (2). This knowledge, Kimmerer notes, is distinguished from Western scientific knowledge because it is “much more than information concerning ecological relationships. Unlike scientific knowledge, it is woven into and inseparable from the social and spiritual context of the culture” (2). See Chapter IV for a more extensive discussion of indigenous and Western scientific knowledges.

⁸ “A Picture” first appeared in *Out There Somewhere* (2002).

⁹ My thanks to Scott Pratt for this reading of the agency of California in the poem.

¹⁰ My reading of this poem is inspired by Scott Knickerbocker’s insightful interpretation of Wallace Steven’s “The Snowman.” See *Modern Ecopoetics: The Language of Nature, the Nature of Language*, 38-40.

¹¹ My thanks to Louise Westling and Scott Pratt for sharing their insights into this poem.

¹² See also *Surviving Columbus: The Story of the Pueblo People*.

¹³ This interpretation of *Fight Back* derives from Catherine Rainwater's reading of *Ceremony*, 118.

CHAPTER IV

SONOROUS VOICES: GARY PAUL NABHAN'S DIALOGICAL SCIENCE

In the essay "Missing the Boat," Gary Paul Nabhan explains how he first wandered from the conventional path of biology and into the rainforest where cultures form a rhizome with biological systems, creating new pathways for diversification of both biological and cultural forms.¹ As a college student, Nabhan was scheduled to visit the Galápagos islands, where he was to be initiated into the realm of evolutionary biology. But, Nabhan writes:

with this, as with most rites of passage that have been scheduled for me, something went awry. I did not become a "pure" anything. Instead of spending the summer engaged with the beak of a finch or the cactus-eating habits of the giant tortoises in Darwin's field laboratories, I fell under the spell of a dazzling diversity of tropical South American fruits. I succumbed to the guavas, papayas, bananas, and custard apples cultivated by indigenous farming communities--and to the indigenous folk themselves. Lured by their handiwork, I became as consumed by the "cultural selection" of fruits and seeds as Darwin's disciples are by the "natural selection" of bones and beaks. (*Cultures of Habitat* 30-31)

Thus begins the story of Nabhan's professional, intellectual, and scientific divergence.²

This theme, of the detour, divergence, or swerve from the expected trajectory, runs throughout Nabhan's work: his writing as well as his theories of evolution, pollination, and island biogeography. The language of seduction in the passage illustrates another key theme in Nabhan's writing and thinking: the pleasures of difference and the evolution of Nabhan as a thinker with the others--human, plant, and animal--he encounters. In succumbing to the lures of the tropical fruits--and the cultures that have abetted them--Nabhan is in turn consumed. The blurring of natural and cultural selection, and the ecstatic intertwining of self and other, are central figures for understanding the trajectory of Nabhan's thought. The irrepressible unsettling of established boundaries and categories animates all of Nabhan's work: his teaching, writing, and activism.

Nabhan's work links each of the preceding formal and thematic dimensions of literature from Thoreau, Hurston, and Ortiz. Nabhan's texts include elements of the naturalist narrative evident in Thoreau's work. Like Thoreau, Nabhan encounters the nonhuman as agent, and his ontological formulations of agency and sacrament push beyond the boundaries of scientific realism. This ontological orientation changes the kinds of questions Nabhan asks as well as the methods he uses to examine nature: the recurring metaphor for knowledge in Nabhan's writing is relationship. Nabhan's ethnobotanical texts link with Hurston's ethnographic work, particularly in the figure of the ethnographer as a character who must learn how to listen and what questions to ask, as well as to navigate multiple languages. Finally, Nabhan's ethnobotanical investigations extend the insights of indigenous knowledge and environmental justice

articulated in *Fight Back*. The Comcáac knowledge of reptiles, for example, is scientific but emerges within an indigenous worldview. This knowledge is also essential to cultural survival, linking scientific research to activism for Comcáac sovereignty. Nabhan's Western scientific work is thus in constant conversation with indigenous forms of knowledge, forming a dialogical text. This cross-cultural challenge illuminates three key dimensions that Nabhan introduces to the question of nature, knowledge, and literary form. The first is the ethical contribution of formal innovation to cross-cultural collaboration. The next is the mode of uncertainty, epistemological and ethical, that comes with this work. The last is the agency of the nonhuman in luring us into relationship.

Although it is impossible to trace all the influences that have led Nabhan to his hybrid position, Nabhan explains his commitment to cross-disciplinary work in a series of essays and interviews. For Nabhan, the possibility of creative thinking that breaks out of current paradigms derives from cross-disciplinary interactions (*Cross-Pollinations* 49). In *Cross-Pollinations*, he describes a particularly productive period in his work, when he had shifted his sleep schedule to observe nocturnal pollinators. Nabhan attributes this creativity to the intellectual, cultural, disciplinary, and geographical border lands he inhabited during this time: "I felt free to move between two countries, four cultures, and five languages (Spanish, English, O'odham, Seri, and scientific Latin). Not only did I take in information from all these languages and cultural perspectives on a regular basis, but I freely borrowed metaphors and syntactical constructions from them as well" (10). This milieu is aesthetic and sensual as well as empirical and scientific, requiring and

enabling new ways to frame problems. This ability to pose questions that exceed the limits of current paradigms corresponds to Thomas Kuhn's concept of a "scientific revolution." According to Kuhn, a scientific revolution necessitates "the community's rejection of one time-honored scientific theory in favor of another incompatible with it [. . .] produc[ing] a consequent shift in the problems available for scientific scrutiny [. . .] transform[ing] the scientific imagination in ways that we shall ultimately need to describe as a transformation of the world within which scientific work [is] done" (6). Nabhan's location on the boundaries of conventional biology, between cultures, and across the disciplines of the humanities and the sciences, is a position from which current theories can be critiqued and new questions posed.

Nabhan's intellectual engagements help to explain his amphibious approach to questions of knowledge. He has worked with indigenous scientists since his graduate work, which produced his first book, *The Desert Smells Like Rain* (1982). *The Desert Smells like Rain* recounts his experiences working with and learning from the Tohono and Hia c-ed O'odham people in the Sonoran Desert that bridges the United States and Mexico. *Singing the Turtles to Sea* (2003) evolved from his enduring friendship with the Comcáac community of Desemboque and Puente Chueca, Mexico. This intellectual formation of Nabhan as a Western scientist in constant dialogue with indigenous science is crucial to understanding the significance of Nabhan's textual innovations, as well as the wider ethical and epistemological reach of his work.

Indigenous and Western Science

Nabhan's work is engaged with the traditions of both Western and indigenous sciences. Drawing on this experience, Nabhan advocates for a redefinition of science broad enough to recognize the validity of indigenous scientific knowledge (*Turtles* 158). Nabhan defines ethnoecology as "any community's attempts to understand other species' interactions on their own cultural terms" (*Turtles* 159). Together, a broad definition of "science" and a commitment to understanding the meaning of knowledge within a community's culture creates the possibility of communication and collaboration, even when there are ontological and epistemological differences. Sandra Harding suggests defining science as "any systematic attempt to produce knowledge about the natural world" (10). To this Nabhan adds that "artistic expression" is interwoven with scientific insight in the Comcáac community (*Turtles* 3). Robin Kimmerer offers a series of distinctions between current forms of indigenous and Western science as a way of describing their similarities as well as commenting on their differences. According to Kimmerer, indigenous science tends to be qualitative, diachronic, and localized, while Western science tends to be quantitative, synchronic, and to produce abstracted and generalized predictive models (5).³ This description highlights the shared empirical basis of these ways of knowing while noting differences in emphasis.

Indigenous scientific knowledge cannot be defined in Western terms because of fundamental differences in ontology and ethics. For example, the concept of "natural world" from Harding's definition may not have a clear meaning in this cross-cultural context. Vine Deloria notes that contemporary Western science focuses on a "restricted

arena," whereas the native definition of knowledge is wider (45). Further, the implications of this knowledge may be understood very differently. Gregory Cajete, for example, emphasizes the responsibility of the individual knower to the community: "it is not just a matter of individual understanding but is gained and shared for the perpetuation of the community" including both human and nonhuman members (72). In sum, defining Western and indigenous sciences, and describing their points of convergence and departure, is not easily accomplished.

Nabhan identifies a key element in forming collaborative ventures between indigenous and Western science: that of taking a knowledge system on its own terms, within the context of its culture. Western science operates mainly within the ontology of scientific realism. By "scientific realism" I mean, simply, that Western science claims that it describes the world and that this world exists independently of human ideas. This contrasts with indigenous forms of science, in which ethical and spiritual values are interwoven with epistemological claims (Kimmerer 6). The contrasting commitments between these two cultures gesture to a fundamental incommensurability in certain areas. This does not imply that cross-cultural work between indigenous and Western science is impossible. Rather, it suggests that these differences must be recognized in order for dialogue and collaboration to occur. The necessity of this process of recognition and negotiation has been addressed in the literature on indigenous science. For example, Kimmerer notes that: "As western scientists come to recognize the value and validity of traditional knowledge, they often attempt to extract the kernel of objective 'fact' and

discard its cultural context, like the unwanted husk of a fruit. Separation of the knowledge from the culture devalues both" (5).

These different cultural contexts and value systems lead to differences in the way questions are posed by Western and indigenous scientists. For example, in the context of restoration ecology, Kimmerer notes that there may be different goals based in different philosophies, which then result in different approaches to restoration and management (and even the concept of management may be a source of disagreement) (6). The Indigenous People's Restoration Network explains that "Ecological Restoration is inseparable from cultural and spiritual restoration, and is inseparable from the spiritual responsibilities of care-giving and world renewal" (quoted in Kimmerer, 6). Indigenous scientists and their Western scientific collaborators agree that indigenous science, and its insights, cannot be reduced to a "tool" in the "toolbox" used to solve problems. This is not only an issue of respectful interaction; it points to a different understanding of both nature and knowledge.

It is in this context that Nabhan's formal innovation with the scientific text is vital. Scientific monographs became increasingly technical and specialized in the nineteenth century, corresponding to the professionalization and disciplinary specialization of the sciences during this time (Farber 33-34). In the contemporary Western scientific article, language is understood as a transparent medium through which data is communicated.⁴ The genre of the peer-reviewed scientific article is strictly defined, with a standardized format (usually introduction, methods, results, discussion, and conclusion) that crosses the disciplines in peer-reviewed journals.

Nabhan's texts create an intersection between Western and indigenous epistemologies by expanding modes of expression and thus engaging both ways of knowing. Nabhan's formal innovation with the scientific text holds at least two significant epistemological implications. The first is the fidelity of the text in representing knowledge and the scientific process. In Nabhan's work, the text is dialogical, seeking to express the multiple voices, human and nonhuman, that form knowledge. The second dimension is related to these formal innovations. In the context of his cross-cultural work with indigenous collaborators, this dialogical form makes an ethical intervention: it seeks a form capable of communicating indigenous knowledge and voices, as well as the process through which this knowledge is formed. In this chapter I investigate the epistemological value of Nabhan's formal innovation, and the ethical dimensions of this work, in the context of his collaboration with indigenous communities. I then turn to Nabhan's efforts to engage with the nonhuman world in his work, specifically, in his portrayal of plants as interactors in the creation of knowledge. This work with plants evidences Nabhan's training as a pollination biologist as well as the influence of indigenous science. Nabhan's dialogical scientific texts are thus the culmination of my exploration of the capacity of literary texts to constitute and express communal epistemologies that cross the boundaries of disciplines, cultures, and species.

Nabhan's Dialogical Science

Nabhan's texts engage multiple voices, human and nonhuman, in conversation. These texts are hybrid, incorporating elements of the ethnographic narrative, the natural history essay, and the scientific article. This hybrid form allows for a text that is

communally created, forming a location for cross-cultural dialogue between Western and indigenous ways of knowing. In the context of this cross-cultural work, the multivocal form of the text holds an ethical dimension: it deemphasizes the authority of the author and of Western science in order to create dialogue on more equitable grounds (Nabhan, *Turtles* 4). Through the inclusion of multiple voices, the voice of the single author is decentered. Nabhan's attempts to create a multivocal text began with his first work, *The Desert Smells Like Rain: A Naturalist in Papago Indian Country* (1982) and continue through his more recent work, especially *Singing the Turtles to Sea: The Comcáac (Seri) Art and Science of Reptiles* (2003).⁵

As the first monsoon rains begin in the desert, the voice of the narrator in the "Overture" to *The Desert Smells Like Rain* begins in the first person plural and then enters the *Umwelten*, or worlds, of nonhuman and human desert dwellers.⁶ The narrator follows a yellow turtle as he emerges from the dry mud "where he had been buried through the hot dry spell [. . .] He has no memory of how many days it's been since his last swim, but the pull of the water--*that* is somehow familiar" (5). The narrator suggests the temporality of the turtle's *Umwelt* and its perceptual dialogue in the beckoning of the flood water and then turns to a human experience of the same rainstorm: "Julian imagines big yellow squash blossoms in his field, just another month or so away. It makes his mouth water" (5). Here human and nonhuman temporality and sensual immersion live side by side in the desert and in the text.

These shifting points of view become shifts in voice as the narrator considers the rain ecology of the desert. At one point the text looks over the shoulder of an indigenous

farmer, Remedio, as he considers irrigating his fields. The narrator at first speaks of Remedio in the third person, but then the text moves into free indirect discourse: "He has heard that well water has some kind of 'medicine' (chemical) in it that is no good for crops" (8). The Spanish syntax of the last phrase indicates a merging of the voice of the narrator with that of the character. But the narrator then takes on the voice of the Western scientist and his technical vocabulary: "I joined in a study with other scientists to compare the nutritive value of tepary beans grown in Papago flashflood fields with those grown in modern Anglo-American-style groundwater-irrigated fields nearby" (8).⁷ However, just as the voice of Western science follows but does not silence the words we overhear in Remedio's voice, the Western scientific study verifies but does not replace indigenous scientific knowledge. Indigenous science grows out of a coevolution of plant and human communities in the desert ecology and gestures to a position for the Western scientist to take in learning to dialogue with the human and nonhuman inhabitants that surround him.

This theme of coevolution is folded in the formal dimensions of the text, which shows the limitations of Western science in the rainwater experiment: the experience of the rain can be translated but not replaced. The text offers a more complete portrait of the desert. The narrative brings the voices of indigenous knowledge and Western science, the experience of the rain by individuals and communities, human and nonhumans into conversation. The text expresses an ontology distinct from scientific realism, describing emotional and sensual qualities and experiences that are not quantifiable through empirical methodologies.

Nabhan's most radical experimentation with the form of the scientific text is *Singing the Turtles to Sea*. The subtitle reads "Undertaken in Collaboration with the Seri Tribal Governors and the Traditional Council of Elders," and the opening pages list more than a hundred Comcáac contributors. These prefatory pages indicate the collaborative nature of Nabhan's ethnobiological work and, further, the text's attempt at fidelity to this process. The first part of *Singing the Turtles to Sea* compiles textual forms including ethnographic narratives, dialogues, quotations, history, and scientific theories. Alongside these written forms are photographs, illustrations, carvings, charts, maps, and archival sources. This section forms the first eight chapters and constitutes the majority of the text. The second part of the text is a status report in a more conventional ethnobiological mode. Nabhan notes that while Comcáac knowledge is presented in the second section "within Western scientific systematics [,] [n]either of these frameworks is assumed to be more or less 'correct' than the other" (226).

The introduction further frames the study by complicating the position of the narrator. The chapter begins with a variation on the classic ethnographic arrival scene, as Nabhan enters on a sand road. A Comcáac artisan, Blanco, attempts to sell Nabhan an ironwood rattlesnake carving, after Nabhan has reminded himself to patronize other carvers (1). Comcáac carvings are collector's items, and the sale of these art works is essential to the survival of the individuals, community, and the ironwood tree itself.⁸ When Nabhan seems likely to decline, Blanco intensifies the sales pitch, proclaiming that he "saves" Nabhan (2). Calling Nabhan by his Comcáac name, "Hant Coaaxoj" (Horned Lizard), Blanco points out that in this carving, unlike most rattlesnake carvings, the snake

is not in the process of eating a horned lizard. Instead, Blanco has carved Hant Coaxoj as a bulge in the snake's body--in other words, the lizard has already been swallowed. The exchange highlights the complexity of power relations between Nabhan as an ethnographer and source of funds in this remote area:

"I was going to carve Hant Coaxoj eaten and dead again! But then, the last time you came, you pay me all I ask for. This time, well, I make snake, but see that bulge?"--he pointed half way down the snake's sinewy length--"This time, Hant Coaxoj gets swallowed by Snake, but Hant Coaxoj doesn't die. Hant Coaxoj lifts his thorny head and cuts right through Snake's skin to get out [. . .] I've seen him escape that way, right up through Snake's skin. Hant Coaxoj, this time you go free!"

"I go free?"

"Yes, you buy this snake from me for a good price, and you go free!" (2)

Blanco has the last word in this exchange, and the narrator is unable to resist the lure of the carving. The images in this passage both confirm and undercut the promise that Nabhan will "go free." In the carving, Hant Coaxoj has been consumed by the snake--a figure that, as we saw in the passage from "Missing the Boat," signifies the Nabhan's immersion in the culture. Blanco's knowledge of the predator-prey relationship of the snake and lizard catches Nabhan as well; he writes: "Sometimes it is the Old Gringo Blanco's stories that get to me" (3). Nabhan is caught by his fascination with the Comcáac culture just as Hant Coaxoj is caught by the rattlesnake. However, the unequal

economic status creates a tension that prevents a nostalgic reading of the passage as simple friendship; the text displays the constant negotiation of ethics and responsibility entailed in this work for cultural survival. At a basic level, the text contradicts itself: Nabhan does not “go free,” but rather, invests himself further in the community through each chapter.

The ethical dilemmas posed by cross-cultural work are intensified in the scene that begins the first chapter. This is staged as another arrival scene: “Our nostrils flared as we entered the smoky plume of the fiesta, walking into the gathering from the other side of the village’s largest satellite dish” (15). These repeated arrival scenes figure the constant disorientation and renegotiation involved in this work. But this event forces the narrator onto the ground of ethical as well as epistemological uncertainty. The opening sentence introduces the context of the entire study: the transition and challenges faced by the Comcáac, as they continue to celebrate cultural traditions--in this case, a puberty ceremony for a young woman--in the midst of rapid technological and economic change, as symbolized by the satellite dish in the village, a new image of the machine in the garden. However, Nabhan does not go seeking a pastoral or primitivist Eden (*Turtles* 16). Instead, the narrator is stalked by the celebrant’s “young, inebriated cousin [. . .] [who] would approach us and very seriously request that we sing an American song or recite our life histories into his tape recorder, so that he could ‘save’ this event for posterity” (16). This mocking challenge to the narrator’s ethnobiological pursuit frames the next dilemma faced by Nabhan, when he discovers that the Comcáac are eating Green Sea Turtle, an endangered species, as part of the ceremony (17). Seeking confirmation,

the narrator inquires what kind of turtle they are eating, and Ernesto Molina replies “*cooyam*,” which, the narrator explains, refers to “the younger migratory Green Sea Turtles that arrive from the south in the spring earlier than the rest” (17). This translation displays the wealth of knowledge contained in a single Comcáac word, linking the endangered sea turtle to the conservation of the Comcáac language.

Although at first “incredulous,” the narrator then reflects: “It dawned on me that we were participating in a sacrament, one that has been performed ever since the Comcáac first became seafaring people. By blessing this young woman’s rite of passage with the meat and blood of *moosni cooyam*, they were linking her life to the very creature that swims through their culture’s stories, songs, dreams, and diet” (18). The figure of blood runs through this passage and the opening chapter, linking the menarche celebration and the sea turtle’s blood through the metaphor of sacrament and “communion,” with its echoes of sacrifice, remembrance, community, and resurrection (18). Nabhan writes:

But as I looked up again into the face of the sea turtle shining in the firelight, another wave of emotion washed over me. Because I once shared quarters with a marine biologist who worked tirelessly to protect the nesting beaches of sea turtles, I had for twenty years boycotted any restaurants that featured sea turtle meat, eggs, or soup. Caught up in the moment, perhaps flattered by the invitation to share sea turtle with Seri friends, had I suffered some ethical lapse? (18)

This vignette poses what seems to be a dilemma between the narrator's commitments to conservation biology and the Comcáac community, but it is the work of the entire text to undermine this false opposition and to find a way to mediate between these two cultures. This mediation takes place through flesh: the flesh of the turtle and of the narrator who consumes it and, in doing so, is consumed. The flesh figures the imperative of embodied relationship in the formation of ecological knowledge. In contrast to the value placed on objectivity and detached observation in Western scientific methodology, it is only through engaging these complicated relationships that the narrator can hope to gain insight into the processes at work in this landscape. This focus on relationship reflects, in part, the methodological difference between the sciences of biology and ethnobiology, which incorporates the study of human cultures. Nabhan's particular contribution is through the form of this text. The text mediates between the Western science of conservation biology and the indigenous science of the Comcáac. As Nabhan notes, the sea turtle is embedded in the Comcáac "stories, songs, dreams, and diet." Communicating the richness of this knowledge requires a multivalent and multivocal text, a mode of "thick description" Nabhan argues for in the introduction (*Turtles* 5). The method of thick description was suggested by Clifford Geertz. Geertz emphasizes that anthropology was an interpretive as well as an observational practice and that ethnography must include a thorough description of the cultural context as well as the behavior being studied (9-10), arguing that the virtue of ethnography is not the gathering and verification of facts, but "the power of the scientific imagination to bring us into touch with the lives of strangers" (16).

This narrative dramatizes the moment when the narrator is faced with the ethical challenge of doing cross-cultural science and avoids the dangerous move that Kimmerer warns against--seeking to extract the knowledge of the community from its surrounding context of meaning and spirituality. It is the multigeneric form of the text that communicates the complexity of this knowledge, the relationships between the Comcáac and turtles and between the narrator and members of the community, as well as the conflicts within the narrator himself. Relationships are the locus of meaning, from the young girl's relationship with her community, to Nabhan's relationship with marine biologists, Comcáac ecologists, the turtle who has a face, to the multitude of relationships between humans and reptiles depicted in the text. It is only by venturing onto unfamiliar ground that the narrator can learn the meaning of the sea turtle in the community's life and so begin to understand their knowledge of this species. This moment of epistemological uncertainty is tied to ethical uncertainty: "had I suffered some ethical lapse?" (18). The text answers this question not only by performing the negotiation of simultaneous scientific and ethical dilemmas, but by leaving them unresolved. This willingness to pose questions without demanding answers is a form of inquiry that requires textual innovation. Nabhan's methodology allows multiple hypotheses, possibilities, and worlds to coexist without being harmonized.

This process of unresolved questioning ends the episode, as the young cousin who has been weaving through the celebration weaves his way back into the narrative:

The young Seri anthropologist reappeared with his tape recorder, which no longer held either tape or batteries. Nevertheless, he wanted to talk with me. He held the recorder up in front of my mouth.

“Well,” he began, “tell me about your culture. What are your beliefs?” (18).

The first-person narrative of this section allows us as readers to know that this is precisely the question that the narrator is asking himself, as he balances between his commitments to conservation biology and his fidelity to the cosmology of the Comcáac community. We also know that the narrator has not found an answer. This interaction figures the work that this text does: creating a space where these voices of ecological knowledge can have equity. The Comcáac youth turns the tables on the ethnobiological expert, requiring a mutual interrogation. The search for an answer to the epistemological and ethical dilemmas of cross-cultural science will be explored through the rest of the text.

Tied to the thick description of Comcáac knowledge and the ethical imperative of contextualizing this knowledge within the culture is the question of indigenous voices. This requires moving beyond the strict form of the scientific article to a text that is adequate to expressing the knowledge held by the Comcáac community. The text is not merely a representation of the interactions but a participation in the epistemological project with its concomitant ethical obligations to the nonhuman world and to the Comcáac community. In the introduction that explicates the theoretical orientation of the

text, Nabhan articulates this inclusion of the voices of Comcáac collaborators as an ethical mandate:

far too many published ethnobiological treatises fail to capture fully the diverse tones and timbres of contemporary cross-cultural discussions [. . .] Far too often in the past, ethnobiological texts paraphrased, summarized, or homogenized such discussions to the point that the heterogeneity of native speaker's voices could barely be heard [. . .] we need to foster a brand of ethnobiology that features the expressive individuals who interpret their culture's traditions in idiosyncratic ways and innovative ways, rather than continuing to stereotype every soul in a community as if they uniformly adhere to the same cultural norms (*Turtles* 4-5).

Textual innovation is central to Nabhan's effort to communicate the diversity of indigenous knowledge and voices. This is evident in the structure of the chapters and visual appearance of the page. In Part I of *Singing the Turtles to Sea*, each chapter weaves together multiple voices. The chapters begin with quotations from indigenous writers, Western scientists, and philosophers of science. These quotations are followed by a vignette, set off in a distinctive font, which sets out the paradoxes and problems for the chapter. The voice of this narrative is the one that speaks in Nabhan's more ethnographic work, such as *The Desert Smells like Rain*: the narrator is humble, curious, and often the source of humor through mistakes and mishaps, as in the attempt to identify a lizard that begins chapter four, "Naming the Menagerie":

When Craig [Ivanyi] captured a Zebra-tailed Lizard, I was sure that Guadalupe would look at it and declare it to be a *ctamófi*. No such luck.

“*Ctoicj*,” he declared.

“*Ctoicj*? Why not *ctamófi*?” I moaned.

“Yes, well...it’s not easy to know the names because, traditionally, the animals of the *monte* all had two, maybe three names,” he explained. “*Ctoicj* is the oldest one, but it is for the same animal as *ctamófi*.” He added, “There is a third name for the young ones: *matpayóo*.”

I groaned [. . .]

“Don’t worry, Hant Coaxoj, most of them have two or three names, and at least you know one of them.” (100)

The character of the ethnobiologist is situated not as the expert but as the somewhat overwhelmed apprentice, invoking humor and empathy from the reader, who also struggles with the detailed taxonomy of Comcáac herpetology.

In each chapter, following a break signified by white space, the narrative voice shifts. This narrative voice (rendered in a more standard font) seldom speaks in the first person and uses a more detached perspective and tone, as in this account of a poisonous snake and its mimic: “It is curious that most contemporary Comcáac do not concern themselves with the differences between the true Western Coralsnake (*coftj*) and the false coralsnake (*hant quip*)” (108-09). The passage goes on to explain the differences between the two species and to hypothesize about the Comcáac community’s relaxed attitude toward the false coralsnake. This same idea would have been depicted

differently had it been embedded in an opening vignette; likely it would have involved a comic error in identification by the character “Nabhan.” Following the opening scenes in each chapter, the character of “Nabhan”--clown, occasional dupe, student, advocate, and friend--retreats from the center of attention in order to orchestrate the Comcáac voices in a discussion of their knowledge of the natural world.

This orchestration is evident in the appearance of the pages. In Chapter II, for example, inset quotations from named Comcáac individuals, demarcated from the central narrative voice by lines and white space, interrupt the “author’s” voice on almost every page. In this chapter on “Mapping the Comcáac Sense of Place,” these voices move through the Western form of the text and into Western cartographic representations. On page 45, a map of contemporary Comcáac homelands in Sonora is labeled in *Cmique Itom*, the Comcáac language. *Cmique Itom* is not closely related to any extant language and is quite difficult for non-Seri speakers to learn (*Turtles* 3, 6). The following page shows the greater Comcáac territory, again with *Cmique Itom* names, but this time with translations into English of contemporary Mexican and U.S. locations. The visual representation of the map becomes a hybrid form, changed by the overlay of *Cmique Itom* that displays the Comcáac knowledge of the land while at the same time denying mastery of this knowledge to the reader. The map becomes a tool of disorientation and partial reorientation.

This figure of the map indicates the wider theme of the chapter, the concept of “homeland” in Comcáac culture. The author’s voice narrates the trial and error process through which contemporary ethnographers attempted to discover the “collective cultural

geography” of the Comcáac (52). The ethnographers engaged in careful questioning, using the language of “your land” rather than “place,” “home,” “world,” or “legally defined territory” in an attempt to avoid placing categories on Comcáac ways of inhabitation (53). These ethnographers were surprised by what they learned from these interviews about Comcáac relationship to the landscape, such as the knowledge of the exact location of an individual’s own birthplace (54). The collage of textual styles and mediums communicates both the range of Comcáac knowledge and the intrinsic relation between language, ecological knowledge, and forms of expression.

This interplay of knowledge, language, and artistic expression is illuminated by the juxtaposition of text, charts, and art, including drawing and photographs of carvings. On page 102, a chart interprets the surrounding textual explanation about the Comcáac knowledge of turtles encoded in language (see Figures 1 and 2). Starting from the *Cmique Itom* term *Ziix Ccam*, “thing that-is-alive,” the table features a tree that branches into five recognized forms of turtle, each of which follows of line of increasing specificity. A column lists the Western scientific taxonomy of genus, species, and variety parallels to the Comcáac taxonomy. These categories do not “verify” Comcáac knowledge--the Western taxonomic names are not included--but rather serve to indicate the depth of Comcáac observation, as the final branch of the tree ends with the variety “*moosnictoj* ‘orangish Green Sea Turtle.’”

The interaction of knowledge and expression is amplified by the photograph of the carving below the chart, a Desert Tortoise that shows “the characteristic shape of the carapace” (102). The authorial voice lends authority to the carving through

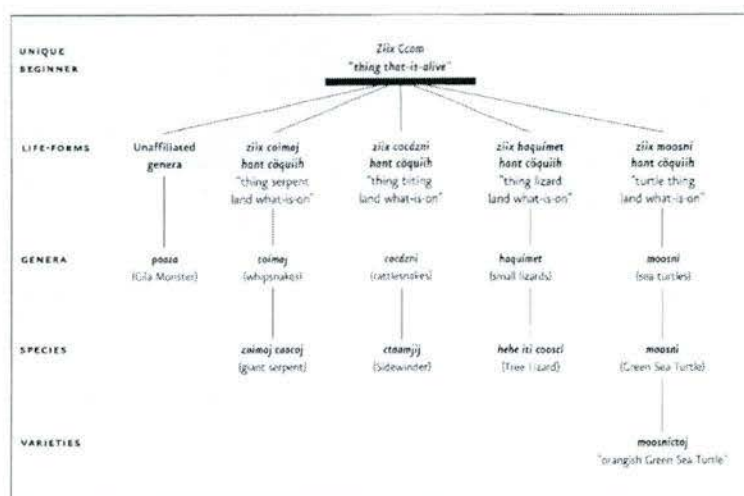


Figure 9 (above). Some life-form categories named in Chiricahua.

Figure 10 (right). A Desert Tortoise carving showing the characteristic shape of the carapace. (Photo: Heiga Teiwes, 1997)

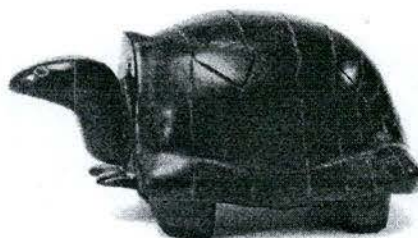


Figure 1. Sample page from Nabhan's *Singing the Turtles to Sea*.

With regard to other, more unique-looking, reptiles, some Seri individuals are so intimately familiar with them that they do not place them in any life-form category. These "unaffiliated genera" include *paaza*, Gila Monsters, and *caixox*, geckoes and night lizards. Which lizards stand alone and which get placed within the life-form category *ziix haqimet hant cõquih* is to some extent a matter of personal taste and familiarity. However, the number of monotypic, unaffiliated genera recognized by most Comcáac is quite large compared to the number of polytypic genera subsumed under life-form categories (Table 12). Scholars of folk taxonomies typically refer to a classification system as "flat" if it has many monotypic, unaffiliated genera and tends not to use life-forms and other higher categories. By these standards, Comcáac folk taxonomies are considered to be extremely flat (Berlin 1992). This characterization, however, does not do justice to the complexity of the Comcáac sense of natural order.

Oddly, a few kinds of animals and plants—humans, Leatherback Turtles, Regal Horned Lizards, and boojums, for example—are separated out from the "unique beginner" category *ziix coam*. Instead, these legendary beings are placed in another, higher, category: *ziix quisax*, "things with spirit-breath" (Felger and Moser 1985).

"The Seri can't eat Leatherbacks. It's prohibited. If you put it [Leatherback meat] into your mouth, you'll fall under a spell like you're sleeping, even though you were just awake, chewing. The Leatherbacks understand our dialect, they can turn themselves over for us in the water or on the beach. It's not merely a turtle—it's one of us. Leatherbacks always come in the spring, migrating with fleets of *cooyam* [Green Sea Turtles from the south]. They never come alone, by themselves."

GUADALUPE LÓPEZ, *Desenboque*

EVEN IN THE DRIEST PORTIONS of the Sonoran Desert, myriad kinds of animals walk on the ground, protecting themselves with a shell or a venomous bite; they are not all easy to tell apart at first glance, so there are many names and diagnostic characters to remember. Sometimes elders in *Desenboque* will recall

Figure 2. Sample page from Nabhan's *Singing the Turtles to Sea*.

the notation of its accuracy. But the inclusion of the carving moves beyond a verification of Comcáac knowledge to the question of expression of this knowledge, pressing at the boundaries of the page (the carving is three dimensional, impossible to depict fully through the book format). This pressure indicates the need for even more radical formal experimentation. Not just ethnobiological texts but all of the disciplines of Western science need this kind of epistemological openness and textual innovation. This does not mean that the standard format of the Western scientific article needs to be replaced, but rather that there is the possibility of coexistence, with each textual form enabling the construction and expression of knowledge.

Linked to this ethical dimension of textual representation is the ethics of practicing research with indigenous communities. Throughout his scientific and naturalist essays Nabhan argues for Western scientists to acknowledge and respect indigenous scientific knowledge, sovereignty, and culture, against stereotypes of the “noble savage,” against the extraction of knowledge and resources from indigenous communities, and for conservation work (especially on indigenous land) to include indigenous people as decision makers and to assure benefits to indigenous communities. The final two chapters of Part I of *Singing the Turtles to Sea* engage these questions of how the benefits of research should accrue to native communities. Chapter VII explores the role of the Comcáac as conservationists and managers in cooperation with governmental and non-governmental agencies. Chapter VIII turns to the question of the conservation of Comcáac knowledge.

These two concerns are tied together in the “para-ecólogo” certification course developed by tribal elders and Western scientists (*Turtles* 222). Through this program, indigenous and Western scientific methods and knowledges are combined to monitor and protect endemic and endangered species (*Turtles* 222). By valuing indigenous knowledge and directing support to the Comcáac community, rather than to universities and outside research, the knowledge is preserved through practice (*Turtles* 222). Further, the community retains control over both their traditions and their land. The chapter ends with this exemplary program, returning thematically to the ethical dilemma posed in the introduction. Cultural and ecological survival are shown, finally, to be inseparable rather than in opposition.

Nabhan’s efforts to create a dialogical text further involve the agency of the nonhuman, and especially the plant. These texts are scattered throughout his career, from his earliest publication (especially *The Desert Smells like Rain* and *Gathering the Desert*) to his most recent work in the preservation of heritage species and food traditions, *Renewing America’s Food Traditions* (2008).⁹ This work reveals Nabhan’s training as a pollination ecologist attuned to the agency of the plant world, as well as the influence of indigenous knowledge and perceptual styles in his own field observations.

Following the Animal

Human alienation from nature is the central problem that has preoccupied environmental theorists in recent times. While the alleged cause of this alienation varies--from textuality to Enlightenment mind/body dualism to cyborg technologies--the proposed antidote to the artificiality of civilization remains constant: a re-immersion of

humans in nature in an attempt to recover a state of primordial unity. This lost unity is frequently given a temporal location in the Pleistocene, contextualizing the relationship of *Homo sapiens* to nature in an evolutionary perspective. Poet and Deep Ecologist Gary Snyder emphasizes the brevity not only of European humanism but even of the Holocene environment that forms our contemporary frame of reference (67-68, 73). For Snyder, the Pleistocene and its associated culture--including oral traditions, subsistence economies, place-based identities, and contact with wild nature--is our true home. Within this worldview, the necessity of wild things and wild places for the human spirit mandates the preservation of wilderness, places where the destructive impact of contemporary civilization is limited. Snyder describes Alaska as one such place where "The condition of life [. . .] still approaches the experience of the hunter-gatherer world, the kind of world that was not just the cradle but the young adulthood of humanity [. . .] It is not the 'frontier' but the last of the Pleistocene in all its glory" (73-74).

The loss of this primordial unity and thus of our home in nature is frequently attributed to the advent of agriculture, which transformed human cultures from Pleistocene hunter-gatherer societies to Neolithic settled communities. Paul Shepard argues that agriculture has wielded a destructive impact on natural, psycho-social, and socio-economic worlds:

Wild things retreated into the distance, and the mix of garden, pasture, dwellings, weeds, kept animals, lice, cockroaches, bedbugs, house mice, rats, and other inhabitants of simplified communities filled the phenomenal and economic world. With irrigation, cultivation, and the rest

of the routine round of obligatory labor, [. . .] The ancient human acceptance and affirmation of a generous and gifting world was replaced by dreams of plenty [. . .] Domestication would create a catastrophic biology of nutritional deficiencies, alternating feast and famine, health and epidemic, peace and social conflict, all set in millennial rhythms of slowly collapsing ecosystems. (83)

In Shepard's vision of agriculture, "wild things" fade, seen from the contemporary viewpoint through the lens of an Edenic nostalgia.¹⁰ The characterization of obligatory labor and loss of faith in a generous world recalls the expulsion from the Garden: "cursed is the ground because of you; / in toil you shall eat of it all the days of your life; / thorns and thistles it shall bring forth to you; / and you shall eat the plants of the field" (Gen 3:17-78 NRSV). Because of the shift to an "agricultural civilization," the contemporary world is infested with pests who are disease vectors that we seek to drive from our homes and fields (Shepard 103). Shepard's passage ends with an apocalyptic view of inevitable and catastrophic cycles of decline.¹¹

This narrative is structured by what Bruno Latour has named the "Great Divide" of modern Western thought between nonhuman nature and human culture" (*Modern* 11, 97-106). Ironically, even as advocates of "the wild" seek to relocate humans within nature, this thinking reproduces the very dualism they have identified as the central problem for our time. William Cronon has argued that this dualism underlies the aesthetic and ideology of wilderness preservation, which has had a problematic and even neo-colonialist impact in the American West and in national parks policy throughout the

world.¹² According to Cronon, wilderness is not “a pristine sanctuary where the last remnant of an untouched, endangered, but still transcendent nature can be for at least a little while longer be encountered without the contaminating taint of civilization”; rather, wilderness is a product of the very civilization proponents of the wild seek to escape (69). Cronon argues that the idea that “our *real* home is in wilderness”--whether this is located temporally, in the Pleistocene, or spatially, in Alaska or other wilderness areas--prevents us from caring for the places where we actually live (81). In this way the Great Divide organizes our understanding of our relations with the nonhuman world. This is evident not only in the romanticization of the Pleistocene and of wilderness, but also in our ambivalent attitudes toward domesticated and agricultural species, those nonhumans too closely associated with civilization.

Recent attempts to think beyond this Great Divide have concerned themselves with “The Question of the Animal.” Historically, the Western tradition has considered the animal unworthy of philosophical attention because of the supposed lack of some essential characteristic used to define the human: a soul, reason, language. Contemporary philosophers have begun to question the relationship between humans and animals, in particular reflecting on how the divide of human/animal--what Agamben has called the “anthropological machine”--is used to constitute the very identity of “human,” as well as to undergird discourses of rights and ethics (26-27). For contemporary thinkers, the question of the non-human animal has become a locus of anxiety about that which is “‘wholly other’” (Derrida, *Animal* 15). In his discussion of Derrida and Levinas, Cary Wolfe notes that the “recontainment of the alterity of the other” and the ethical status of

human others “is purchased at the expense of the sacrifice of all forms of difference that are not human,” in a logic Derrida has named “carno-phallogocentrism” (27).

One attempt at resolution of the question of the human/animal relation has been to embrace an evolutionary definition, understanding ourselves as ‘human animals.’

However, this attempted resolution fails, not because humans are not evolutionarily linked to other animals, but because the central question is not biological but ontological, and the central problem is not one of continuity but of difference. In *The Animal That Therefore I Am (More to Follow)*, Derrida states that he is interested in “complicating, thickening, delinearizing, folding, and dividing the line” between humans and animals (29). This does not mean that Derrida reinscribes the Divide--what Derrida calls “the limit that we have had a stomachful of, the limit between Man with a capital *M* and Animal with a capital *A*” (29). Instead, Derrida gives attention to the abyss that separates humans and animals, rejecting the “biologistic continuism” that asserts “some homogeneous continuity between what calls *itself* man and what *he* calls the animal” (30). For Derrida, we need to move beyond claims of continuity or discontinuity, and turn our attention to

determining the number, form, sense, or structure, the foliated consistency of this abyssal limit, these edges, this plural and repeatedly folded frontier. The discussion is worth undertaking once, instead of asking whether or not there is a limit that produces a discontinuity, one attempts to think what a limit becomes once it is abyssal, once the frontier no longer forms a single indivisible line but more than one internally divided line; once, as a result,

it can no longer be traced, objectified, or counted as single and indivisible.

(30)

Through his attention to difference rather than sameness, Derrida thinks past the problematic category of "The Animal," a category that implies homogeneity among all nonhuman animals, and by extension all of the nonhuman world.

Moving beyond the Great Divide requires reconfiguring the very categories we use to construct our thinking. In her most recent work, *When Species Meet*, Donna Haraway considers how companion species might help us to think beyond Latour's Great Divide and other associated dichotomies, including "animal/human, nature/culture, organic/technical, and wild/domestic" and toward a future of respect and response between species (15). In her discussion of Derrida's work on animals, Haraway proposes a new direction for thinking through our relations with companion species. Derrida's "*first and decisive*" question, following Bentham, is not whether animals can think, speak, or use language, but whether they suffer (27). For Haraway, there are many other questions that need to be asked, about work, play and the possibility of joy: "Can I, the philosopher, respond to an invitation or recognize one when it is offered? What if work and play, and not just pity, open up when the possibility of mutual response, without names, is taken seriously as an everyday practice available to philosophy and to science? What is a usable word for this is *joy*?" (22).

Thinking with Plants

Questions beyond suffering proliferate when we consider our relationships with plant as well as animal companion species. These evolutionary engagements reveal the

inadequacy of our structures for thinking about the nonhuman. The question of suffering--at least in its classical utilitarian form--leads us to ask about moral considerability and sentience. Though these questions are important, they reinscribe another, unexamined divide: that between animals and plants, or--to be more accurate--between animals (including human animals) and the rest of the world. While this cognitive divide is unsurprising, given our everyday experience of identification with other animals, it disguises not only our long entanglement with non-animal others but also prevents us from asking an even more interesting series of questions about what Derrida calls the "heterogeneous multiplicity of the living, or more precisely (since to say 'the living' is already to say too much or not enough), a multiplicity of organizations of relations between the living and the dead [. . .] among realms that are more and more difficult to dissociate by means of the figures of the organic and inorganic, of life and/or death" (31). Thinking about and with plants--and beyond them to the even stranger realms of fungi, archaea, and bacteria--we are led to question not only the divides of human/nonhuman and human/animal, but also the very idea of the individual. Derrida's first question "Can they suffer?" reveals an implicit assumption that we know the discrete identity of what suffers. Haraway's introduction of the question of companion species and co-evolution offers the possibility of focusing on relationships rather than entities and of speaking about the myriad of life forms that inhabit us and the world.

Nabhan has long been engaged with the presence of the nonhuman. In Nabhan's work, plants are agents, actors, and interactors in evolutionary history and cultural traditions. Plants emerge in story and practice, cuisine and medicine; in turn, human

communities cultivate and care for plants, enlarging their habitats, changing their forms, and dispersing their seeds. In this way the nonhuman reciprocally enters the material practices and symbolic productions of human culture and generates new possibilities for interspecific relation. Nabhan's texts are part of this process, inhabited by human and nonhuman voices that lead the narrator in new directions. This understanding of the agency of nonhumans in human culture and agriculture contrasts with the narrative of a fall from Pleistocene unity. Nabhan's writings investigate our engagements with plants through work and play and ask what epistemological orientation is needed to learn about these nonhumans. In Nabhan's conceptualization, the course of life, the surface of the planet, our cultures and our bodies are drawn into playful, reciprocal, dynamic relations that result in a constant flow toward diversification, what Deleuze and Guattari call "becoming."¹³ Deleuze and Guattari argue that becoming is a process of mutual resonance in which non-filiated entities form alliances across species and kingdoms. Becoming is distinct from genealogical filiation, which proceeds through hierarchical branching controlled by natural selection (238-39). Instead, becoming is rhizomatic and describes unpredictable processes and events, rather than substances and entities. Deleuze and Guattari use the symbiosis of plant and pollinator as an example of this process: the wasp and orchid enter into a relation called a "block of becoming" in which they do not imitate but instead transform one another (10). Co-evolution with the plant world, and with the other animals and nonhumans drawn into this block of becoming, results in an ever more complex entanglement.

Through the practices of ethnobotany and pollination ecology, Nabhan is attuned to the language of plants, a focus that complicates the questions set out by Derrida and Haraway. His work's intimate engagement with plant companions, and with the human cultures that resonate with them, undermines the divides of human/nonhuman and plant/animal by shifting the focus from the individual to relationships. This shift complicates the question of suffering by asking what suffers, and what is lost, in the extinction of relationships. And finally, Nabhan's work with the coevolution of human cultures and plant companions calls us to rethink the divides of wild/domestic and natural/cultural, and instead to see ourselves as constituted by this relational ontology with nonhuman others. These relations involve suffering and yet can well be named joyous. The sources of this joy are in the connections made within a world of differences. The philosophical implications of Nabhan's co-evolutionary work can be developed through four motifs paralleling the questions of work, play, suffering, and joy: namely, lures, tricks, grief, and sacrament. The first two focus on plants' erotic invitations to relationship. The second two focus on human responses to these invitations.

Lures

In "The Flowering of Diversity," Nabhan tells what can best be understood as a creation myth about the intricate relations that have shaped the surface of the planet and our cultures, a story that counters Edenic narratives, whether the Fall is from the Garden of Eden or the Pleistocene (*Seeds* 3-16). Standing in a Colorado meadow called *Florissant*, Nabhan recounts the "flowering" of diversity in geologic time, when "the

course of life swerved when flowering plants and their insect pollinators, followed by avian and mammalian seed dispersers, all became interdependent" (*Seeds* 5). If we look at this moment from the point of view of the plant, the agents of this revolution are the angiosperms, the flowers that with their own kind of intelligence lure the insect, animal, bird, and human worlds into mutualistic symbiosis.¹⁴ Plants attract pollinators through lures (colors and scent) and rewards (such as pollen and nectar, mating and nesting sites, scents used to attract females, and sometimes deceptions).¹⁵ In return for these valuable rewards, pollinators provide the opportunity for genetic outcrossing. In this first flowering of diversity, plants lured pollinators, and through the process of specialization "insect groups shifted from being mere phytophagous (plant-eating parasites) to symbionts that accrued consistent rewards for their role in pollination" (*Seeds* 7). This flowering proceeded through increasingly complex interactions across species and kingdoms, as angiosperm flowers distilled nectars, fragrances, seeds, and fruits to attract pollinators and seed dispersers until, by the late Tertiary, the flora of the planet shifted from gymnosperms (cone-bearing trees) to angiosperms (flowering trees) that comprise the flesh of our food: "Over eighty percent of what we have eaten for thousands of years is angiosperm tissue, in the form of grains, roots, leaves, and fleshy fruits of plant families that did not exist until this revolution changed the world" (*Seeds* 6). This story offers a more subtle understanding of diversification than popular interpretations of 'survival of the fittest': "Where a diversity of lifeforms can be found, there may be hidden several subtle but beneficial relationships between plants; these may control the structure of vegetation as much as competition does" (*Seeds* 10). The course of life

swerved toward complexity, not through competition, but by the development of what Nabhan calls the “long traditions” of plant-animal symbiosis (*Gathering* 43).

Nabhan’s second flowering of diversity is the domestication of food plants that came in the wake of megafaunal extinctions at the close of the Pleistocene. This was the moment when human and plant intelligences intersected and changed the course of human and plant evolution: “Once the ground sloths, giant bison, horses, and elephants were extirpated, their coevolved seed plants soon came under the aegis of human craft and curiosity. They then diverged into a myriad of cultivated varieties, land races, or crop ecotypes” (*Seeds* 15). Flowers turned their intelligence to human cultures, luring us with their scents and tastes “to become their agents of dissemination and increase” (*Seeds* 15).¹⁶ Since this time 10,000 years ago, Nabhan argues, inhabitants of the Americas have devoted themselves to this multitude of species (*Seeds* 16). This brief creation myth of the birth of the planet as we know it and the birth of agriculture concludes, not with a fall into alienation, but with an intensifying web of relations between plants and cultures, both human and animal.

This co-evolutionary resonance did not end with the dawn of the Neolithic, however, and Nabhan’s writings and work witness to the ongoing mutuality between plants and cultures. This attention to plants flows both from an awareness of the long evolutionary lineages that draw humans and plants together, and from his work with place-based food traditions. In his work with indigenous communities in the Sonoran Desert, Nabhan recognizes that “certain plants have characteristics so distinctive that they have become personae in Native American folklore” (*Gathering* 6).¹⁷ Nabhan’s book

Gathering the Desert offers a profile of several plants that are keystone species for desert cultures, including creosote, mescal, and Organpipe cactus. Similarly, in American food cultures: "Just as much as our heroes, outlaws, and clowns, these foods have become what William Carlos Williams called 'the American Grain,' [. . .] voices that testify in the various styles of our ethnic communities" (*Renewing* 5). The organization Renewing America's Food Traditions (RAFT) playfully divides the North America into "Food Nations," with "Salmon Nation" extending up the Pacific Northwest coast into Canada and "Chile Pepper Nation" reaching south into Mexico. In other words, just as through domestication, the nature of plants is affected by human culture, so, too, human culture mirrors and incorporates the life of plants. Our once-clear boundaries between wild and domestic, natural and cultural, begin to reveal their ragged edges. Plants have lured humans and other animals into the work of pollination and dispersal through what Wendell Berry has called "the pleasures of eating" (145). In addition to work, plants also play, often using the very pleasures they offer to trick us.

Tricks

One of the ways plants lure pollinators is through deceptions, such as the phenomena of pseudocopulation in which a male wasp, believing he is mating with a female, is positioned by the orchid to come into contact with the orchid's pollinia, which he then carries off to the stigma of the next flower (Proctor et al., 205-12). Nabhan's literary works detail encounters with a variety of tricksters, and as often as not he is the butt of the joke, as when he bites into a desert "Coyote melon" that looks like a cultivated variety. After the bitter taste nearly causes him to vomit, a grinning O'odham woman

explains: “‘It *used* to taste just like an apple, they say. Then Coyote came along and he *shit* on it. I guess ever since then it has had that taste that is in your mouth right now’” (*Desert* 80). The final lines of this story find the narrator staring down at a field of Coyote melons:

So, I wonder what other tricks Coyote is preparing. Year after year, he steals watermelons from my Papago friends and goes down to hide them in the wash. He eats the big, cool fruit, spitting and shitting out the seed. Now and then, downstream from villages, I see small, ugly watermelons growing by themselves in the dry wash. What has he done to them? How bad do they taste? (*Desert* 86)

The mixed tone of apprehension, respect, and self-deprecating humor illuminates a theme that runs throughout Nabhan's work: the agency of the plant world and the wisdom that enables certain cultures--based in indigenous scientific knowledge but not restricted to it--to cohabitate with this unruly presence. The Western scientist's way into understanding this relation is through the practice of epistemological humility--what Haraway calls “situated knowledges.”¹⁸ Haraway argues for a new practice of science that recognizes the agency of “objects” and urges us to shift our metaphor for scientific knowledge from “discovery” to “conversation.” (*Simians* 198). Following this practice of “faithful knowledge,” the human knower recognizes “the world's independent sense of humor” as s/he “gives[s] up mastery while searching for fidelity” (*Simians* 199). In fact, it is the Coyote or Trickster of the desert southwest that Haraway proposes as an appropriate figure for this unpredictable world (*Simians* 199).

Nabhan's stories often begin with the details of the journey he takes to a place where there are no road maps, figuring the limits of Western scientific knowledge and its associated realist ontology: "I could not get to this place directly from my home" (*Seeds* 32). The journey serves as a figure for epistemological humility. In the essay "Fields Infused with Wildness," a portrait of genetic introgression in Tepehuan agriculture, the journey to Nabogame enters the unknown: "We drove a day beyond Hildago de Parral, mostly on dirt roads through pine-covered barrancas, before roads vanished completely" (*Seeds* 33). The intelligence of plants lures Nabhan into the field. Leaving the truck behind, Nabhan is guided through the fields by an indigenous farmer, who shows him "*kokoñi ushidi*, raven's planting," the teosinte growing in and among the domesticated maize plants (*Seeds* 34).¹⁹ Nabhan reminds us that in many cultures, ravens are tricksters like Coyote, planting weedy look-alikes. He shyly "sidle[s] up" to the plant, learning to see the differences between the two species that at first glance seem identical (*Seeds* 34). Unlike the industrialized agriculture of the North, these fields are "infused with wildness" (*Seeds* 31). The plants are not static objects anchored in the ground "by human hands," but a community of relations in process: "A spontaneity is expressed even within the cultigens that elsewhere seem so uniform and predictable, say, in the rolling stretches of the corn belt." (*Seeds* 31-32). The narrator attributes this spontaneity and adaptation to "the ancient wisdom of teosinte's genes" (*Seeds* 32). However, a celebration of wildness at the expense of domesticated crops, or of plant intelligence at the expense of agricultural practices, would miss a central insight of Nabhan's work: the blurring of the identities of plant, animal, human that requires thinking beyond the usual categories of

both Western science and philosophy, to shift from thinking in terms of substantive dualisms to a range of processes that cannot be classified as natural or cultural, wild or domestic, human or nonhuman, plant or animal.

The ongoing process of coevolution is evident to Nabhan in the Tepehuan fields: “Not manicured environments; not merely corn, nor beans, nor squashes planted by human hand. The croplands held within their reaches a wealth of wildlings, keeping the field in a state of flux: a weedy maize named teosinte; a flutter of ravens, a weaving of wild bean vines; a heap of husk tomatoes” (*Seeds* 31). Invoking the well-known example of indigenous agriculture, the Three Sisters, reminds us that indigenous agriculture is far more varied and complex than the fragments of lore packaged in seed catalogues and children’s books, and that it is a living tradition.²⁰ Indigenous agriculture evolves in a dialogue with the nonhuman in which both are agents, requiring a reconceptualization of “domestication.” Through culturally mediated geographic isolation, Nabogame maize has developed distinctive genetic features, while genetic introgression between domesticated maize and teosinte continually revitalizes the cultivated crop (*Seeds* 35).²¹ This gene leakage is sustained by the agency of both species without integration: “Nabogame maize and the little teosinte do not completely integrate with one another; there may be some gene flow between them, but one is not overwhelmed by the other” (*Seeds* 35). Ted Toadvine sees in this relationship an example of Deleuze and Guattari’s becoming-other: “Indigenous cultural practices, domesticated plants, and native ‘weeds’ enter here into a single block of mutually transformative coding and recoding, a veritable becoming-other of each of the terms involved” (“Culture” 217). The becoming-other of

the human culture may not proceed on a genetic level, but, Toadvine notes, "it is just as much the plant, wild and domesticated, that farms itself through us as we who farm it" ("Culture" 217). As the plant farms itself through human labor and agricultural traditions, human cultures are reciprocally transformed. Domestic and wild maize, assisted by seed dispersers and the trickster, raven, who mediates the gene transfer, have drawn the Tepehuan into a symbiotic mutualism.

As Nabhan stands in the field, he recognizes that the indigenous scientific knowledge about these plants and their ways of being are "as important as conserving the seeds themselves" (*Seeds* 33).²² Conventional environmental policy focuses on conserving individuals or species as objects: we recognize endangered species on a list, but not endangered knowledge and the material practices that create and conserve biodiversity. In both Western science and philosophy, the focus is on stable entities labeled as "nature" rather than on the generative relations between humans and nonhumans. Nabhan's scientific investigation leads to an ontological understanding of the inseparability of pollinator and flower, and of seed, weed, and culture. Even when speaking of conservation, Nabhan is less interested in statically preserving species as objects, and more concerned with restoring ecological relationships. This ontology turns back to science with implications for policy that require both scientists and policy-makers to think beyond the divides of nature/culture and wild/domestic.

Grief

Nabhan's depiction of the desert oases *A'al Waipa* and *Ki:towak* in *The Desert Smells like Rain* begins with the line that separates them: "A cloudless sky, a bone-dry

road. After miles of eating dust on a drive parallel to the border, we had arrived”(89). The springs are located on opposite sides of the U.S./Mexico border, which figures the conceptual divides that have resulted in the ruin of the oasis *A'al Waipa*. Nabhan's portrait of the oases turns on the contrast of eating dust versus eating fruit. This central image invokes the Garden of Eden, another oasis in the desert: the curse of “dust thou art” and the lost fruits of the garden (Gen 3:19). But this “fall” inverts the orientation of Shepard's fall from Pleistocene unity into agricultural civilization. In this narrative, humans are not the curse that desecrates wilderness, and agriculture is not the force that drives away wild things. Instead, it is the removal of the humans who tended the oasis that causes the destruction of the sanctuary.

Nabhan contrasts the U. S. National Park Service's management of *A'al Waipa* springs with that of *Ki:towak* where indigenous cultural practices continue, illuminating the Great Divides embedded in National Park policy and the Wilderness Act.²³ When the Park Service took control of *A'al Waipa* after the Creation of Organ Pipe National Monument in 1937, it condemned Tohono O'odham and Hia c-ed O'odham farmland and did its best to erase the signs of indigenous inhabitation of the landscape (*Desert* 94-95). This erasure conformed to the aesthetic mandated by the Wilderness Act, which declares that a wilderness area is a landscape that “in contrast with those areas where man and his own works dominate the landscape [. . .] retain[s] its primeval character and influence, without permanent improvements or human habitation [. . .] and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable” (Wilderness Act, Section 2.c.). The divide between

nature and culture is evident in the opposition of human domination and the forces of nature. This dichotomy is further linked to the history of imperialism and the removal of indigenous peoples, in this instance as well as in the broader history of wilderness preservation in the United States (Cronon 79).

The irony that underlies this story is that the removal of indigenous peoples and structures--such as agricultural fields and irrigation ditches--reduced the biodiversity of the site, which the Park Service had claimed as a sanctuary:

So if you're ever down in Organ Pipe Cactus National Monument and visit the Park Service wildlife sanctuary of Quitabaquito, remember that an old Papago place called *A'al Waipa* lies in ruin there. Its spirit is alive, less than forty miles away, in a true Sonoran Desert oasis. There, the irrigation ditches are filled with tules, and they radiate out from the pond into the fields like a green sunburst. *Ki:towak*. (*Desert* 97)

Nabhan details how Luis Nolia, the caretaker at *Ki:towak*, "blesses the oasis, for his work keeps it healthy" (*Desert* 91). Plowing and irrigation at these oases encourage heterogeneity through moderate disturbance, providing the trees and seedplants that attract birds. In removing the people who befriended the birds, cultivated the orchards, and blessed the oasis with their work, the National Park Service destroyed what it valued and sought to preserve in a static form as an object of aesthetic contemplation. Confronted with the dying fruit trees at *A'al Waipa*, Tohono O'odham farmer Remedio laments "'Poor things, such old trees left with no one to care for them!'" (*Desert* 93).

This portrait reveals that the preservation of species, seeds, and sites, devoid of

the human cultures with which they have co-evolved, is based on a flawed ontology. These partners are not unchanging substances but instead are constituted by their relations, forming what Deleuze and Guattari call the “blocks of becoming”: “What is real is the becoming itself, the blocks of becoming, not the supposedly fixed terms through which that becoming passes” (Deleuze and Guattari 238). These processes are not mystical: they are based in material practices, in cultural and relational site-specificity that is more fundamental than the entities themselves. And though this is a story of grief for the lost springs, it holds the promise that “friendship”--an interspecies tradition of care and reciprocity--can create a sanctuary for difference to thrive. In Nabhan’s work, another word for this process is the sacred.

Sacrament

The experience of the sacred permeates Nabhan’s writings about the nonhuman world. Interactions between plants and their animal and human symbionts are “long traditions,” and the destruction of these relationships impoverishes the sacred (*Gathering* 43). Nabhan describes efforts to preserve Kearney’s blue star in the Desert Botanical Garden. The endangered plant sprouted and grew in plastic pots, but efforts to pollinate the plants by hand with cat’s whiskers were unsuccessful (*Habitat* 275). The star flowered but never seeded in the absence of its co-evolved pollinators. In recalling this event, Nabhan’s tone is once again suffused with grief: “It was as if the blue stars’ bodies were there, but their spirits had flown away” (*Habitat* 275). The loss of the pollinator is a loss of meaning for the plant: of the process that called it to live and evolve. Similarly, Nabhan’s recent work with the organization Renewing American’s Food Traditions

(RAFT) focuses on recovering food traditions rather than storing seeds in seed banks. In a strategy called “eater-based conservation,” RAFT seeks to restore endangered plant and animal species and their habitats by re-embedding them in the lives and memories of biotic and cultural communities: “where they can become part of our blessings and feasts once again.”²⁴ One example is the “Milking Devon Cattle,” of Maple Syrup Nation (New England), first brought over by the Pilgrims in 1623 (*Renewing* 122). The Milking Devons lost popularity with the move away from multipurpose breeds, until in the 1970s less than one hundred cattle were left (*Renewing* 122). Through the work of the Livestock Breeds Conservancy and the Slow Food Ark of Taste, the populations are recovering and are once again being valued for their distinctive characteristics (*Renewing* 122). Nabhan contrasts these lived interactions with the peculiar European-American structure of the zoo or museum, which create artificial environments and prevent encounters with other species than our own except as highly mediated spectacles (*Habitat* 273). These institutions expose the danger that results from structures (epistemological and social) that close our bodies and souls off from encounters with species other than our own. According to Nabhan, human and non-humans need to “make contact, and receive each other’s blessing” (*Desert* 21).

In Nabhan’s writings, all acts of eating are sacraments when they emerge within the long traditions that have developed through evolutionary time. This is evident in his descriptions of wine-drinking in the desert, both the wines fermented by humans and those that form spontaneously:

In the desert heat following dawn, fermentation occurs within the remaining juices of the punctured fruit and in the nectar of still-open blossoms. Fruitflies and bees go to drink in these ephemeral pools. They become drunk, fall in, and drown. Doves and hummingbirds get in on the dregs. A multitude of insects swarms in as the day proceeds, working to finish off the mild wine before mid-morning, for the flowers close by then. They soon forsake the wine and escape for the shade, about the same time that the Papago do below, down on the burning desert flats.

Drinking wine. Dealing with the desert heat. These are old, old rituals.
(*Gathering* 78).

The wine, autochthonously produced by the Organpipe cactus and the desert heat, consumed by insects, birds, animals, and humans, is an interspecies celebration. To echo Haraway's phrase, this ritual can best be described as joyous. Nabhan reframes the question of suffering to one of the loss of interactions, a loss that accelerates with each new ecological crisis. But the lexicons of grief, suffering, and extinction are always intertwined with those of lures, tricks, friendship, and sacrament. Long traditions, old rituals, human and animal cultures, and the lure of plants form relationships that constitute each other and embody the sacred. At the center of Nabhan's work is the pulse of a living communion, a relation that seeks us out and draws us irresistibly toward a future of reciprocal transformation.

Notes

¹ My use of the term “rhizome” is drawn from Deleuze and Guattari’s concept, rather than the more standard botanical definition. The rhizome is a central figure in *A Thousand Plateaus* that indicates complex, non-hierarchical relations between entities that generates ongoing transformation and new possibilities. See “Introduction: The Rhizome,” 3-25.

² Actually, although this essay details the moment when Nabhan swerved from biology to ethnobotany, Nabhan’s intellectual nonconformity began much earlier. See, for example, his account of painting and color theory as a high school student in *Cross-Pollinations*.

³ As noted in the introduction to this dissertation, the field of Western science has at times been broader and less homogenized. The history of Western science, extending from Aristotle to the present, encompasses many approaches to the question of knowledge and the natural world. Thoreau is the exemplar of a thinker who resisted the fragmentation of knowledge into disciplines with strict boundaries, as well as refusing the isolation of scientific knowledge from values and ethics. Nabhan’s work traces a lineage to the natural history tradition, as exemplified by Thoreau, as well as to professional and indigenous sciences. See, for example, Nabhan’s foreword to Thoreau’s *Faith in a Seed*. For a description of how contemporary science developed ideals of objectivity in the mid-nineteenth century that persist into the present, see Loraine Daston, “Objectivity and the Escape from Perspective.”

⁴ See Gillian Beer, “Problems of Description in the Language of Discovery.”

⁵ Nabhan usually employs a first-person narrator who is a distinct character in his ethnographic and naturalist texts. For simplicity’s sake I have chosen to call this character “Nabhan,” though the relationship between the narrators of the various texts and the actual person Gary Paul Nabhan is not nearly so clear.

⁶ The term *Umwelt* is drawn from the work of ethologist Jacob von Uexküll, who argued that understanding the life-world of nonhuman organisms could be accomplished through understanding their perceptual capacities as defined by their morphology. For von Uexküll, the worlds of animals need to be understood as composed of meaningful relations rather than as external and mechanistic cause and effect. See *A Stroll Through the Worlds of Animals and Men*.

⁷ The study demonstrated that beans grown with rainwater irrigation tended to have a higher nutritional value (*Desert* 8).

⁸ In addition to *Singing the Turtles to Sea*, see *Ironwood: An Ecological and Cultural Keystone of the Sonoran Desert*. Ed. John L. Carr and Gary Paul Nabhan.

⁹ "Renewing America's Food Traditions" is also the name of an organization founded in 2004: <<http://www.slowfoodusa.org/index.php/programs/details/raft/>>.

¹⁰ For an historical study of the phenomena of Edenic nostalgia, see Carolyn Merchant, "Reinventing Eden: Western Culture as a Recovery Narrative," in *Uncommon Ground: Rethinking the Human Place in Nature*, ed. William Cronon (New York: Norton, 1996), 132-70.

¹¹ Although Shepard is more positive toward what he calls "garden agriculture" (which is closer to the models of agriculture described in this essay) than "agricultural civilization," Shepard is also clear that even small-scale agriculture does not "achieve that final recovery of our truest being: to live wholly an authentic Pleistocene existence" (107n50).

¹² On the question of wilderness preservation as neo-colonialism, see Roderick Neumann, *Imposing Wilderness*.

¹³ See Gilles Deleuze and Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, "Introduction: The Rhizome" and "Plateau 10."

¹⁴ Michael Pollan's *The Botany of Desire: A Plant's-Eye View of the World* offers an engaging popular study of co-evolution from the plant's point of view.

¹⁵ Two wonderful introductions to pollination biology are Stephen L. Buchmann and Gary Paul Nabhan, *The Forgotten Pollinators* and Michael Proctor, Peter Yeo, and Andrew Lack, *The Natural History of Pollination*.

¹⁶ I have borrowed the evocative phrase "the intelligence of flowers" from Maurice Maeterlinck's book of the same title.

¹⁷ Nabhan emphasizes the freedom of response that characterizes these mutualistic relationships between Sonoran human and animal cultures and endemic plant species: "we may be accused of promulgating a kind of environmental or culinary determinism, or believing that Native Americans have always lived in a static balance with nature. To the contrary, what interests us most is the diversity of historic responses that individuals and cultures have had" (6).

¹⁸ See Haraway, *Simians, Cyborgs, and Women*, 150-83.

¹⁹ Teosinte is an ancient ancestor of corn that some farmers regard as a weed.

²⁰ The "Three Sisters" is an indigenous agricultural practice of companion planting. The corn provides a climbing pole for the beans, which fix nitrogen into the soil through

associations with rhizomatic bacteria, and the squash run along the ground, efficiently using space and caring for soil while providing a complete protein.

²¹ Geographic isolation of populations allows for genetic divergence, known as allopatric speciation. In this case, the geographic isolation maize is not from a physical barrier but from the human practice of agriculture, which has helped the plant to extend its range north. See MacDonald, *Biogeography*, 272-75.

²² This epiphany is reflected in the trajectory of Nabhan's career, which has moved from a focus on seed banks to preservation of entire food cultures. See Gioia Woods, *Gary Paul Nabhan*.

²³ For a more recent discussion of this case study, see Gary Paul Nabhan, "Destruction of an Ancient Indigenous Cultural Landscape: An Epitaph from Organ Pipe National Monument." *Ecological Restoration* 21.4 (December 2003): 290-95.

²⁴ Nabhan's call for eater-based conservation has been misunderstood because of somewhat sensationalized reporting. While RAFT does seek to return foods to our tables, Nabhan is clear that endangered species should not be eaten **"at any time in the near future, until biologists affirm that they are fully recovered"** (RAFT 2).

CHAPTER V

CONCLUSION

In the face of climate change, species extinction, and environmental pollution, the role of environmental studies in examining problems and training students is clear, as are the contributions of disciplines such as the natural sciences and public policy. The place of the humanities in this endeavor is less apparent. Not only the discipline of environmental studies, but also that of ecocriticism (the study of literature and the environment) has struggled to articulate the contributions of the humanities, and in particular of literature, to environmental questions. Conceptualizing the role of the “environmental humanities” requires a reformulation of what questions we ask and how we pose those questions, and thus a redefinition of the project of environmental studies. As Latour notes, questions of nature reveal “the impossible distinction, contradicted every day, between ontological and epistemological questions” (*Politics* 41). Bringing the humanities into the conversation of environmental studies requires rethinking the relationship of ontology, epistemology, and expression in formulating questions. By ontology I mean what is real or most fundamental. The ontology of scientific realism, which forms the assumptions of many questions in environmental studies, holds that the world exists independently of humanity and that this world can best be known through the empirical methodologies of Western science.

The humanities--including literature, philosophy, and religious studies--challenge both this ontology and the privileging of empirical methodologies that derives from it. The disciplines investigate questions of ethics, value, meaning, culture, interpretation, and expression, arguing that these experiences are constitutive of nature, rather than being secondary and therefore inessential qualities. The Environmental Justice movement and environmental justice literature reveal what is at stake in claims about knowledge of nature. Claims about nature, though masked as objective, are frequently deployed to undergird ideological constructions about gender, race, societal structures, and economic policies. The authority to make claims about nature and to be heard are thus inseparable from political power. One of the most significant contributions of the humanities is to show how these slippages between empirical and ideological claims happen rhetorically. My dissertation has focused on the capacities of literature to express multiple voices and ways of knowing, including indigenous, local, and environmental justice knowledges

This confrontation between epistemes is figured the distinct ontologies in the opening to Simon Ortiz's "Our Homeland, a National Sacrifice Area." Ortiz contrasts the worldview of the map, which reduces the landscape to factual information about elevation and roads, with the relational ontology of the Acoma community. The map describes the landscape in this way: "Mt. Taylor, Elevation 11, 950 ft and Acoma: The Sky City" (*Fight Back* 338). In contrast, Ortiz writes that the Aacqumeh names for the landscape, which communicate the community's "map," "do not appear anywhere except in the people's hearts and souls and history and oral tradition, and in their love" (*Fight*

Back 337). This sentence brings in all of the elements excluded from an objectivist ontology: the people's emotional and spiritual relationship to the landscape, the narratives that communicate the meaning of place, the history of inhabitation, and the knowledge that is encoded through place names. Ortiz's contrast of the names in English and Acoma Keres figure the history of colonization and resistance, revealing that apparently objective descriptions and factual information can in fact erase the struggles over the meaning of a landscape. This is an example of the hermeneutical method of the humanities and, in particular, of the value of literature. Literature's contribution to epistemology, as demonstrated by this excerpt from *Fight Back*, is to offer a distinct means of knowing nature through formal innovation that brings all of the elements of experience into conversation--political, axiological, sensual, narrative, and ethical.

Henry David Thoreau's naturalist texts cross the boundaries of literature and science. As a principal figure in both American literature and ecocriticism, Thoreau's participation in the fields of poetry, philosophy, and field biology models a pluralistic approach to the question of knowledge that can inform the question of the "two cultures." A pluralistic approach to knowledge requires uncovering ontological and epistemological assumptions. Thoreau's texts evidence two ontological orientations that contrast with the positivist assumptions of scientific realism. The first is Thoreau's insistence that knowledge of the world requires the integration of all facets of experience, including values and ethics, as well as emotional and sensual attachments to things. The second ontological orientation in Thoreau is that of nonhuman agency. It is these two elements--the embrace of the wide spectrum of human experience and the agency of nonhuman

others--that allows a new set of questions to be asked, both about nature and about literature's contributions to knowledge. Through a reading of literary innovation in the ethnographic work of Zora Neale Hurston, the poetry of Simon Ortiz, and the texts of Gary Paul Nabhan, I have endeavored to delineate the potential of literature not just to communicate but to generate knowledge. Each of these authors illuminates literature's epistemic contributions while revealing the political and ethical dimensions of this work that texts perform.

The first dimension of the potential of the literary text is epistemological. Hurston's ethnography *Mules and Men* brings together dialect and the oral traditions of African American folk culture to create a hermeneutic of the community. That is, the ethnographic text is formed through a dialogical process and communicated through a series of literary techniques that brings the voices of the community into the text. These techniques include vernacular language, signifying rituals, direct discourse, and free indirect style, highlighting dialogue and dissent. This dialogical form is a way of knowing the world that is formed in community and embedded in cultural traditions. In this way *Mules and Men* "signifies" on the modernist ethnography, opening the text up to new modes that allow for communal epistemic practices (Staub 80). Further, this practice of science offers a genealogy for the environmental justice movement in two ways. First, *Mules and Men* models a communal epistemic process. Second, it seeks textual forms that are capable of enabling and expressing this communal voice. In situations of environmental racism, knowledge is formed in communities from lived experience and cultural traditions; it is expressed through narratives and tested through

public discourse (Corburn 51). *Mules and Men* offers a model for this communal mode of knowledge formation. Further, it suggests a role for the professional expert that is situated and responsible. *Mules and Men* models a collaborative relationship between communal and professional knowledge where cultural traditions and expressive forms are intrinsic to the epistemic process.

Simon Ortiz's work of autobiography, poetry, and prose, *Fight Back*, links to Hurston's formal innovations and expands the work of environmental justice, revealing the next dimension: the political as well as epistemological value of literature. *Fight Back* sets the communal voice in the context of continuing colonization, extending the temporal reach of this textual work. Drawing on the oral literature of the Acoma community, Ortiz re-maps the landscape of colonization through these narratives and poems. Like Hurston's work with dialect in the context of the modernist ethnography, Ortiz's work with Acoma Keres and English disrupts standard English and opens it to new expressive possibilities. To these languages Ortiz adds the possibility of the nonhuman voice as it enters into a dialogue with human interlocutors. *Fight Back* places these multiple voices in the context of labor, forming an epistemology that is dialogical, material, and political. Framing these poems with the 1680 Pueblo Revolt, Ortiz retells this story as a model for coalitions of resistance in the present. These coalitions are formed through shared experience of labor in gardens and mines, forming an alliance between oppressed human communities and marginalized ecological communities. These texts make communal epistemology and agency possible; this is what Sandoval

calls "coalitional consciousness" (71). *Fight Back* offers a poetics of environmental justice, revealing the contributions of literature to knowledge and resistance.

In the last chapter, Gary Paul Nabhan's work links to the naturalist tradition, to Hurston's ethnographic work, and to the themes of indigenous knowledge and environmental justice in Ortiz. Each of these elements is brought together both formally and thematically, as Nabhan constructs hybrid texts that facilitate a dialogue between indigenous and Western sciences and between human and nonhuman agents. This endeavor illuminates the third dimension of textual innovation, its ethical potential. Nabhan's texts seek to reveal and articulate the voices of collaborators, but this textual work is not only concerned with recognizing the value of indigenous knowledge. It requires, first, a redefinition of what is meant by scientific knowledge. For Nabhan, this not only involves understanding indigenous empirical knowledge as science but also taking this knowledge on its own terms, within the context of culture and values (*Turtles* 158-59). Secondly, these reformulations of knowledge require new textual forms adequate to express the voices of his collaborators, such as the multi-generic work *Singing the Turtles to Sea*, which includes quotations, drawings, photographs, and narratives as well as charts, graphs, and maps.

My dissertation traces a series of themes that bring the questions of nature, knowledge, and justice to the center of the debate about environmental studies and delineates the particular contribution of literary innovation. This includes the capacity of literature to express multiple and conflicting voices, both human and nonhuman. Literature's capacity to communicate multiple voices and to bring these voices into

conversation offers an epistemology that is distinct from the empirical disciplines. This facilitates and illuminates the role of the community in the formation of knowledge, from Hurston's dialogical ethnography, to Ortiz's crossing of oral and written literatures, to Nabhan's restructuring of the scientific text.

The formal innovation of multiple and communal voices enables what I have called the hermeneutic of the community, that is, a process through which the community claims the authority to speak for itself. This leads to an interrogation of the role of the "expert" in the formation of knowledge. *Mules and Men* makes the negotiation of authority central to the text. Ortiz's *Fight Back*, through its focus on labor and epistemology, contests the meanings assigned to the landscape by professional and regulatory organizations. This negotiation of the role of the expert is similarly evident in Nabhan, where the collaboration between professional and local knowledge--specifically, between Western and indigenous science--is the central enterprise of the text's formal innovations. In each of these texts, there is a disruption of standard English and conventional textual forms, at times revealing incommensurability between ways of knowing. It is at these moments that the value of literature is most clear: it discloses these dissonances between voices without requiring harmonization according to any single ontology or methodology. This is essential because, as Corburn notes, "[k]nowledge claims are always embedded in power relationships (Foucault 1977). Power is expressed in public decision making by who gets to define problems, offer evidence, be heard, and design solutions" (64). Allowing for multiple, conflicting, and

dissonant voices and ways of knowing serves to disrupt dominant epistemological formations, thereby opening the possibility of more equitable negotiations of knowledge.

This decentering of the authority of the ethnographer in *Mules and Men* and *Singing the Turtles to Sea* links to the destabilization of the authorial voice. In *Fight Back* and Nabhan's naturalist texts, this opening up of the text to multiple voices includes the nonhuman. Linking back to the ontological orientations of Thoreau's work, Ortiz and Nabhan begin with the assumption that the nonhuman world is an agent capable of entering into the process of knowledge formation and the creation of the text. An analogy to this understanding of the literary text as a mutual creation between human and nonhuman is the model of science proposed by Donna Haraway. Haraway critiques Western science's claim to disembodied objectivity and the construction of subject-object relations that derives from this objectivist ideology (183). She argues that the "objects" of knowledge in natural science must be understood as "subjects," as actors who participate in the construction of knowledge as "conversation" (197-98). In literary terms, this means that writing is a generative encounter, and texts are a co-creation that belongs neither to the human nor to the nonhuman.

This conceptualization of the contributions of literature to questions of nature is distinct from other approaches suggested by ecocriticism. Rather than structuring the interdisciplinary dialogue as one where literature conforms to truths discovered by the empirical sciences, I suggest that the richest formulation of knowledge is possible when the humanistic disciplines are taken on their own terms (Foster 361). Similarly, in the context of environmental justice, the value of literature is not merely polemical or

pedagogical (though it can serve both of these functions). Jason Corburn characterizes local knowledge as heterogeneous and hybrid, oppositional, held by communities, based in tradition, intuition, and experience, expressed through narrative and image, and tested through public discourses (57-65). Literature has the capacity both to formulate and to express the epistemology of environmental justice communities.

Ursula Heise argues that the valorization of situated knowledge in environmental justice communities is merely a variation of the dominant sense-of-place paradigm that characterizes much of ecocriticism (30-33, 42). This critique is particularly important in revealing what can be essentializing rhetoric about the connection between indigenous and Mexicano/Chicano environmental justice communities that rejects globalization and clings to nation-based concepts of identity (Heise 32). My argument for the importance of the epistemology of local knowledge in environmental justice communities does not derive from a supposed essential or spiritual connection of the people to the landscape. Rather, I have sought to emphasize the importance of language as constitutive of knowledge, rather than subscribing to the aesthetics of immersion. The discussion of experiential knowledge in *Fight Back* does not rest on a facile ethics of proximity but rather, as the poem "To Change in a Good Way" details, on making connections between the knowledge gained from labor and the global social and economic networks that encompass and structure these situations of environmental racism. Rather than calling for a return to the local, Ortiz argues for coalitions of resistance that cross the lines of nationality and base their connection not on shared locality or identity but on shared opposition to exploitation, whatever its form.

What my dissertation offers, finally, is the beginning of an ecohermeneutics: a practice of reading. This practice requires attention to the multiple voices that inhabit and speak through texts. This attention, in turn, requires a questioning of ontological assumptions about nature and nonhuman others, of how we define our questions and subjects of knowledge, and how expression forms an essential part of this process. I have argued that formal innovation in texts both constructs and expresses knowledge of nature that exceeds the bounds of problem-solving and scientific realism. The multiple voices that inhabit texts also exceed the possibility of mastery. An ecohermeneutics, then, is ultimately a practice of reading in the midst of epistemological uncertainty. The embrace of uncertainty, as Hurston and Nabhan show through their ethnographic encounters, and as Ortiz demonstrates through his work with languages, is an ethical position that offers hope for learning to listen the multitude of voices that inhabit our world.

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