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The Simulation of Nature:
Contemporary American Fiction in an Environmental Context

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by

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Abstract

The dissertation is an examination of how nature is socially constructed in particular texts of contemporary American Fiction. In discussing the novels of Thomas Pynchon, Richard Powers, and Jonathan Franzen, and the non-fiction of Mike Davis, I argue that their works accurately depict how nature is created because they recognize the idea of nature as a textual artifact. Fully aware of their textual limitations, these works acknowledge and foreground the ontological uncertainty present in their writing, embracing postmodern literary techniques to challenge the notion that "nature" is a tangible, stable, self-evident reality. They embrace the fictionality of language, admitting that any textual enterprise can only aspire to simulation.

The dissertation begins by exploring the simulated nature of Walt Disney's Animal Kingdom. In the hyperreality of the theme park, we can see that Disney's simulation of exotic nature reflects a reality defined by media images, myriad details that signify nature but never seem to equate to nature. Pynchon's *Mason & Dixon* explores the eighteenth-century border conflict between the age of miracles and the age of reason, a critique of the Enlightenment as seen from its crumbling twenty-first century edges. Franzen's *Strong Motion* mines similar territory as the novel reveals the deeply buried foundation on which we've structured our lives, a foundation that confines us to categories and hierarchies based on domination. Powers's *Gain* uses the intertwined narratives of the growth of a corporation and the death of a middle-aged mother to dramatize the reduction of all reality to an equation designed to maximize profit. Finally, Mike Davis's two books about Los Angeles suggest the apocalyptic future of nature. His Los Angeles is a postmodern world of chaos, non-linearity and fractal borders, a work of natural history depicted through the aesthetic lens of postmodernist fiction.

These eco-novelists are aware that reality becomes a matter of differing and competing worldviews. Underlying their concern with language and its ability to represent reality is an awareness that there is a nature that exists beyond language. Unlike most of their contemporaries, however, they refuse the illusion of defining a one, true nature.

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Finally, I give special thanks to my advisor Tom LeClair and my wife Judy Karnia. In a world of simulation, these two people are my reality. *The Simulation of Nature* is my attempt to gain their respect, repay their patience and commitment, and to simulate, in some small fashion, all that I admire about them.

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Introduction

Nature Knows Best: The Social Construction of Nature

I placed a jar in Tennessee,
And round it was, upon a hill.
It made the slovenly wilderness
Surround that hill
Wallace Stevens from "Anecdote of the Jar"

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The problem with nature is that it's all encompassing. If we consider nature all of creation, then we include not just rivers, rocks, animals and plants, but also humans and their creations. If everything is nature, however, this definition balloons to almost meaningless dimensions. We then look to circumscribe nature, a necessary attempt to invest the term with some usefulness. Yet finding those boundaries between what is nature and what is not is extraordinarily complicated. The border ebbs and shifts, a permeable membrane where what's natural and the un-natural are defined by the ever-transgressing border. In broad strokes we can argue that human-created civilization exists outside of nature, and beyond the constructions and systems of our species, there we will find nature.

But knowing the exact moment when we've crossed that line is impossible. Take, for example, the highway running through an unpopulated countryside. The speeding Toyotas and Fords, the semis and busses are not nature. The gleaming metal and powerful engines are at the advanced edge of human technology. As we step away from the cars and trucks, nature begins where? Does civilization, the non-natural, cease at the edge of the shoulder, where the pavement ends and the grass begins? Perhaps nature begins outside the fenceline a few yards away, the

visible barrier erected to keep nature out and non-nature in. Or does nature begin after we are out of sight of the highway, a two-acre walk across the field and into the treeline? Or even further out, say two miles away when we can no longer hear the dull whine of the traffic in the distance? Or perhaps some many miles away, where the pollutants from cars and trucks have been reduced to negligible amounts.

The definition of nature is essentially a problem of categorization. At its largest dimension, one definition of nature can encompass all of the physical planet. As definitions of nature are narrowed, we begin to lose any sense of an essential quality of nature. There is no concrete essence or trait that makes an object part of nature. Rather, the term nature becomes a net that, depending upon how we cast it, captures different objects. Like Wallace Stevens's jar in Tennessee, our human constructs, our categorizations, *make* the slovenly wilderness surround that hill. There can be no one definition of nature. It is a complicated amalgamation of cultural meanings determined by daily practices, governmental decrees and media images. The attempt to explain this nature is a slippery task. Yet it is in our *human* nature to ceaselessly strive to categorize the world, to define the intrinsic and the extrinsic. Despite the fluidity of the border, we nevertheless seemed programmed to affix it. To quote Stevens again: "Oh! Blessed rage for order, pale Ramon,/ The maker's rage to order words of the sea…"[1]

In the perpetual dialogue over what constitutes nature, this one overarching structure debates whether "nature" exists in and of itself or whether it is a product of human construction. Dave Foreman, publisher of *Wild Earth*, and the poet Gary Snyder articulate a view that, at the outset, seems commonsensical:

> Human societies create a variety of dreams, notions, and images as to the nature of Nature. But it's not impossible to get a pretty accurate picture of Nature with a little first-hand application—no big deal. I'd say take these dubious professors out for a walk, show them a bit of the passing ecosystem show, and maybe get them to help clean up a creek. (Snyder, "Nature" 9)

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[1] Wallace Stevens, "The Idea of Order at Key West"

Nature? C'mon buddy, it's right here past the end of these houses. On the other hand, William Cronon, from the collection of essays entitled *Uncommon Ground*, complicates nature, approaching it as an idea instead of the rocks and trees, fur and feathers of Foreman and Snyder:

> These essays take as their starting point one key insight. It is that "nature" is a human idea, with a long and complicated cultural history which has led different human beings to conceive of the natural world in very different ways. (Cronon, Foreword 20)

Of course, these are not the only voices in conflict over nature, but the definitive split over the very essence of nature makes this dialogue valuable. Cronon argues for a textual approach to the idea of nature. He defines nature as a heavily mediated, cultural construction that is seemingly more a product of language than of organic creation. His approach is influenced by structuralist and post-structuralist theory in addition to its environmental concerns: "Asserting that 'nature' is an idea is far from saying that it is only an idea, that there is no concrete referent out there in the world for the many human meanings we attach to the word 'nature'" (Cronon, Foreword 21) For brevity's sake, I reductively label his approach "social constructionism."[2]

To represent the other side, Foreman, founder of the radical environmental group EarthFirst!, and the poet and essayist Gary Snyder contributed essays to a special edition of *Wild Earth* decrying Cronon's ideas and the collection *Uncommon Ground*:

> [Cronon] spins his high-falutin' theories far from the real world of Grizzly Bears and Gila Chubs, and far from the other (opposed) real world of timber corporation boardrooms and congressional committees—far, indeed, from the frightening reality of chainsaws ripping through thousand-year old forests, from the D-9 blade stopped by brave souls buried to their necks in a rough roadway, from the rallies, letter-

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[2] Social constructionism accurately describes an aspect of this approach, but Cronon's arguments, and most of the other authors in *Uncommon Ground*, are subtle and supple, encompassing both a textual understanding of nature as a product of discourse, but also keenly aware of the material damage done by this discourse. Social constructionism may be a defining characteristic of these voices, but it is certainly not the only characteristic.

> writing, and scientific reports by all manner of conservationists. What Cronon criticizes is a straw-philosophy and a straw-movement, which exist only in the windowless, climate-controlled conference rooms of his Uncommon Ground ivory tower. (Foreman 4)

Foreman, Snyder and the other writers in *Wild Earth* propose a definition of nature committed to the materiality of the thing they defend. They are incensed at the idea that the physical reality of nature take a back seat to its construction as a cultural product. As Johnson refuted Berkeley, Snyder refutes Cronon's preoccupation with textuality by offering to drag him into a nearby creek. From Cronon's point of view, however, such an argument for an essential nature is simplistic:

> Popular concern about the environment often implicitly appeals to a kind of naive realism for its intellectual foundation, more or less assuming that we can pretty easily recognize nature when we see it and thereby make uncomplicated choices between natural things, which are good, and unnatural things, which are bad. (Cronon, Introduction 25-6)

As I did with Cronon, I'll reductively label these proponents "materialists."

The vitriolic tone of the debate seems paradoxical when one considers that both sides would be labeled environmentalists. Both Cronon and the *Wild Earth* essayists espouse "green" ideas committed to the health and stability of the planet. This internecine warfare results from their two very different ways of looking at nature and reality. A strict, hard correspondence understanding of reality—where there is a one-to-one relationship between words and what those words stand for—leads Foreman and others to argue for protection of vast areas of wilderness under the assumption that such a thing as "wilderness" exists and can have boundaries delineated. Cronon's social constructivism suggests that ideas like "wilderness," "purity," and even "nature" need to be placed in a context of cultural messages. For Cronon, our access to reality is always mediated by language; thus nature, even at its most seemingly pristine, is always corrupted by human influence. Separation of nature from the discourse that surrounds it is impossible.

These two worldviews are in many ways touchstones for our contradictory understandings of nature.[3] Both are true, yet seemingly incompatible. They inevitably lead to disparate strategies for protecting the planet. Both sides, operating within their own philosophies, can accuse the other of aiding the more immediate enemies of the planet. Cronon argues that a naive definition of nature can lead to quixotic pursuits of impossible ideals, inhibiting any real change:

> Once we believe we know what nature *ought* to look like—once our vision of its ideal form becomes a moral or cultural imperative—we can remake it so completely that we become altogether indifferent or even hostile toward its prior condition. Taken far enough, the result can be a landscape in which nature and artifice, despite their apparent symbolic opposition, become indistinguishable because they finally merge into one another. (Cronon, Introduction 40)

Foreman and Snyder argue that a relativist muddle of understanding nature provides academic justification for those who would abuse the physical planet in pursuit of profit: "The attacks on Nature and wilderness from the ivory towers come at the right time to bolster the global developers, the resurgent timber companies…, and those who would trash the Endangered Species Act" (Snyder, "Nature" 8). While both sides argue for the necessity of their view and the danger of their opposition, Foreman and Snyder make a worrisome play for a moral purity that uses anti-intellectualism to argue their version of nature. By falling back on pragmatism and so-called common sense, the "materialist" will inevitably and perhaps deliberately misunderstand nature more for political gains than philosophical inquiry.

To a large extent, "The Simulation of Nature" agrees with Cronon. While Foreman and Snyder are persuasive in arguing for a materialistic understanding of nature, such a view too

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[3] There is also another dynamic at work in this conflict: the role of the intellectual in society. Cronon, as Foreman's quote insinuates, is an intellectual out of touch with the subject of his study. His language revisits a common rhetorical strategy of accusing academics of living in the ivory tower, failing to engage in real world pragmatics. This is not to say that the radical ecology wing of a green movement ignores academics. The academics that are admired and deemed worthwhile, however, invariably have "street credentials." Often they are scientists, biologists or ecologists who spend significant amounts of time in the field.

narrowly defines what counts as knowledge about nature. They may argue that Cronon and other academics fail to ground their thinking in direct encounters with the physical planet, but I believe that such an argument is marked by a certain prejudice. The more radical environmentalists like Foreman are deeply discouraged by contemporary human civilization. They argue that any thinking that arises from within civilization's institutions—namely universities—is already marked as suspect and insufficient; insufficient because it neglects the knowledge gained by immersing one's body into the environment under study, and suspect because this thinking is produced in a corrupt atmosphere in the process of destroying the environment under study. I disagree with both of these criticisms. Understanding and defining nature cannot be achieved by simply relying on one's senses to create knowledge, nor should we dismiss ideas from the ivory tower because they are products of a system that seems to be destroying nature. What we describe as nature is too vast to be readily understood by visits to particular streams or prairies. Without abstract thinking independent of sensory input, we simply cannot understand the cultural complexity of such a disputed term as nature. One can make an analogy to biologic studies of animal populations. Such studies became magnificently richer with the aid of computers. The immense calculating abilities allowed us to "see" dimensions we were incapable of previously. These machines have expanded our knowledge as much as the microscope. In the same way that this knowledge is beyond our sensory appreciation, so must cultural criticism of nature exist beyond our ability to touch, see, smell and hear nature.

In presenting these voices of environmentalists, I've embarked on the course of defining some contemporary thinking about nature. After a few more pages, these stern, straightforward statements of Foreman, Snyder and Cronon will give way to more aesthetic voices that I believe better accomplish the task of elucidating nature. The four authors discussed in the following chapters—Thomas Pynchon, Richard Powers, Jonathan Franzen and Mike Davis—would not typically be seen as nature writers. Franzen's novel takes place in Boston and its suburbs. Powers deals with the growth of a mammoth corporation. Davis's two books revolve entirely around Los Angeles. Pynchon's book, despite much of it being set in the frontier of eighteenth-century

America, still resists categorization as a nature novel. Rather, these works dramatize the various and often contradictory ways we categorize our knowledge of the world, depicting a world with contested boundaries between the simplistic unmediated connection of Snyder and the complex textuality of Cronon.

Novelists like Pynchon, Powers and Franzen have concern for the physical planet, yet are aware that the idea of nature, the threat of environmental erosion, even their own concern for the sustainability of ecological systems, are all socially constructed. The scholar and historian Mike Davis shows the intertwining of reality and representation that frustrates all attempts at recording nature. In exploring these works of authors often labeled "postmodernist," I show that these writers are informed by all sides of this debate to circumscribe nature. They may feel that the physical world does indeed push us around, but they recognize that a non-mediated experience of nature can never be related through a textual artifact. At the heart of their works is a particular postmodern dilemma, the oft-noted crisis of legitimation. For many, nature appears to be that authority beyond the text that would seem to resolve this crisis, yet even the turn to the physical planet cannot escape the linguistic constructions that envelop us. These authors know this. They turn toward nature, but never turn their back on language.

These writers also possess an historical awareness of nature. For them, nature is not a universal, timeless entity, but a cultural idea that has been shaped and determined over time. The linguistic construction of nature demands a recognition of its historical construction as well. The nature we know is a product of political forces that not only have physically altered the shape and quality of the land, but also have determined what aspects of reality constitute nature. What has been classified as nature has changed with our cultural changes: swampland turns from a noxious wasteland to a productive essential component of an ecosystem; deer herds transform from symbolic tokens of the pastoral to overpopulated pests created by an expanding civilization. These writers contextualize the *ideas* of nature as well as the landscape itself, denying the stability of the terms they employ just as they chronicle the fluid changes of the land.

The authors studied here contribute a profound new understanding of nature in the written text. Their writings are immensely learned, influenced by an amazing knowledge of science, history, computing, business, politics and architecture among other specialties. Often approaching the very limits of language's ability to describe, the texts shift into overdrive, using overheated, rhetorical excesses to overwhelm the stodgy, rational discourses that fail to accurately convey the depth and breadth of nature. In their efforts to describe the physical, social and psychological conditions of their worlds, the novelists nearly exhaust language's ability. When even this excess fails, text gives way to iconography, maps, font changes and pictures, engaging in as many avenues of understanding as necessary or possible. These authors are not satisfied with merely employing the precise term for each object they describe, limited by some nominal avenue of epistemology. They expect to communicate the rage, awe, splendor, beauty, power and overall complexity of nature through the complexity of their text, pack as much knowledge as possible between the covers of their books. Each work possesses a sophisticated understanding of the interrelations of all aspects of the world—including the relation between nature and text—revealing original and imaginative means by which these connections come to light.

In analyzing these works, I argue that the depictions of nature in these works are as accurate a map as text can achieve because they are fully aware of their textual limitations. In fact, they embrace their textual limitations as avenues toward a more intricate and complex mapping of the territories they describe. The writers are expert cartographers, not so foolish as to think that their charts and maps are so detailed as to be the landscape. On the contrary, they embrace all the tools of their craft, using symbols, icons, coded language… all artificial constructs in an effort to provide the most exact guide to nature for their readers. Never do they presume that they are providing nature itself. As a map would become cluttered, overwhelming and useless by realistic portrayal of all geographical features of the land, so does a literary text become a more simplified nature as it strives for a verisimilitude that attempts to occlude the hand that creates it. A map is true because it is aware of its manipulations and uses those to its advantage. Such are the works here.

To better understand how these works compare to traditional nature writing, it is worthwhile to consider the idea of ecocriticism. Cheryll Glotfelty, in *The Ecocriticism Reader*, defines ecocriticism as "the study of the relationship between literature and the physical environment" (xviii). Glotfelty further systemizes ecocriticism into three stages, analogous to Elaine Showalter's stages of feminist criticism. The first stage focuses on how nature is represented in literature. The second recognizes, rediscovers and recuperates the genre of nature writing. The third, theoretical stage raises fundamental questions about the "symbolic construction of species," namely the philosophic dualism that separates the human from nature. While I think Glotfelty's system has its flaws and is self-admittedly unbinding, it does provide a recognizable system in which to place this project. Primarily this work resides in the first stage, an examination of nature in contemporary literature. But in its entirety it is informed by the thinking of the third stage. How nature is portrayed in literature is best understood in light of fundamental questions about the construction of nature itself. Glotfelty's third stage may be reconstituted as the stage of ecocriticism where we employ literature to question its own discourse on nature.

The novels discussed here are themselves works of ecocriticism. They raise questions regarding the cultural construction of nature, and as highly self-conscious works, they also question their own discourses on nature. So despite the lack of any texts easily categorized as nature writing, I believe that "The Simulation of Nature" is still a work of ecocriticism, deeply concerned with the intersection of literature and the environment. It sits along the same continuum with such early works of ecocriticism as Annette Kolodny's *The Lay of the Land* and Leo Marx's *The Machine in the Garden* and later works like Lawrence Buell's *The Environmental Imagination.* More precisely, this work has much in common with the works of the cultural critic Andrew Ross and his two books, *Strange Weather* and *The Chicago Gangster Theory of Life.* While these two books might need to be shoe-horned into Glotfelty's ecocritical system, Ross's books are remarkable accounts of our contemporary understanding of nature, and a dire warning to resist "the growing reliance upon the authority of 'nature' to deal with problems that are primarily social both in their origin and in their solution" (Ross *Chicago* 238). It's worth noting that neither of Ross's books

appears in *The Ecocriticism Reader*'s list of recommended readings. Such an omission points to a neglected aspect of ecocriticism arising from a bias toward the materialist's mode of thinking.

The rise of ecocriticism came about because of an intense concern that the way we live is exploitive and debt-ridden. As Green Studies have infiltrated the field of literary criticism, the emphasis of most ecocritics has been upon texts whose ideologies veer closer to Foreman and Snyder than to Cronon.[4] Many ecocritics look to those authors that profess an answer to a life that has arrogantly turned away from a connection to the earth. Dismayed at a culture that takes its resources for granted, ecocritics have recognized in contemporary nature writing a reaction against this arrogance and insensitivity, works that hold out for that ultra-textual authority that nature seems to promise. Non-fiction texts by the likes of Barry Lopez, Annie Dillard and Wendell Berry reappear frequently in ecocritical studies because they dramatically foreground a desire for nature in its purist sense. While these nature writers address environmental concerns, they generally explore the pursuit of an unmediated connection with nature. The bulk of their explorations takes place in locales far removed from cities, suburbs, and other overly-humanized aspects of the environment. Pushing deep in the arctic, reworking the rural farm, or plunked down in the desert, these new materialists put the non-human, ultimate Other at the center of their texts.

Unsurprisingly, the first wave of self-defined ecocritics have focused on this resurgence of nature writers. With dog-eared copies of *Walden* and *My First Summer in the Sierra* in hand, they have prolifically made up for a slow start in greening literary studies. A similar surge in nature novelists has overlapped nature writing and ecocriticism. Authors such as Terry Tempest-Williams and Rick Bass, who put the human/nature relation at the center of their novels, have begun to garner critical attention focused on their approach to nature. They are "nature writers" in the truest sense as they attempt to transform the experience of nature into texts, aiming for an exact re-presentation of the physical landscape. Their view of nature is similar to the hard correspondence of the

[4] Snyder's poetry, in fact, is often the subject of ecocritical studies, and The Association for the Study of Literature and Environment takes as its motto a short poem by Snyder.

materialists. The text, more often than not, is simply a vehicle, a transparent medium for delivering nature as it *truly* is.

In many ways, ecocriticism is seen as a critical response to theoretical approaches to literature. Much of what was labeled "theory" in the last three decades was an understanding of reality in textual terms, a worldview that influences the social constructivism of Cronon. Laurence Coupe, in the introduction to *The Green Studies Reader,* notes that in various schools of thought—formalist, psychoanalytic, Marxist, new historicist, deconstructionist—that which we call nature has been a product of discourse. Primarily nature has been seen as a sign in a signifying system and as such, what we label as the referential must be questioned or at least "placed in emphatic parentheses" (2). Experimental works by the likes of Pynchon, John Barth, and Don DeLillo became closely aligned with such theories because of their common concerns with the playful, fictional element of language, its fluidity and elusiveness. Much ecocriticism wants to dismiss these and other similar aesthetics as inaccurate in their description of reality because they are not grounded in the materialist assumptions of nature. They fail in presenting an "accurate" representation because they suggest a reality not confirmed through hard perception. The common criticism argues that they are "melodramatic," or "texts infatuated with texts," or, as often said about literary theory, "irrelevant to the real world." Such is the reason why Sven Birkerts can call ecocriticism "a reply to and, perhaps corrective for the perceived irrelevancy of 'theory' in recent years."

I disagree with the notion that ecocriticism should be seen as a corrective to the irrelevancy of theory, primarily because I believe that theory offers much for scholars who seek to understand the discourses around nature. Labeling theory as "irrelevant" is an attack on theory's way of understanding reality as inherently textual. The linguistic turn suggests that reality is a product of language and social discourse, or at least that is the only manner in which we can comprehend reality. There may be a real world, one that is remarkably similar to that material world insisted upon by materialists like Dave Foreman, but we can never know for certain that we have

successfully separated that reality from the social components through which we access this reality. In a word, the two are inseparable. Reality—or in this case, nature—*is* its social constructions.

For many ecocritics, such concern with language seems incompatible with a concern for nature. And in literature informed by such ideas, many ecocritics see a conspicuous lack of interest in nature. Scott Russell Sanders, in his essay "Speaking a Word for Nature" in *The Ecocriticism Reader*, laments the barrenness of contemporary fiction. He feels that "a deep awareness of nature has been largely excluded from 'mainstream' fiction'" (Sanders "Speaking" 192), and then goes on to attack, among others, Don DeLillo's *White Noise* for paying attention to a sunset only because of the toxic gasses making it so vivid. A satirical comment about air pollution apparently isn't the right sort of awareness for Sanders. This approach, which we can affectionately label Sanders's rule, sanctions only a certain type of unspoiled nature as an appropriate subject for an ecological novel. Texts like Thomas Pynchon's *Gravity's Rainbow*, William Gaddis' *JR*, or DeLillo's *White Noise* are ecologically informed but have not received much attention as novels concerned with nature because they are deemed too concerned with language. Now some of those novelists, Pynchon and DeLillo in particular, and their next-generation heirs are producing explicit eco-fictions, but because they are often not wrapped in traditional "nature" writing themes, the novels' ecological focus has failed to register on the ecocriticism screen. Sanders admits that DeLillo and others are "reporting on our condition" when they situate their novels in urban settings "engulfed by human racket," but he claims these fictions are false because they never look beyond the human realm. And therein lies the dangerous misapprehension. Sanders subtly equates "nature" with "truth," proscribing the social as somehow not natural and false. Certainly there are fictions that pay little attention to the world outside living rooms and cities, but in castigating these fictions as false, Sanders's criticism goes awry. Sanders's argument falters because he confines his understanding of nature to the hard correspondence materialism that bounds Foreman and Snyder.

The philosopher Richard Rorty helps us better understand this demand for accuracy in representation. In his book *Philosophy and the Mirror of Nature*, he contests the notions of objectivity and rationality in the pursuit of accurate representation. Such notions are "an automatic

and empty compliment which we pay to those beliefs which are successful in helping us do what we want to do" (10). Rorty dismisses the ideology of thinkers like Foreman and Snyder because they are committed to a theory of knowledge that attempts to "eternalize" certain discourses (namely objectivity and rationality) and make them appear as truth, subject to no appeal. In the rhetoric of nature writing, nature itself occupies this "eternal" discourse. It is seen as a self-evident truth which acts as a corrective for the convoluted social structures that build up around it. The oft-used phrased "nature knows best" succinctly sums up this belief in nature's purity and truthfulness.

For Rorty, however, "nothing counts as justification unless by reference to what we already accept, and that there is no way to get outside our beliefs and our language so as to find some test other than coherence" (178). Justification is not predicated on a special relation between ideas and words, but rather on social practices. To look to nature (or objectivity or rationality) as a guarantee of truth is to mistakenly ignore that even these are products of discourse. To translate this into our discussion of nature, one cannot expect a text to depict an unmediated representation of nature. Language is always a social construction no matter what its subject, and any attempt at a pure representation of what nature is runs afoul of conversation and social practice. Foreman, Snyder and those that would see ecocriticism as a corrective to the idea of social constructionism in its many forms attempt to privilege nature as a permanent neutral matrix by which they can criticize the social. But they misconstrue the essence of nature when they divest it of its socially created components. Andrew Ross puts it more bluntly:

> We are in dialogue with the natural world, it is not our supreme court. There are no "laws" in nature, only in society, because "laws" are made only by us and can therefore only be changed by us. Nature, in short, does not always know best. And with the exception of those tiny pockets of wildness that have not been made over by humans, what we know about nature is what we know and think about our own cultures. Those who say otherwise are either living in a very old dream of science, or are desperate enough to want some unanswerable authority in control of their, and our, lives. (*Chicago 15*)

Perhaps in wildness there may be some truth to what materialists would argue. The most remote spaces, perhaps, are free of our ideas and our influence. Yet even that idea of wildness is a product of a categorization that purports to separate humans from parts of the physical planet. To attempt to talk about it or write about it co-opts even wildness into the realm of social discourse. Wildness, despites its apparent isolation, occupies just another grid in the matrix of human epistemology.

Ecocriticism needs to expand its reach beyond its concentration on a certain type of nature. The purpose of this project is to explore the works of fiction and non-fiction that are ecologically informed, yet exist outside the sphere of nature writing and nature novelists. I am interested in the way the social construction of nature has led to an unstable environment veering toward ecological catastrophe. While many contemporary authors deal with the spectre of ecological collapse by focusing on those spaces that have remained untainted in some aspect, and look to them for escape, rejuvenation and solace, the works of central importance here reflect the gory, frontline confrontations where nature meets the human-made. These works of literary fiction, non-fiction and cultural icons, by directly confronting the intense mediation between human and nature offer tremendous raw material for understanding how humans create their idea of nature.

By focusing on these texts and approaching them the way that I do—that is, by concentrating on how they reveal the social and historical constructions of nature—I demonstrate that these works are better descriptions of what we call nature and, more importantly, may provide deeper insight into how we might prevent an impending ecological crisis.

Too often, the "star" texts of the ecocritical movement reveal a naive and even simplistic understanding of nature. Their concerns are bounded by ideas of purity, wilderness, or nature as an entity that exists independent of human ideas. Separating nature from its cultural origins leads them to believe that a true understanding of nature comes through a direct connection with its essence. This simplification of nature, one denuded of its cultural element, is further perpetuated by the methods used to depict this connection in their texts. In their attempts to deny the various levels of mediation present in encounters with nature, including their own act of writing, these nature writers adopt a prose style that presumes a transparency of language. Those writers best at

masking the multiple levels of cultural mediation between the physical environment and what gets labeled "nature" in their texts—these are the authors most lauded by ecocritics. Ironically, such authors are inadvertently the most deceptive in their characterization of nature.

The materialists' desire for the immediate connection belies a conception of nature as prior to history, something that can be reached without traveling through the social. They and the majority of nature writers want to fix the free play of nature as if it were the one idea excluded from language's laws of signification, when of course it is not. A passage from Barry Lopez's book *Arctic Dreams* exemplifies the contradictions and limits of textualizing that which cannot be communicated through language. In this passage, Lopez encounters a herd of muskoxen. In these animals, Lopez feels that aspect of nature which exists wholly apart from human interference. In his description, he attempts to invest the arctic wilderness with an essence seemingly outside of history:

> On pages crowded with crude field drawings of the snow bunting and the pattern of a bone scatter along Baker Creek, I wrote: "the innocence."
>
> The words came at the end of a long afternoon in which I had wandered with and sat at the perimeter of a small herd of seven adults, a yearling, and four calves. It was a reaction to something I could not have located on a muskox farm: they were so intensely good at being precisely what they were. (74)

That essence Lopez tries to capture frustratingly escapes description. In fact, the characterization of the muskoxen inverts itself so that the muskoxen remain undefined. Lopez finds himself at an impasse in describing the muskoxen because his concept of nature falters when he attempts to render nature in textual terms. The nature Lopez describes lies outside of culture and language. Or to be more provocative, it may not even exist. The best he can do—keeping in mind that Lopez may be considered one of the best of contemporary nature writers—is the tautology "they were so intensely good at being precisely what they were." The framework used by Lopez immediately characterizes, not the wild muskox, but something else, something for which the muskoxen operate as an other. The access to the true nature beyond the social leads to a dead end. Inevitably, Lopez's

descriptive reach for a true essence of nature ends up couched in social terms, telling us far more about his conception of society than about the wilderness. His comments about the muskoxen, positioned as they are, allow for an implicit critique of farming, humans, and society in general based on the idea of a pure nature represented by the muskoxen. He wants us to believe he has somehow captured that which is beyond history, but his description of nature reveals a social, cultural and historical framework from which there is no escape, not even for the innocent muskoxen.

Certainly we might agree that these wild muskoxen are in some sense apart from society. I would argue that the mysteriousness that Lopez fails to capture is perhaps that essence of nature that resists textualization. But what nature writers like Lopez fail to appreciate is that we can *only* approach that mysterious essence through the mediating framework of history and language. Later in his book, Lopez claims that "[t]he land retains an identity of its own still deeper and more subtle than we can know" (204), and he's absolutely correct.[5] We cannot know it and attempts to do so end up in barren conclusions that nature is what it is. Such a result is absolutely meaningless outside of a social framework. Lopez's inability to describe the true essence of the muskoxen is representative of this lack at the heart of nearly all nature writing that presumes a nature outside of history.

As a structural starting point for explaining reality, this image of nature before history is upside down. This inverted image of reality allows nature writers, as the Lopez quote reveals, to position nature as the effective opposite of history, culture and language. When this inverted image solidifies into a myth, one with a very long history, "Nature" becomes the realm of the absolute and the repository for social ideals. Neil Evernden, in *The Social Creation of Nature*, describes the danger when these social ideals, and potentially social injustices become entrenched:

> They are immune from analysis or criticism once they cease to appear as human concepts and instead become perceived as eternal givens. In other words, once

[5] Such is the idea often expressed about communication with animals. Even if a lion (or a muskox) could talk, we could never understand him because the cultural frame of reference is so disparate.

> something is perceived as lying in the realm of nature rather than in the realm of society or history, it seems beyond criticism. By definition, it has nothing to do with us: we are not its architects. (23-4)

Granted, the more blatant attempts to "naturalize" social failings draw attacks. The recent fuss over *The Bell Curve* rejected the notion that African-Americans' lower socio-economic status was the result of a "naturally" less intelligent race, arguing instead that this condition was a social and historical result. But too often, couching arguments in terms of the true nature of a phenomenon immunizes the framework to criticism. Ecocritics must be aware that the *ideas* of nature are always in a context, not simply the landscape itself. We must overturn the assumption that nature is a stable entity and, as such, an authoritative resort for social criticism.

Wendell Berry offers another example of the presumptions that within nature lies the ideal. For Berry, true nature is represented by the Camp, his rural family farm. In this passage he delineates culture and nature through the journey from his university office to the Camp:

> It was a journey from the abstract collective life of the university and the city into the intimate country of my own life. It is only in a country that is well-known, full of familiar names and places, full of life that is always changing, that the mind goes free of abstractions, and renews itself in the presence of the creation, that so persistently eludes human comprehension and human law. (63)

Berry rejects abstract thinking in favor of experience. He offers another variation on living in the immediate present as preferable to the historical understanding of nature, the abstractions that attempt to place immediate experience in a context. Berry, however, doesn't necessarily reject historical context. In fact, his reputation as a significant thinker lies in his contextualization of rural Kentucky in terms of the history of farming, rural depression, industrial agriculture and the rapid modernization that has radically altered a way of life. Yet Berry, like Lopez and many others, never moves from numbering the historical influences on the land to contextualizing his particular idea of nature. He doesn't consider that his ideas of nature are subject to the same historical conditions that affect his farm. For him, the land is a constant: it is like a pure granite block upon which history

carves its story. It is in this stable block where he locates the power of nature. Berry is always concerned with how history operates upon the Camp. His books meld personal recollections with historical recountings of how humans have shaped and altered the landscape of rural Kentucky. In both cases, historical and personal, Berry's narratives separate subject and object. The landscape is a pure substance which is manipulated by humans, but Berry does not move beyond this dichotomy to examine how the concept of the land, the idea of the object, is in fact created by the subject. The idea of a pure nature or even a corrupted nature, as in the case of the Camp which Berry works to reform, springs from a specific cultural dichotomy that demands an antidote to civilization. Just as Berry's depressed landscape is the byproduct of social forces that drain the land of its productive value, Berry's conception of the Camp as a place for escape and renewal is a byproduct of cultural forces that have attached certain meanings to rural farms, wilderness and other landscapes situated in opposition to universities, cities and other heavily socialized landscapes.

Like Wendell Berry, nature writers have been instrumental in historicizing nature. The best of them politicize the landscape and reveal to us the forces that have shaped what often seems to have been inevitable. In explaining both ecological forces and social forces that affect the environment, they have expanded our temporal conception of nature. Yet when they look for a deeper understanding of nature beyond this history, they have a disturbing tendency to dismiss the historical in the search for a more intense present. Annie Dillard, in one of the most lauded of these texts, *Pilgrim at Tinker Creek*, feels that only by living completely in the present can we truly appreciate nature. Dillard, in a work that often is astutely aware of historical forces, turns her back on the intellectual understanding of her surroundings in favor of a supposed unmediated direct connection to her experiences:

> *Self*-consciousness, however, does hinder the experience of the present. It is the one instrument that unplugs all the rest… Self-consciousness is the curse of the city and all that sophistication implies. It is the glimpse of oneself in a storefront window, the unbidden awareness of reactions on the faces of other people—the novelist's world, not the poet's. I've lived there. I remember what the city has to offer: human

> companionship, major-league baseball, and a clatter of quickening stimulus like a rush from strong drugs that leaves you drained. I remember how you bide your time in the city, and think, if you stop to think, "next year… I'll start living; next year… I'll start my life." Innocence is a better world. (81)

The problem with Dillard's assertion is that this self-consciousness never really goes away, even after moving to the country. In spite of the quote above, Dillard often seems to embrace this self-awareness throughout *Pilgrim at Tinker Creek* , recognizing that she is recounting *her* distinct version of a landscape. Indeed, Dillard has a greater sophistication in her understanding of the idea of nature than most of her colleagues, delighting in her personal creation of an idiosyncratic nature. *Pilgrim at Tinker Creek* seems to conjure up a whirlwind of nature with Dillard as the animating consciousness at the center. Yet this passage confirms that, for Dillard, the truest connection to nature requires a dangerously apolitical approach premised on the illusion that one can get beyond self-consciousness; or in other words, get beyond some form of mediation.

Gary Snyder, in *The Practice of the Wild*, brings this ahistorical concern directly to language itself. In discussion with a friend, Snyder conceives of language as an ecological system. In this passage, he looks to find the most dominant and most wild facet of an ecology of language:

> "One might say 'poetry' is the lion because poetry clearly eats and intensifies natural speech. But given that almost all of our thinking is colored by language, and poetry is a subset of language use, that can't be it. I'd say it was the unconditioned mind-in-the-moment that eats, transforms, goes beyond, language. Art, or creative play, sometimes does this by going directly to the freshness and uniqueness of the moment, and to direct unmediated experience."
>
> Ron tested me with a Whorfian challenge: "Is there any experience whatsoever that is not mediated by language?" I banged my heavy beer mug sharply on the table and half a dozen people jumped and looked at us. We had to give up and laugh at this point, since it always seems to come back to an ordinary mystery. Our table was under the branching head of a caribou. (71)

Again, we have the desire for the unmediated experience. Snyder's attempt to prove that such a state can exist fails to withstand any condition beyond immediate reaction. Certainly a startled jump at a loud noise is an experience that requires no intervening mediation, but such a facile trick hardly supports Snyder's assertion. Such a moment doesn't go beyond language, it simply precedes it. Language, like laughter, inevitably follows it. The idea that art can attain (or be reduced) to some similar unmediated moment ignores the immense amount of cultural learning that must precede an appreciation and creation of art. Snyder's final sentence simply confirms this. The near non-sequiter "Our table was under the branching head of a caribou" must be taken as an artistic flourish meant to comment on Snyder's conception of mediation. That caribou head represents the potential of direct, unmediated experience with nature. But for such an icon to function metonymically, there must be some mediation, some cultural instruction on the wildness of the caribou, its position as polar opposite of overcivilized, fruitless intellectualizing about nature. Otherwise, it's just a dead piece of flesh.

This understanding of the idea of nature as stable and uninfluenced by social changes explains the dominance of a certain type of nature writing. The rising wave of nature-influenced works remains in the non-fiction, descriptive category, what might be called the binocular/microscope approach to understanding nature. All we need do, these works imply, is closely observe and nature will reveal her secrets to us. Or if the secrets are not to be revealed, we will at least appreciate the mystery. Barry Lopez takes us to the Arctic circle with detailed descriptions of migration patterns. Annie Dillard looks very closely at the world surrounding a small creek. The belief is that everything worth knowing is somehow tangible. We've gone too far into abstractions, as Berry might argue, and we need to get back to things we can touch and feel. To that end, we get a lot of lists and catalogues in nature writing. The goal seems to be to overwhelm us with detail, proving that there is an awful lot to be learned in even finding out what we're actually playing with. Abstractions, apparently, can only serve to blind us to the myriad realities of concrete experience.

It may be true that we can gain much by gathering all the data that we can, but this data means nothing without abstract concepts. This mania for data at the expense of categorization, privileges a particular form of accuracy where nature is concerned. In the rush to get to a more true sense of nature, ecocriticism bypasses most of the complex negotiations that exist, and will always exist, between the physical realm and the artistic response to it. Sanders notes that the most significant nature writing isn't found in the mainstream novel, but the essay, travel writing, science fiction and "regional" fiction.[6] But his criteria for what counts as nature writing blind him to other examples of ecologically informed fiction. Among his examples are Berry, Edward Hoagland, John McPhee, Peter Mathiessen, Paul Theroux, all of whom are authors that explore nature at its most remote locations from civilization. Achieving their connection to nature inevitably requires a physical separation from civilization, a geographical shift that allows them to ignore the mediating effects of society. In Sanders's examples, the focus is upon a close accurate description. In many cases, the nature writer aims to vividly present an exotic locale, to make the reader feel like she's actually there. Sense perceptions are listed and catalogued, often to exhausting degree. Of the five, sight predominates because of its apparent objectivity. Its passive reception of data presents an apparent objective reality that authenticates the author's description.

This epistemology of the senses has a direct ancestor in the empiricist thinking of the Enlightenment. In the Enlightenment revolution in thought, the definition of what is true becomes a near irrevocable link to what can be observed and manipulated. Experimentation and the scientific method become the only avenues to truth. Evernden notes that this was a "democratization of knowledge" (83). True representations of nature, be they demonstrable experiments or meticulous descriptions, were to be visible to all people. A fact was true because everyone could see that it was true through detailed processes that revealed the mechanizations of nature. Among other effects, delineating nature in this fashion allowed for serious questioning of spirituality and religion. Evernden explains why this is crucial in the development of an empiricist's view of reality:

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[6] Of course, it is influential critics like Sanders who largely determine what counts as significant nature writing in the first place.

> Indeed, it would be fair to say that it was *necessary* that "everyone" see these things, because there is now no other authority to vouch for them. In the past, the "authority" of nature was presumed to come from God: we saw it in the messages He chose to present. With the systematizers of the Renaissance, the authority shifts to what we might call the denotative core of nature: the innate "necessity" that ensures the adherence of the world to human-discerned laws. (85 Evernden's emphasis)

For the world view of the Enlightenment to take hold, its explanation of reality must be understandable and demonstrable beyond any mystical, outside authority to explain phenomena. The need for an authority, however, did not disappear. It was instead reinscribed in nature itself. Its essence was still the same, but the authority now was vested in the fact that nature simply is. Nature, as mentioned above, moves beyond criticism in much the same way that "God" works in mysterious ways: both are unquestionable. One cannot criticize a chemical reaction or mass migration. They are what they are. Of course, this is exactly how Lopez believes he is describing the muskoxen in *Arctic Dreams*. "They are so intensely good at being precisely what they were." Yet Lopez, and most people, proceed to use that authority to say something about human society. For Lopez, it is the subtle use of the word "innocence" that indicts society. For others it's deferring to an essential "human nature" to explain events: Social Darwinism, *The Bell Curve*, sociobiology.

The remnants of this authority of the natural still maintain a hold over contemporary nature writing. Practitioners of the binocular/microscope genre build their descriptions on assumptions rooted in the eighteenth century. It may be a kinder, gentler empiricism, but it still looks to capture and describe nature at work. Many nature writers are blind to the idea that truth can exist beyond observation and experimentation. Deductive reasoning, abstractions if you will, are anathema to nature writers because such thinking does not gain its power from nature as the authority. It is, in fact, more human-centered and more reason-centered than conclusions reached from immediate, sensory experience. Nature writers, on the other hand, are locked into a passive way of

experiencing nature, or gaining knowledge of nature. They watch closely, travel to distant lands and wait for the veil to be lifted. The quest for knowledge becomes preoccupied with representation.

This dominant mode of describing and, hence, creating reality has failed as a means of understanding the human position in the physical world. Despite our immense knowledge gained through observation of physical phenomena, and our extensive manipulating and harnessing of those phenomena, we are veering closer and closer to an ecological catastrophe. Indeed, the crisis we seem bent upon bringing about may be largely the result of our reduction of epistemology to one narrow avenue. Our dependence upon an instrumental reason that answers only to pragmatism, and our infatuation with a technology that presumes progress to be linked to further and more complex dominations of nature has deposited us at a dead end. Our very limited conception of reality has been reduced to an overly simplistic dualism of subject and object. Since Descartes, Locke and Kant, Western thought has consistently developed reality-explaining theories that presume we are innately separate from the world we inhabit. In the second half of the twentieth century, however, this dualism has been increasingly threatened by the shining knight of empirical thought, science itself.

As physics, the ultimate practice of empirical science, has pushed deeper and deeper, it has reached the limits of observation as a means of gaining knowledge. The Heisenberg Uncertainty principle of quantum mechanics shattered the illusion that we can simply observe and have an unmediated flow of information from the real world straight into our perceptions. Instead, at the very basic level of nature, we find that observation radically changes reality. This discovery, perhaps more than any other recent revelation about nature, may have the power to restore our understanding of nature, reversing the nature/history relation to show that the concept of nature is a human invention. Physics has shown that we cannot study nature so much as study the way we study nature. Subatomic physics suggests that, in one sense, Lopez is right and nature ultimately retains an identity we cannot know. If such is the case, then arguably our responsibility moves to an understanding of how we conceive of nature, how we create a reality around nature. Most nature writers still operate in a Newtonian universe, believing if they just look hard enough they will see

both position and velocity, but it is impossible to capture both. Nature ultimately retains an unknowable identity.

For a more exact understanding of nature, we do better to look at those novelists that have abandoned the Newtonian universe in favor of one of uncertainty. These are the artists who understand that we cannot capture in a text the eternal present, unmediated connection with nature. Our presence—call it self-consciousness, language, the post-lapsarian condition, whatever you like—not only alters the reality that we see: it in effect creates it. Because we can never reach that ultimate hidden identity of nature, we can only write about, discover and critique the way we have created that reality. Post-Newtonian physics doesn't simply describe where we live: it describes how we live.

* * * * *

The key term for understanding the literary works here and for understanding our relationship with nature is "mediation." Both Snyder and Dillard, in their desire to have that unmediated experience, offer poetry as something that comes close to achieving this state. Ironically, one might consider poetry as the most artificial of language uses in that it alters syntax so dramatically that the reader is forced to pay attention to the language, the individual words. Contrast this to the novel, Dillard's realm of self-consciousness, where the style of realism, the vernacular of most mainstream fiction, actively attempts to make the language disappear, allowing the reader to forget the conventions of literature. It bears repeating that both of these art forms, and all others, are fictional representations of what we experience away from the text. Poetry offers no closer relation to nature than the novel.

The new nature writers and their critics do not adequately explore the very medium in which they work. They work diligently to historicize the environment, revealing the historical factors that produce the landscapes we encounter, but they do not historicize their texts. They are committed to contextualizing the environment, suggesting, for example, that wilderness operates outside the

bounds of society, but they strongly resist contextualizing the ideas of their texts. They often confess that language is inadequate for expressing the reality they experience, but they do not confess the fictionality of language.

The presumption behind the following chapters is that we always approach the physical planet through some mediating framework. The vast information culture that enmeshes us today has had the effect of effacing these frameworks simply through their ubiquity. Television, the internet, telecommunications, print media: all of these have worked to erode the clear usually self-evident distinction between the real and the false. Indeed, that distinction has been so corrupted that for most of daily life, it need not even matter. We operate quite fluidly among luminescent images of actors, disembodied recording artists, and even virtual classrooms. Such an artistic form as hip-hop, with its multiple sampling of other recordings, reveals just how prevalent is the spread of simulacra. But such distinctions as what is natural and what is created become radically important when faced with the threat of environmental crisis. What is real and what is authentic nature become crucial questions when the health of our planet is at stake. The novelists that follow do a better job of revealing the role of self-consciousness in nature, accepting it rather than straining to mask its effect.

Thomas Pynchon's *Mason &Dixon* offers an example of competing worldviews at the end of the eighteenth century. As the ideas of the Enlightenment take hold in the new world of America, Pynchon shows us the struggle to define reality as older concepts of magic, superstition and animism come in conflict with the instrumental rationality and the scientific method. Captain Zhang, the far-eastern practitioner of *Feng Shui*, become Pynchon's mouthpiece for a world that cannot be reduced to mathematical equations and a reality that cannot be completely mapped by surveyor chains.

From the vantage point of history, we know that Zhang's worldview is doomed, yet we see similar ideas in Mike Davis's descriptions of Los Angeles at the end of the twentieth century. At Portsmouth, Mason and Dixon encounter a talking dog who explains himself as an extreme manifestation of humans investing their own traits in animals. It provides amusement in Pynchon's

world, but proves more deadly in Davis's Los Angeles. In contemporary Los Angeles, the governing theories supporting the built environment are in direct contradiction to those that more accurately explain the natural world. And where a talking dog is clever metaphor in *Mason & Dixon*, the anthropomorphic bobcats of Los Angeles have more deadly results. Davis describes a city built under a worldview that pays more attention to economic, authoritative and racial demands than to the real terrain and climate of southern California. Like eighteenth-century America, Los Angeles is a chaotic mixture of competing worldviews that is destroying the physical planet.

Jonathan Franzen's *Strong Motion* and Richard Powers's *Gain* also deal with conflicting worldviews over nature. In Powers's novel, the very structure of the book pits one view of reality against another. *Gain*'s multiple narratives are a modernist collage that depict the countless versions of reality that mark the discourse of capitalism's exploitation of resources, both physical and human. Franzen's novel seeks to discover the structures that define our contemporary worldview of nature. *Strong Motion*'s historical journey back to the founding of a deadly chemical corporation condenses the century-long process that naturalizes social relations. Franzen uses multiple voices to foreground his central idea that the way we describe our world is critical to our relationship to it. His outright didacticism becomes a forceful cry for an alternative voice, one to counter the slowly eroding options left available.

In her essay "The Idea of Nature," Kate Soper suggests that eco-politics "will prove that much more incisive the more prepared it is to question its own discourse on 'nature'" (124). This is what the following eco-novelists do. Their works are politically informed as well as being aware of language's ability and inability to describe reality. Eco-novelists, as perhaps all novelists do, land in the middle on a continuum of conflict over representing reality and representing language itself. All texts are in some ways about themselves, but eco-novelists foreground the language and categories through which we articulate our own world. Even with their concern for the material world, these eco-novelists agree with a philosopher like Rorty. In the end, reality becomes a matter of differing and competing worldviews. Those worldviews that seem to have the most internal coherence, that seem most acceptable, *become* reality for us. The problem is that too often those worldviews that

are accepted as reality have gained their prominence through unequal power relations and various social constructions that have been "naturalized" over the course of time. These eco-novelists seek to question and overturn those hierarchical constructions by revealing their social origins. In deconstructing and reinventing nature, they give opportunity to differing worldviews that are now considered marginal and perhaps eccentric, but may offer a more coherent representation of reality. If we derive our notions of truth from dialogue, the conversation continues and alternatives can become reality.

* * * * *

I begin this dissertation, not with a traditional work of fiction, but a fictional creation nonetheless. Walt Disney World's Animal Kingdom is as much an artistic creation as any of the novels that follow, with elaborate story lines that literally allow guests to step inside a new world. I begin with the theme park because I believe the Disney experience of nature helps solidify many of the ideas introduced in this chapter. Animal Kingdom is another site of conflict over the definition of nature. Its reality is constantly called into question as the park constructs meticulously real habitats for its exotic animals at the same time it constructs elaborate fantasies for its visitors. What we consider reality has always been Walt Disney World's playground, and Animal Kingdom's multiple versions of nature's reality works as a three-dimensional model for our convoluted categorizations of nature. In Animal Kingdom, nature is both sacred and sold. The mystery and awe of nature are worshipped while simultaneously commodified. What of nature is real, when the word nature encompasses a vast savannah populated with live cheetahs and giraffe as well as a plastic dinosaur and a safari-style home decorator book?

On my trip to Walt Disney World, I took two photographs that have since hung above my desk while researching and writing this project. The first is of a palm tree. It is no ordinary palm tree, but a welded, metallic one framing the entrance to Space Mountain in Tomorrowland. It gleams a bright, lustrous gold, with glimmering aluminum leaves and a shiny, perfectly round trunk.

Polished round coconuts form a necklace at its top. The other photograph is of the Jazz Inn motel at the Disney All-Star Resort. In the foreground of this photograph, is a small brick courtyard with flowers, shrubbery and a fountain surrounded by a wrought-iron fence: it is a perfect copy of a French Quarter locale. In the background, in bright primary colors, stands a three-story tall plastic sculpture of a drum set at the entrance to the cartoonish facade of the motel.

Both of these pictures directly confront our ideas of nature and reality in a humorous and playful way. The palm tree makes no pretensions toward accurate representation. It's an avatar of Tomorrowland—a land where man-made artifacts have replaced everything "natural." And yet, even in this psuedo-future where bark and fronds are replaced by sheet metal, we still have some aesthetic, if not functional, need for "nature." The simulated French Quarter of the Jazz Inn comes with its own commentary about the reality of such reproductions. The gigantic and clearly fake drum set reminds us that the authenticity of the courtyard is every bit the caricature as the entrance behind it. Both are signs, working in much the same way as the neon, eight-foot letters screaming "Jazz" above another doorway to the motel.

Between these two pictures I've placed a quote by Jennifer Price that offers a context for metal trees and quaint courtyards:

> Among the set of meanings we've attached to the natural world, perhaps the most overarching and powerful is that nature is *not* a shifting set of human meanings. It's tangible, secure, rocklike, stable, self-evident, definable, real. In a word, it's natural. (191)

At first glance, these two pictures, while playful, are easily decoded. It seems quite easy to say which is natural and which artificial. 99.9 percent of Disney visitors would categorize the palm tree in the "unnatural" column. But once we overlook the playfulness, questions about nature come to mind. Why bother constructing an aluminum tree in a representation of the future? To what purpose, in an amusement park, does it make artistic sense to show nature completely replaced by artifice? And what about the blue waters and white beaches of Bay Lake behind Space Mountain? That "natural" beauty comes as the result of a massive engineering feat in the 1960s that turned the

lake inside out. Is this still nature? If given a continuum, most visitors would say the fountain and courtyard are more real than the drum set (even though a French Quarter courtyard may be more anachronistic in cartoonish central Florida). Both, however, are reconstructions that have similar exaggerations. And both have the same function of signifying jazz to the average guest. Despite its fidelity to an existent reality, the fountain is no more authentic than the drum set, and its wrought iron and brick create no stronger connection to the original than the molded plastic snare drum.

These two pictures set the tone for the pages that follow. In this group of novels, non-fiction works, and one amusement park, I explore the ambiguous and fluid meanings that surround our concept of nature. In works about toxic waste, cancerous capitalism, and urban ecology, the apparent borders between nature and culture, simulation and authentic are shown to fluctuate and even to be artificial. The misplaced dependence upon such unreal borders has led to entrenched, destructive ideas about nature. Ideologies have become, not just hegemonic, but reified to the point of fact. Our ideas of reality are rooted in a misunderstanding that mis-identifies historical, social conditions as natural laws. Like the palm tree and the Jazz Inn, these works, as I present them here, offer a unique perspective on our relation to nature. Fraught with ambiguity, they toy with our sense of nature as an absolute. They afford an approach to nature that can help overcome what Andrew Ross calls "the powerful sway of neoromanticism over the ecology movement" (*Chicago* 9). If we continue to fall under the spell of nature as stable, self-evident reality, we will not see its human construction. Too often, a return to nature or nature as guide is proposed as the solution to the problems of contemporary society. This solution, however, relies upon an understanding of nature as existing outside of the social, before and beyond history. This is not the case. Without recognizing that what we call nature is a social creation, we will continue to fail at understanding our relationship with the physical world.

And it is evident from the ecological stresses that continually plague the world at the turn of the century that we are failing. The route that must be taken to alleviate these stresses, however, does not go through appeals for wilderness or mandatory nature hikes. The impending ecological crisis can only be averted by addressing the social issues that threaten biological health. We must

approach nature as a social construction instead of the authority of final appeal. We must recognize that nature is not an external constant that confirms or justifies our social patterns, but rather that we invest nature with our values and ideals, even inventing the very idea of nature ourselves. Certainly there is a difference between the genuine palm tree and the metallic copy. I am not suggesting that there is not a physical bottom line that must be adhered to. On the contrary, I firmly believe that protection of this physical realm should be a central concern of society. It is a mistake, however, to think that the meanings attached to one palm tree are substantially different in kind than those attached to the other. They both exist in the same discourse that creates the idea of nature. We may categorize palm trees as different, but it is how those categories are created and operate that is key to ecological reform. We categorize a tree that grows from a biologic process through water, soil and sunlight as part of "nature." The tree that grows from an artist's cutting, welding and bolting sheets of metal is not. This is a system that is human generated, not inevitable, not self-evident, and not stable. As the culture becomes increasingly concerned with the destruction of nature, interrogation of this system is crucial if we are going to halt that destruction.

As we near the end of the century, the concept of nature faces an even more imposing threat. That authority that was reinvested in the wake of the energy crisis is showing signs of cracking under the onslaught of scientific advances. Further indications of environmental catastrophe have now been coupled with breakdowns in seemingly self-evident categories. Race has been disproven as a biological construct. The nature of reproduction has been threatened by successful cloning techniques. Donna Haraway has taken the very powerful notion of the cyborg, importing it from science fiction into political reality. Artificial intelligence and neuroscience have called into question our notions of the mind. In all directions, distinctions that defined nature are breaking down. This threat to the social construction of reality has its ancestry in the discovery and cracking of the genetic code. Since Watson and Crick produced their breakthrough in 1953, science has redefined the human as the end product of a fine set of blueprints. Our very essence as humans has been permanently altered into a series of genes that defines our propensities from obesity and sexual preference to eye and hair color. More so than all the others, DNA research is lending weight to

Haraway's suggestions that communication sciences and modern biologies are oriented toward "the translation of the world into a problem of coding, a search for a common language in which all resistance to instrumental control disappears and all heterogeneity can be submitted to disassembly, reassembly, investment, and exchange" (*Simians* 164). Our world is moving more and more to one that is defined entirely by language. We need authors who can move beyond simply describing reality to understand the political power behind that reality. We need writers who do not simply ask what, but question who is asking? We need writers who understand language as much as they understand reality.

Two

Truer Than Life: Disney's Animal Kingdom

In 1998, the Disney empire gained a new colony in central Florida when it opened its fourth major theme park at Walt Disney World. Animal Kingdom represents Disney's foray into the zoologic sciences, integrating live animals alongside its more typical rides and attractions. As an entertainment company whose major stars are anthropomorphized animals, Disney has a reputation as masters of animating metal and plastic into life-like automatons. The conjoining of this reputation with the presence of live animals conjured up all manner of bizarre scenarios. Would tigers roam the 100 Acre Wood with Tigger? Would visitors see a real baby elephant flying across its pen? Would grizzlies appear to sing "The Bear Necessities," tooth and nail in the service of song and dance? How and where would Disney draw the line that separated reality from fantasy? Exactly how would Disney differentiate itself from typical metropolitan zoos? Even more crucial, how would Animal Kingdom differ from Busch Gardens and Sea World, its major competitors in the business of animal-oriented theme parks? Such a theme park would seemingly have to acknowledge wildlife's precarious position in an increasingly degraded ecology, potentially leading Disney into areas of contested political issues. The fascination of seeing live exotic animals would have to be balanced by a sensitive treatment of their often depressing condition in the world outside protective zoo walls. By injecting live animals into its theme-park formula, Disney simultaneously ran the risk of injecting contentious environmental politics.

Animal Kingdom is the fourth theme park built in the Walt Disney Resort, similar in size and approach to its predecessors, The Magic Kingdom, Epcot, and Disney-MGM Studios. The various attractions include simulated rides inside darkened theaters, 3-D movies, Broadway-style shows, and water rides intermixed with elaborate environments that hold exotic animals. At times, the park can resemble a traditional zoo, with crowds of people pressed up against glass to stare at a sleeping tiger. But if there is familiarity there is also amazement at the elaborate lengths Disney has

gone to recreate realistic habitats for its animals. In traditional zoos, visitors encounter a familiar, comfortable presentation of exotic animals. Limitations of money, space and specimens confine wild animal presentation to a relatively standard model. Bars or fences surround the animal: visitors observe the animal from a distance just beyond the barrier. Invested in that caged animal are the associations of exotic nature transmitted to the visitor. The experience of a wild, strange nature—the inaccessible wilderness of the savannah, the jungle, the ocean depths or the skies—is contained, caged in that animal as much as the animal is caged in its pen. This metonymical relationship to nature is as far as most zoos go. Some of the more progressive and more flush zoological parks attempt to create more elaborate environments for their specimens, disguising cages and pens so that they appear as natural barriers or allowing compatible animals to occupy the same pens. But these recreations are rarely exercised on a large, park-wide scale. Their rarity is confirmed by marketing that labels them as exceptional attractions. More generally, wild nature is presented in small, monadic bits.

In Animal Kingdom, Disney presents a zoo expanded in acreage and wealth, and the company attempts to change the quality of a zoo itself. Nature at Animal Kingdom no longer seems confined behind the eyes of the caged beast, no longer transmitted across an almost insurmountable distance only hinted at by the moat and bars separating visitor from animal. Instead, the expensive entry fee to Animal Kingdom purchases more than a glimpse of a far-off world, a longing for an exotic world. The forty-dollar ticket attempts to purchase satisfaction of that desire. Disney takes the nature hinted at in the eyes of the typical zoo animal, and through plastic, fiberglass, narrative, costume, plants and scenery creates a complete simulation of nature. The promise of Animal Kingdom is that the visitor can occupy the same world as that exotic creature. And though the visitor may be conscious that this world—this nature—is simulated, nevertheless he and the animal are joined in this fantasy. The moat literally disappears, and the visitor lets himself or herself become a participant in the spectacle.

In Animal Kingdom, Disney provides an immediate, emotional connection to some of earth's most impressive inhabitants. The park takes aim at what Jennifer Price sees as "a peculiarly

middle-class obsession" for a certain brand of "nature," tapping into ideas of wilderness, purity, ties to indigenous people, ecotourism, and primarily a sense that nature is a "counterpoint to modern everyday life" (Price 189). Immersed in exceptionally detailed recreations of habitat, we encounter elephants, tigers, gorillas and giraffes in such close proximity that an intellectual distance is impossible to maintain. Animal Kingdom labors to present an unmediated connection between its guests and nature. Melody Malmberg tells us in *The Making of Disney's Animal Kingdom Theme Park* that the park was not to be just about animals, but about "people's emotional reaction to animals." The goal of Animal Kingdom was to present an emotional encounter with nature, especially animals. "It was not to be an information park or an issues park, but a park about love" (10). "Love as an idea became a skeleton for everything else" was how one member of the initial design team described the concept for Animal Kingdom.[7] Though the park is painted with an environmental coat throughout, the ecological message is secondary to the hope for a gut-level connection between humans and animals, one that bypasses the head for the heart. The Imagineers' definition of Animal Kingdom springs from the same font of desire as Gary Snyder's wish for an unmediated connection with nature.[8] The theme park hopes to make the same connection as Snyder's "unconditioned mind-in-the-moment" when one is completely engrossed by nature. The ecological message, the park's designers decide, can come only after the emotional connection.

The themes, narratives and ideologies expressed in Animal Kingdom allow us to see the various conflicted ideas that surround the term nature. At its heart, Animal Kingdom is nothing more than a marketing device for itself. And the way Animal Kingdom has chosen to market itself is through myriad associations with nature. With no other goal but the bottom line, the Disney corporation will employ any and seemingly all connections with nature whether they are contradictory, implausible or ridiculous. One can be sure that Disney knows its audience, and Animal Kingdom very likely reveals the wide-ranging continuum of the popular understandings of nature.

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[7] Zofia Kostyrko, quoted in Malmberg, p12.
[8] See Introduction, p 19-20.

When compared to the ideology of Disney's first park, Animal Kingdom's presentation of nature reveals the changes in humans' relationship to nature over the course of twenty-five years. In the Magic Kingdom, Disney World's first theme park that opened in 1971, the natural environment is colonized. For the most part, nature in that original park is confined to pristine, well-regulated formal gardens. The topiary statues that stand at the park's entrance are fair representatives of the idealized role nature plays in the Magic Kingdom. In the small areas where nature is allowed a bit more rein, any wild or uncivilized character is carefully circumscribed as an aspect of the past in the wild untamed West of Frontierland, or as pristine wilderness in the unexplored dark continents of Adventureland.[9] Stephen Fjellman suggests that at the time of Disneyland and Disney World's creation, many people looked to the past as an anchor in surreal times. Much of the nature we encounter is nature in the past tense, much like the mythical small-town America the park celebrates. Main Street U.S.A. distorts the history of middle America just as it distorts the perspective of the buildings that line its street. Buildings, history and culture are reduced or eliminated to create a nostalgic ideal for guests to inhabit for a day or two. In a similar fashion, nature is a framed in nostalgia, with the frontierland of Davey Crocket, or the western edge of civilization on Tom Sawyer's island. Even the dark continents depicted in Disney's Jungle Cruise are of a realm of exploration largely passed by 1971. This mania for nostalgia has now extended even to Tomorrowland. Once the gleaming projection of our happy future, Tomorrowland has now been redesigned to depict a future that existed only in 1940s science fiction films and comic books. Ironically, the past plays just as crucial a role in Tomorrowland as in any other section of the park.

In today's culture, perhaps more surreal than the 60s and 70s, nature has replaced the past as the anchor for the times. If the Magic Kingdom's distortion of Main Street U.S.A. suggests the prominent role that nostalgia for small town America played and continues to play in the American

[9] Even these wild parts of nature seem fleeting, their wildness hovering just outside civilizing influences. The romping boyish giddiness of Tom Sawyer Island's paths always end at Aunt Polly's Dockside Inn. Adventureland's jungles have lost the first battle to the Swiss Family Robinson's ingenious technology.

psyche, conceivably the reconstruction of natural environments in Animal Kingdom may reveal the quintessence of nature in a world seemingly bent on its destruction.

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Animal Kingdom's geography is similar to its Magic Kingdom predecessor. The park is laid out in a spoke and wheel configuration with its island center circled by Discovery River and four "lands" that girdle the visually dominant hub. Africa, Asia, Camp Minnie-Mickey and DinoLand U.S.A. surround the island of Safari Village and its fourteen-story Tree of Life in the same way Frontierland, Tomorrowland and Fantasyland surround Cinderella's Castle. And as Main Street U.S.A. funnels crowds away from the entrance, Animal Kingdom relies on its Oasis—a series of trails that meander around small animal pens, over streams and under waterfalls—to disperse crowds as they enter the park. Free of rides, restaurants and, amazingly enough, gift shops, the Oasis is a dense, simulated jungle interspersed with exhibits of smaller animals such as parrots and anteaters. Compared to the vast savannah and elaborate jungle elsewhere in the park, this area is Disney at its most zoo-like. The animal enclosures are clearly defined, and the animals themselves are presented as representative specimens, often with only one or two in each pen. The Oasis allows guests to decompress after the often frantic obstacle course of parking the car, riding a tram, purchasing tickets, renting a stroller or wheelchair and all the other tiny frustrations of embarking on a day of fantasy. In reassuring and comfortable surroundings, Disney guests can catch their breath before the equally overwhelming spectacle of rides, shops, restaurants and shows of Animal Kingdom.

The Oasis leads to Safari Village and the Tree of Life. The Tree of Life is Animal Kingdom's centerpiece, and it's a show-stopper. The gigantic, fourteen-story sculptural work depicts a banyan tree with intricately carved animals on its trunk and branches. The Tree houses a theater showing *It's Tough to be a Bug*, Disney's 3-D film featuring characters from *A Bug's Life*. Surrounding the Tree of Life is a garden with smaller, traditional animal exhibits, and along the

outer edges of the island are the bulk of Animal Kingdom's shops and restaurants. Crossing the various bridges from Safari Village and its Tree of Life, one arrives at the various "lands" of Animal Kingdom: Camp Minnie-Mickey, DinoLand U.S.A., Africa and Asia. All of these lands contain some rides, a show or two, and plenty of gift shops.

Moving clockwise from the entrance to Safari Village, we first encounter the land of Camp Minnie-Mickey. The bridge across Discovery River leads to an Adirondack-style campground, created especially for the younger visitors to Animal Kingdom. It features the *Festival of the Lion King* production, a lavish song, dance and acrobatic celebration with the characters from the movie *The Lion King*. Camp Minnie-Mickey is also where guests can meet the traditional Disney characters for pictures and cuddly embraces. Besides Mickey and Minnie, the characters one finds are predictably anthropomorphic animals: Chip 'n' Dale, Winnie the Pooh and Tigger. Camp Minnie-Mickey is the only locale in Animal Kingdom where a guest can see the "live" version of these characters. Disney clearly has recognized that a bouncing Tigger juxtaposed alongside real tigers would undercut the elaborate context created for the encounters with live animals (and, for that matter, the elaborate context created for Tigger). So Mickey and his pals are ghetto-ized in a secluded corner of the park, reposed in shady tree-lined paths, quietly greeting toddlers. This confinement of a certain strain of imagination is necessary because Animal Kingdom relies on a stronger sense of reality to achieve its fantasy. In the other parks, there is no "real" to compete with giant cartoon characters come to life. Everything is gleefully fake, a remarkable fantasy. Even the "France, the "Italy," and the other countries of Epcot, despite their real-world counterparts they aim to simulate, are rearranged, stylized representations of the originals. In Animal Kingdom, a key component is that Disney has created something of reality as opposed to fantasy. The most important structural material holding up Animal Kingdom's world is the inclusion of a palpable sense of reality; something, in other words, that Disney has not created. The choice to include wild animals and serious environmental messages injects an aspect of the real nature into this fantasy world. What is crucially different about Animal Kingdom—and helpful for this study—is *how*

Animal Kingdom uses this sense of reality in its attractions to reinforce the notion of a true sense of nature.

The third major attraction of Camp Minnie-Mickey is "Pocahontas and Her Forest Friends" at Grandmother Willow's Grove. This show features an actress portraying Pocahontas, an Audio-Animatronic tree (Grandmother Willow) and numerous small, live animals that help Pocahontas learn about the forest. As the show opens, Pocahontas frolics through the forest scenery, enjoying the beauty of nature. The bucolic setting is quickly marred by the sounds of chainsaws in the distance.[10] "The forest is in trouble, Grandmother Willow," Pocahontas tells her foliage friends. What follows is her quest to understand the prophecy of the forest, to discover that "one creature has the ability to save the forest." The attraction delights children as they squeal and gasp at numerous live animals appearing onstage to help Pocahontas learn about the forest ecology. As creatures such as a snake, a skunk and a porcupine teach her that "we must respect nature or she will turn against us," Pocahontas comes closer to learning that individual animals cannot save the forest. But each animal reminds her of a trait that can help the forest. Slowly Pocahontas realizes that the only creatures that can save the forest are the humans who are destroying it. The show ends with Pocahontas celebrating the interconnectedness of the forest. "We are all connected in a circle, a hoop that never ends," she sings, and white doves are released into the air.[11]

The environmental message of "Pocahontas and Her Forest Friends," that we are both curse and blessing on the environment, will be repeated with variations throughout the park. In this setting, geared toward the least sophisticated of Disney's guests, we receive the environmental message in its purest form: the direct, intimate contact with nature will teach us that the earth is our responsibility, under our stewardship. In Grandmother Willow's Grove, the forest literally speaks to the human, as the large willow tree reveals a face that talks to Pocahontas. In this instance, the

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[10] The sound of chainsaws seems to be the default aural indicator of environmental damage. It also makes an appearance at Kali River Rapids, the sight of indiscriminate logging.

[11] If chainsaws signal destruction, then a small flock of doves signals redemption. Besides Pocahontas' birds, a small flock also closes the show at the "Flights of Wonder" bird exhibition.

show actually personifies a significant trait of the materialist's argument: that if we can simply overlook or ignore all the mediating influences between us and nature, nature will gladly and easily tell us what is right. As Grandmother Willow actually teaches Pocahontas how to save her environment, Disney visitors are expected to learn that nature knows best, and the best way to learn what nature knows is to immerse ourselves in the language of the forest. No forestry specialist or ecologist teaches Pocahontas the keys to saving the forest. Rather, the direct contact with the animals, trees and land provide all the instruction needed. Though we will not get such an unmediated connection in the other lands of Animal Kingdom, the goal and the message remains the same. Nature, if we allow ourselves to listen, will teach us how to take care of her. Pocahontas learns this from her furry friends, and finds her role in the ecology of the forest. By listening closely, observing the actions of the forest creatures and obeying her senses, Pocahontas has the direct contact with the physical environment that allows her to discern the best relationship between humans and the environment. Identifying with the Indian princess, we become savior and protector of the wild things of life.

This conceit, that the way to stem environmental destruction requires the unmediated interaction with the physical environment, is one of the driving forces behind the park's aesthetic. The need for an "authentic" encounter with nature, specifically the animals, propels Disney toward absolute realism in both animal habitat and the fictional world that surrounds it. The quest for realism in presentation is a pure byproduct of a materialist stance toward nature, the belief that there surely is an easily recognizable nature, one quite comprehendible through our senses alone. The pursuit of fidelity and accuracy in realistic habitats merely reflects a Snyder-like understanding of nature: we know nature when we see it, so let's make this park look like nature. When understood in this manner, the ridiculous contradictions of Animal Kingdom are obscured and perhaps deemed irrelevant to to its visitors because the park *looks and sounds* like nature.

Animal Kingdom touts its attention to detail in presenting a realistic environment for its animal inhabitants. The health and well-being of the animals dictate a certain fidelity to recreating a native environment, but Disney goes far beyond supplying home cooking for its non-human

performers. The "back stories" create a narrative that works overtime to convince guests that they are in a distinct, historical place. Artificially aged exteriors, simulated posters and advertisements, even graffiti support the fictional narrative of each Disney land. "In a Disney theme park, story is paramount, and sometimes the story is not fantasy but reality" Malmberg writes. The Imagineers "create authentic-looking, authentic-feeling, authentic-sounding spaces… to form the physical basis for a willing suspension of disbelief—in other words, a surrender to the environment of the park" (Malmberg 107). That surrender is part enjoyment—the transportation to another world—but it also is a necessity for Disney's environmental message to be most effective. The realism aesthetic of Animal Kingdom propagates the illusion that we are very near an unmediated connection with nature. We can "surrender to the environment" and hear the voice of nature free from all human interferences.

This voice, however, is a composite of "nature" sound bites that inundate us, a multi-media collage far from the pure instruction suggested by Pocahontas's lesson. Alexander Wilson, in his book *The Culture of Nature*, argues that since the 1950s, when multiple transportation and communication technologies penetrated the natural world, "people began to experience nature as something manipulated, altered, composed by humans" (108). We can see this change dramatically presented in nature shows and films. Here, despite editing, technology, and in some cases physical coercion, the heavily scripted and controlled narrative is presented as spontaneous and with seemingly minimal mediation. In these films, nature is compressed and accelerated in time, its remote aspects made to seem accessible, and often invested with human qualities. The move toward realism in zoos reflects this same dynamic, its unmediated glimpse of nature corresponding, not directly to exotic habitats, but indirectly through the heavily manipulated nature depicted on screen and in other media. In fact, Animal Kingdom's version of nature is directly influenced by Disney nature films earlier in the century.[12] We can trace a direct link from the depiction of nature in the Disney films of the 50s and 60s to the narratives of Animal Kingdom. Because our understanding of nature, especially exotic and remote nature, is inextricably linked with the electronic images of

[12] See King.

nature, what we will accept as unmediated is that which most closely matches those images. The realism of Animal Kingdom is the realism of the Discovery Channel or National Geographic. As those electronic presentations of nature distort both time and distance in order to fit nature inside a screen, so Animal Kingdom also distorts both geography and temporality by bringing exotic animals to Orlando and positioning them in "spontaneous" view. The human construction of this nature cannot be hidden, but it does not need to be. Disney presumes it will fade from our perception because the heavily constructed nature of Disney's recreations accurately simulates the nature given to us on Animal Planet or an IMAX theater. The central Florida landscape is remade to look like images of Africa and Asia. Native plants perform the roles of African jungle. Redirected streams become misty Asian waterfalls. As the one aspect of exotic lands that cannot be imported—like animals or people or artifacts—the exotic landscapes are portrayed by an elaborately costumed Florida topography. In other words, for the majority of Disney visitors that will never visit the Serengeti or an Asian jungle, Animal Kingdom's nature looks just like it does on TV.

Directly across the park from Camp Minnie-Mickey, passing again through Safari Village, a bridge crossing leads to the Kingdom of Anandapur ("place of all delights") in the land of Asia. The land of Asia and its next door neighbor, Africa, define Animal Kingdom more than the others. Asia, recently opened in 1999, features tigers, bats and Komodo dragons along with the Kali River Rapids thrill ride. Africa has gorillas, hippos and Kilimanjaro Safari, the signature ride through Disney's African savannah. These two "continents" highlight the most charismatic animals of the park, and contain the bulk of the park's acreage. Africa alone, at 110 acres, is bigger than the entire Magic Kingdom (Birnbaum 170). In these two lands, Disney devotes immense resources both in acreage and in presentation to simulate an intimate, exotic encounter with all the touchstones of veracity. It is here where the Disney atmosphere attempts its closest approximation of reality.

Asia and Africa lend their names to the two central lands for obvious reasons. They are the home habitat for the bulk of exotic wildlife found in American zoos. In addition, they offer a multitude of cultural signposts around which Disney can create something more than just artful

cages and pens. Both continents have been key sites of colonial power and mythmaking which Disney exploits. These landscapes, Africa especially, are laden with Western European stereotypes of unexplored and untamed lands. Such conceptions have been exploited before by Disney. In the Magic Kingdom, Jungle Cruise's great white explorer shtick still draws in crowds. Things have changed, however, and in the more progressive Animal Kingdom, Stanley and Livingston have been replaced by Dian Fosse and Jane Goodall. Still, there are underlying similarities between Jungle Cruise and Animal Kingdom, despite the latter's sensitivity to environmental and cultural politics. Though the twenty-five years between Jungle Cruise and the opening of Animal Kingdom may have given us a more realistic and truthful picture of the dark continent and the mysterious East, Africa and Asia still represent an antithesis to American civilization. At the opening of Jungle Cruise in 1971, the West could still be nostalgic for the great unexplored, unconquered reaches of Africa and Asia. In the present, the themes of conquering and exploring are subsumed as the two continents are enshrined as the unspoiled purity that has, unlike the West, escaped interment under a corrupt society.

Much of the story that Disney presents in Animal Kingdom is a reenactment of this purity corrupted. Disney's strength as an entertainer lies in its narratives, the ability to produce an emotional connection with a pure hero and an equally potent repugnance for a corrupt villain. Environmental problems, however, rarely follow the simple plotlines of fairy tales. Reducing these issues to storybook level presents the Imagineers with a strong challenge. Finding simple and concrete villains is not easily accomplished in complex environmental relations. The destruction of an ecological system can rarely be accomplished by one person, and while institutions exist that are doing serious damage, there are certain problems with corporations as villains. Some offenders (such as Exxon) are close partners with Disney. Others are too complex to encompass in a twelve-minute attraction.[13] As a result, Disney's narratives tend to be reductive, but Disney does come

[13] In Tomorrowland at Magic Kingdom, Disney does treat us to a fairly cynical, satiric stab at corporate culture. The Extraterrorestrial Alien Encounter features the slimy and amoral Chairman of X-S Technologies. The ride is rooted in a portrayal of arrogant science combined with unrestrained greed that is often at the heart of ecological problems. Yet it is difficult to imagine a similar approach in Animal Kingdom. The

close to addressing the complexities of environmental problems in Asia's Kali River Rapids attraction. The story of Kali River Rapids begins while waiting in line. Guests inch their way through a mocking recreation of a third world bazaar catering to western tourists. After passing a fake temple and a shrine filled with chattering birds, the line for Kali River Rapids winds through an Asian junk shop, filled with bird cages, beads and knickknacks. Signs offer "spesial (sic) prices for tourists." The prelude comes dangerously close to the low-grade, pathetic colonial racism of the older Jungle Cruise. Disney's bazaar seems to mock poorer versions of its own brand of hyper-consumerism and entertainment for failing to live up to the excessive heights of Disney marketing. The somewhat smug tone has the unfortunate result of undercutting the critique of greed that follows.

When guests reach the ride itself, they encounter what may be the least puffy of the softball attacks on environmental destruction. The narrative of this whitewater rafting trip is that of an unauthorized excursion down a river decimated by the business of logging. Guests are positioned as ecotourists, paying a locally run expedition company for the privilege of riding an untamed river. Destructive logging practices are apparent in broadcast sounds of chainsaws and flyers for conservation meetings encountered in line. As guests wait in line for the rafting trip, a video shows scenes of a rural, Asian village whose traditional way of life is being destroyed by illegal logging practices.[14] "The conflict between population explosion and traditional respect for animals and wild places was always borne in upon the Imagineers," Malmberg tells us, "Dramatizing it without simplifying it was the challenge" (Malmberg 176). Kali River Rapids recreates the capitalist struggles over how to benefit monetarily from the forests and remote areas of the Asian landscape.

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attraction's narrative, coupled with its truly frightening and intense presentation, seems out of place in the benign fantasy world of Walt Disney. Such sharp criticism, even in jest, would be even more jarring amongst the easy environmentalism of Animal Kingdom.

[14] The logging is described as illegal though the events depicted are characteristic of legal operations as well. However, by placing this particular company outside the law, Disney makes its corporate villain a bit more threatening to the rafters yet manages to avoid a more serious critique about normalcy in everyday corporate practices. This nightmare trip supposedly visits the outlaw world of renegade capitalism, when in fact, it merely reflects the results of typical Western exploitation.

The video provides us a context in which to understand the destroyed forest and the detrimental effects upon culture as well as the landscape. Instead of an isolated, ahistorical scene of destruction, we are given reasons for the events we are about to see, a village dependent upon Western tourism threatened by corporate irresponsibility.

After a pleasant and scenic beginning, the rafting ride plunges into nightmarish visions of burned-out forests, charred stumps, and vicious flames. The ride makes good use of the frightening environment to underlie the physical thrills of riding the rapids. The excitement and awe that accompany the splash and dip of whitewater rafting are doubled by the awesome spectacle of a ravenous lumber company out of control. With startling pyrotechnics and dismal dioramas, Disney is doing its best to create a monster out of an abstract corporation. Kali River Rapids is a long way from the Magic Kingdom's Splash Mountain. Yet there is something unseemly about well-off tourists, be they ecotourists or Disney guests, joyriding amidst scenes of such destruction. We are positioned as ecotourists, but those of the worst kind: the exploitive, ravenous spectacle-hunters that seek out exotic locales like new cable channels, consuming a people's tragedy for our enjoyment.

Disney's ecotourism as post-colonialist kitsch seems only fitting. The very concept of ecotourism—that leisured consumerism and exotic adventure from the wealthy West can save endangered areas—rests on an unhealthy dependence upon capitalism to save the very things it destroys. Disney makes an attempt to separate bad capitalism (illegal logging practices) from the good (warm-hearted merchandise shop), but the rafting story never seems to escape its whirlpool of exploitation. Kali River Rapids elaborately recreates the trappings of a floundering economy desperate for the saving American dollar, be it exploitive forestry techniques or a dependence upon Western tourists. The ride begins with a shop bowing and scraping to the wealthy, Western ecotourist and then reveals the devastation of a company willing to sacrifice safety and sound practices for the same wealth. Unintentionally, the ride is an accurate commentary on the collision of international capital and third world labor made all the more acute by the plaintive, crude conservation notices to "Speak up to save our forests" plastered around the shop. Beyond the flawed critique of destructive logging practices, the ride endorses an economic system that thrives

on the desperation of third world nations to slip through the back door of capitalism. Such exploitation leads to offshore sweatshops[15], ecological nightmares in Northern Mexico *maquiladoras* and, ironically, industrial logging.

Looking at Kali River Rapids and other attractions with the understanding that Disney wants us to feel engaged, we can see the attempt at actual environmental criticism. Without abandoning their mandate for entertainment, Disney tries to inject environmental messages into the fantasy, aiming to convince guests of a higher purpose to Animal Kingdom. Malmberg informs us that early on in the design of Animal Kingdom, Disney made a conscious decision to create an Advisory Board of conservation, zoo, and zoology professionals to help guide the park in areas of animal management and education about environmental issues. Among the members of the Advisory Board were the president of the American Society for the Prevention of Cruelty to Animals, the president of the Wildlife Conservation Society, and the director of Zoo Atlanta. These people pushed Disney to put an environmental message at the heart of every venue. In addition, they enticed the company to create the Disney Wildlife Conservation Fund to disperse money to organizations that "protect and study endangered and threatened animals and their habitats."[16] The Advisory Board felt that "Helping the conservation world with badly needed funding would help legitimize the project in the profession as well as with animal-rights activists" (Malmberg 33). Disney's heart is in the right place, even if it's shoved there by a concern for good public relations. The Advisory Board served as Disney's conscience. "We helped them strike a balance between fun and education, between fun and conservation" recalls one of the board members (Malmberg 33), but achieving that balance results in some notable side effects.

The environmental messages struggle to be heard amid the hyperactive consumerism of a Disney park. One way of turning up the volume is to make the message more strident and politically potent, as Disney attempts at Kali River Rapids. Unfortunately, however, the more typical Disney solution is to make the message more palatable. Fun and conservation are balanced

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[15] Disney itself has a less than stellar record of treating its workers in foreign countries. See Ross *No Sweat.*

[16] *Disney Wildlife Conservation Fund.* pamphlet (Disney, 1999).

by converting nature into another brand for Disney to market. Every aspect of the park, from souvenirs to trash cans to the paint on the walls, is marketed on the strength of its connection to nature and animals. As *The Safari Style Book* on the shelves of Africa's Mombasa Marketplace reveals, environmentalism at Animal Kingdom is quite in vogue. Animal Kingdom is sharply decked out in the fashions of ecology, and it eagerly encourages its guests to adopt the same fashion plate. "The Merchandise team decided that everything on sale in the park would reflect the human love of all animals," Malmberg writes (160), and as a result, jewelry, clothes and trinkets rely partially on a love of nature for their attractiveness. Buying things is fun, but Disney makes it environmentally sound by connecting it to the conservation messages of the park. In addition, by allowing patrons to donate directly to Disney's Wildlife Conservation Fund at the cash register, Disney offers environmental absolution at the point of transgression. Disney guests walk away happy from Africa's Mombasa Marketplace knowing that by purchasing Animal Kingdom Barbie they've done their part to save the environment.

With our bag of green goodies in hand, we can head out into the village of Harambe and the land of Africa. Harambe, which means "coming together," is a recreation of a present-day East Kenyan coastal town. The fake town is an extraordinary construction, perhaps the best realized environment of Animal Kingdom. All of the structures, from the bridge over Discovery River to the walls of the ersatz Hotel Burudjka, have been artificially aged. Faded letters on the side of a wall advertise "Tusker House Restaurant—Best Food in East Africa," a real restaurant for Disney guests. Harambe even has aural details to complete the picture. From beyond the walls of African shop come the sounds of hammers and electric saws. In a secluded corner of the patio bar at the Hotel Burudjka, one hears a baby crying and a mother singing it to sleep. This particular sound painting is remarkably subtle. Amidst the thousands of families soothing their invariably cranky children, the sound of another crying baby and patient mother nearly fades into the background. But sit at the bar long enough, and the mother's lilting, foreign lullaby will eventually penetrate the chaos. In this back corner of the patio, maybe fifteen people total are privileged to hear this bit of

theatre. Such elaborate attention to realism is indicative of the detail encountered on Animal Kingdom's signature ride, Kilimanjaro Safari.

The Kilimanjaro Safari ride, as the showcase attraction at Animal Kingdom, is magnificent in its realization of an African savannah.[17] Herded onto large trucks, guests are driven into a re-creation of the African plains. This eighteen-minute ride through the fictional Harambe Wildlife Reserve offers amazingly close-up views of giraffe, hippopotamus, cheetahs and lions, all of which appear to be unencumbered by any cages or restraints. In fact, some of the less dangerous animals are free to roam to such an extent that occasionally animals will obstinately block the vehicle's path, halting the ride until a keeper arrives to urge them along. With no cages, fences or barriers in sight, the landscape suggests a wilderness that a traditional zoo rarely summons. The ride presents the illusion of complete immersion in nature. In planning the park, Disney employees travelled to Africa to research their safari ride. "The Imagineers knew that the safari component needed to be authentic" Malmberg writes (18), because Disney felt that Africa itself would be the standard by which the park was judged. But when the Imagineers found the safari parks of East Africa to be too familiar, Kilimanjaro Safari was pushed beyond authentic. Malmberg writes, "The team was struck by the 'theme park-ness' of Africa," and she quotes a project writer, "[T]he tourists' Africa is a theme park—just not a particularly well-run one… We knew the experience we could provide in the Animal Kingdom would be as good or as better than that" (18). Overseas, the Imagineers found that their idealized image of Africa had been Disney-fied, but in Animal Kingdom, they could recreate, not an authentic reproduction of a contemporary Kenyan preserve, but the *image* of Africa handed down from books, pictures and film where the untamed wilderness still exists. Kilimanjaro Safari "improves" upon the reality of its model by adapting the safari experience, not to the reality

[17] One might wonder how I can accurately determine that the Disney savannah is a magnificent realization. In truth, I cannot, having never been to Africa. I can, however, determine that the Disney version of an African savannah looks remarkably like the images of Africa I've seen in various magazines, films, photographs and television shows. It would seem I am just as much a victim of Disney's manipulation as any other visitor.

of the model, but to the mediated impression of Africa we receive, the vast, untouched Serengeti. Alexander Wilson describes the standardization of those culturally valorized scenic places:

> [C]ertain elements have to be rearranged to meet tourist expectations. In the game preserves of East Africa for example, the elephants or lions must be visible and uncontained when the sight seers go by in their tour buses, and preferably the beasts will be eating other animals. But we don't want other buses full of tourists angling for good photos crowding the scene and causing a distraction. (48)

With their numbers shrinking and confined to smaller and smaller areas, the exotic animals have become even more rare spectacles. In the real Africa, Disney planners found themselves in a traffic jam as up to forty vehicles closed in on a leopard, but in Animal Kingdom, animals are always on display: the spectacle is always present, always reliable. Through landscaping, the vistas are preserved and the presence of other guests in safari vehicles is barely noticeable.

Of the safari attraction, Disney proclaims "This is no ordinary safari. We have a story to tell" (Malmberg 70), and like most Disney attractions, the story needs a hero and a villain. The villain in this ride is the poacher: "In Harambe… it would be clear that the savannah was managed by the townspeople and that poachers were threatening the ecosystem—and everyone's livelihood" (Malmberg 40).[18] From the beginning of the wait in line, visitors are warned that poachers have been seen in the Harambe Wildlife Reserve. At nearly every turn in the endless, snaking queue, we are encouraged to keep a lookout for poachers and report anything suspicious to the authorities. Thus by the time we board our safari jeep, we are prepared to identify the villain when he shows his face. Which, of course, he soon does. The ride is narrated through a staged communication between a live guide and the recorded voice of the director of the Harambe Wildlife Reserve. He warns her that there has been a poacher spotted in the reserve and we should keep an eye open for

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[18] Despite assurances from Malmberg that the ride would show the townspeople managing the savannah, that economic aspect is not made clear. Knowing this in advance, a guest might see the connection of the savannah to a local economy, but the average visitor, distracted by the spectacle of the ride, will not likely deduce that the Harambe Reserve is a critical component of the local economy. Such concerns take a back seat to the emotional plight of an elephant attacked by poachers.

him. Eventually the director spots the poacher and we are marshalled into service to catch him. We exit the reserve and a brief, hectic chase traps the poacher and overturns his jeep. The ride finishes as we pass by the culprit held at gunpoint by a reserve ranger.

The narrative follows the villain-threat and happy-resolution narrative typical of the park's attractions. This is, of course, the main reason the threat to the animals is embodied in the persona of the poacher. He's singular, definable, and represents a genuine threat present in wild animal preserves. The Kilimanjaro Safari attraction is so focused on the poacher as the central character of the ride, one half expects to see Poacher shirts and boxer shorts alongside Cruella de Ville earrings and Captain Hook back scratchers at the Mombasa Marketplace gift shop. Unfortunately, this reliance on the poacher as the main, even only, threat minimizes the complexities of the threat to the African savannah. Poaching is a significant problem in wild animal preserves, but Disney's portrayal diminishes the convoluted social and economic conditions that lead Africans to kill animals for their commodity values. Poaching is a problem rooted in socially constructed scarcity, not simply individual greed. Unlike Kali River Rapids, Kilimanjaro Safari offers little context for understanding poaching. The greater evil does not lie in the poacher himself, but in the created conditions that often force people to kill for scarce luxury items—ivory, pelts, horns—to scratch out a living.[19] In the line for the attraction, Disney does offer a video that addresses the encroaching spread of civilization into wilderness areas. Two wild rhinos are filmed with an urban skyline in the background, depicting the uneasy juxtaposition of Africa's wild landscape with its increasing urban landscape. However, the video fails to make a connection between this conflict over space and the accompanying social issues that result in poaching, Instead, horrific images of poached carcasses further inflame our hatred of the poacher. Disney's environmental plot boils down to the level of the organism, ignoring the species in order to depict one man against one animal.

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[19] One wonders just how much Kilimanjaro Safari's enjoyment is related to the underlying class definitions of poaching and preservation. Do we as wild preserve tourists revel in our aristocratic game preserve while we punish the lowly peasant that would dare poach on our enjoyment?

Through such a reduction, Disney performs a political smoke screen by personifying ecological evil in the poacher and avoiding any genuine ecological criticism. What Disney accomplishes is the commodification of social protest and environmental concern, garnering success as a theme park by giving its visitors the ability to purchase an ounce of environmental activism through the simulated defeat of the poacher. Presumably, Disney's employment of this socially constructed nature works because park visitors do not need a materially present nature, or for that matter, a materially present ecological criticism. They accept the signs of environmentalism as easily as they accept the signs of nature in the park. Neither is rooted in any material reality.

Disney must delicately balance its need to make its guests feel good about themselves and to acknowledge that humans are responsible for the plight of the animals. Usually, Disney contrives to have it both ways. Flights of Wonder presents a standard bird showcase similar to ones at Busch Gardens and other zoos. Various birds perform tricks derived from their natural behavior. Much of the show consists of large, beautiful birds flying over the heads of the audience, and the occasional raptor catching a tossed object. Amidst the athletic and comic displays of exotic birds, the show's hosts intersperse bits of environmental pabulum to the audience. Flights of Wonder uses a common environmental trope for its bad guy. Here, the evil is abstracted to a faceless "people" and nameless "civilizations." "Man" has worked to destroy the birds' habitats and poison them with chemicals, and "civilization" is slowly eroding the birds' ability to exist. Andrew Ross shows the danger of this view of humans as a blight upon the landscape:

> The species is therefore addressed as a collective 'we,' or, at best as 'divisions of the human family.' Consequently, there is little room for exposes of the agencies—corporations, governments, large-landowners—primarily responsible for the ecological crisis. (*Chicago 184*)

Humans become the invasive element in the purity of nature. It's an emotional plot device that Disney uses frequently to demonstrate the bad relations between humans and animals. The poacher certainly stands as one element of this invasion. Another example of faceless humans taking the blame occurs in Asia's Maharajah Jungle Trek where we encounter tigers roaming an abandoned

hunting lodge, a re-inscription of purity after the ugly human element has been removed, presumably forced to turn tail and run. In this conception of nature, humans are at worst destructive invaders of nature, and at best token reminders of third world authenticity as the authentic Kenyan guide, or the Indians working Anandapur Ice Cream. The necessary reduction of complex issues results in mindless storybook confrontations that offer nothing but bumper sticker environmental messages.

Disney moves from the third-person abstractions of evil humans to a first-person plural abstraction when it wants to tap into the feel good activism. Yet even this apparent switch to the personal still refuses to address anyone specifically. Where a faceless "they" have perpetrated a crime against the environment, it is an equally anonymous "we" who fix it. And no matter how apathetic or ignorant we are as environmentalists, Disney's narrative lets us feel very good about "our" efforts to ban DDT, to save falcons and pelicans, and to help right the wrongs of civilization. Disney promotes us as having the ability to change the world, but never asks us to do much. The perky bird trainer at Flights of Wonder brightly tells us that we can recycle and reuse, never telling us to refuse. The company has no problems with pushing our activism buttons so long as their message doesn't conjure up any guilt when it comes time to purchase a new pair of mouse ears. We might thoughtfully discard our plastic water bottle in the proper recycling vessel, but Disney does not expect our environmental conscience to reach any higher. Nothing at Animal Kingdom ever questions the wisdom or necessity of buying worthless trinkets at inflated prices simply for a souvenir of our experiences with nature.

The final land of Animal Kingdom is DinoLand U.S.A. Before plunging into this "park within a park" (Birnbaum 174), it's worth noting how Disney addresses North American animals in relation to Africa and Asia. Rather than feature a Rocky Mountain resort with bobcats, pumas, bald eagles and perhaps a bison or two, Disney moves away from live animals to showcase dinosaurs. While bison and mountain lions are every bit as charismatic as lions and tigers, the cultural narratives that would possibly accompany them have already been mined in Frontierland in the Magic Kingdom and the Wilderness Lodge resort area. Additionally, it may be that Americans are

distant from Africa and Asia, but in America we are too close and too responsible for the degradation of our national landscapes, too close to suspend disbelief for the fantasy. DinoLand U.S.A. enables Disney to talk about extinction without ever having to account for humanity as a cause. We Americans have ruined much of our vast wilderness, and what's left seems to be confined to the holy lands of Yellowstone and Yosemite. Our American wilderness tends to be worshipped as an icon of the past, the edenic time of massive flocks of passenger pigeons and gigantic herds of buffalo. In an odd but telling way, DinoLand U.S.A. plays upon that irretrievable essence of nature's past by using extinction, both of animals and culture, as its theme. This section of the park mirrors the materialist view that categorizes nature in terms of purity and separateness from civilization. Our national history is a narrative of increasing urbanziation and westward progress coupled with a nostalgic view of the decrease of wild, open spaces untouched by humans. In the materialist's view, it is precisely these landscapes of the past that represent nature at its most pure. In the hyperreality of America, nature is a relic of the past.

Malmberg describes DinoLand U.S.A. as "a hybrid: part wacky souvenir stand and part dinosaur dig" (74). A giant Brontosaurus skeleton frames the entrance to DinoLand U.S.A. Among the attractions are the Cretaceous Trail, filled with plants and animals that have survived from the last period when dinosaurs were present, and the Boneyard, a McDonald's playland on steroids, with slides, ladders, rope bridges and a pretend fossil bed. On the more serious side there is a working fossil preparation lab where guests can view paleontologists cleaning and preparing dinosaur fossils. Most recently, the lab in cooperation with Chicago's Field Museum of Natural History prepared a Tyrannosaurus Rex skeleton.

In DinoLand U.S.A. one can follow two different narratives—the wacky souvenir stand and the dino dig, both commentaries on extinction. The more straightforward explanation of the past concerns the fictional paleontological dig. Unlike the immediacy of Africa and Asia, the "love" of animals in DinoLand U.S.A. is not driven by proximity. Instead, the connection with these beasts comes through an intellectual bridge, reaching through the past via scientific discovery. In Africa and Asia, the awe of exotic and ferocious beasts was created by strenuous realism and an intimate

relation with the living creatures. At DinoLand U.S.A., the awe emerges intertwined with the powerful presence of big science. We connect with the animals through the mediation of paleontology. The unique Disney touch on this highly scientific discourse is to make academia a theme. The fictional dig operates under the auspices of the equally fictional Dino Institute, a scientific society devoted to the study and discovery of dinosaurs. At every turn of DinoLand's paths we encounter the props of post-graduate scholarship, tenured research, and the scientific life of the mind. Playing upon popular notions of graduate school, DinoLand U.S.A. is awash in the goofy high jinks of graduate student paleontologists and the laughable attempts at control by their professors. The nerdish behavior of scientists is made appealing by the crazy rebelliousness of students. As Malmberg puts it, "the students are pranksters, while the professors are voices of authority" (Malmberg 74). What we have is graduate studies as themeing. A bulletin board near The Boneyard is covered with such notes as "Poker Game tonight, my place" and a note from "Animal" to a colleague requesting a book from his conference with the stipulation that he will pay this time. There are also references to a road trip and flyer for a VW bug with colorful paint job—hopefully exchanged for down payment on a minivan. The storyline even carries into the authentic workings at the Fossil Preparation Lab. Juxtaposed with the day to day detritus of a working lab—the dust, dirt, tools and equipment—are an Imagineer's conception of graduate student life. Little dinosaur doodles comment on the map of the T-rex skeleton. A poster of the rock group Kiss hangs on the back wall. A frisbee can be seen among the books. In the same manner as Kilimanjaro Safari, Disney's authenticity is better than reality. Though Disney went to great lengths to introduce actual scientific work as part of its entertainment, apparently the reality of the scientists and their students is in need of some creative augmentation to be truly "realistic."

The Dino Institute's back story evokes a non-profit organization comparable to such giants as the National Geographic Society or the Audubon Society. In a particularly clever way to avoid crass commercialization, McDonald's sponsors, not Animal Kingdom's DinoLand U.S.A., but the fictional Dino Institute. The narrative has McDonald's providing a substantial "grant" to the Institute for the study of dinosaurs, allowing the golden arches to appear all over the land without

breaking the storyline. We even see a very formal and austere plaque of recognition, in the lobby of the Dino Institute's headquarters. It is commercialization, but one that preserves the purity of the creation. Corporate sponsorship is reconstructed as benign, more stewardship than commercialism.

The philanthropy aspect pervades the expensive rotunda of the institute. In addition to McDonald's plaque of recognition, this large circular room contains numerous museum-quality exhibits, including a reconstructed Tyrannosaurus Rex, that give the waiting room the feel of a heavily endowed organization. Big business meets big science at the Dino Institute. In this rotunda, we are given a preliminary presentation about the life and extinction of dinosaurs. Using the paintings on the walls, voice-overs and lights, the show seems typical of any contemporary natural history museum, surprisingly uninspired blandness from the Imagineers. But the theatrics are a straw man set up for the technological wonders that follow.

The lobby of the Institute also functions as the waiting area for the only genuine thrill ride in Animal Kingdom, Countdown to Extinction. The preliminary show closes with the austere voice telling us that "Mother Nature reinvents the animal after the mass extinction." Countdown to Extinction then proceeds to mock such simplistic ideas of natural history in a technology-driven, high-speed manipulation of the natural processes just described. In a second holding pen just before boarding the ride, we are introduced to Dr. Grant Seeker, another young scientist rebelling against the control of his elder mentors. He ridicules the "quaint and antiquated" bones and paintings of the rotunda, preferring the science and technology that will allow us to see the real thing. Seeker prepares us to travel back in time to see and capture an iguanadon just moments before a meteor strikes the earth, triggering the mass extinction. Countdown to Extinction melds together two central themes of DinoLand: "the conflict between chaos and order, authority and disobedience, youthful creative minds vs. stodgy, controlling brains, and the park's overall theme of the weakness of technology in the face of nature" (Malmberg 35). Technology becomes the tool of the youthful creative minds like the disobedient Grant Seeker who defies the Institute's older Dr. Marsh and sends the guests back too close to the meteor strike. Seeker calls the time travelling device the perfect blend of science and technology, yet refuses to reveal how the vehicle works.

"How do we do it? That's proprietary," he says, using business terminology to sidestep a more convoluted storyline. Seeker's rebelliousness is still contained by an unbreakable narrative of corporate propriety. Countdown to Extinction exhibits big science in service of big business.

The time travel adventure is nearly a colossal failure. We are chased by menacing dinosaurs, nearly lose contact with the present, and just barely escape being obliterated by a meteor. The thrills are the product of an amazing number of technological effects that produce terrifyingly real dinosaurs and a whiplash journey through the darkened attraction. And we do succeed in capturing our pet iguanadon for the juvenile doctor. Though Malmberg, in her description of DinoLand U.S.A., suggests that technology should pale in the shadow of nature, it is technology that seems to win out on all fronts. Countdown to Extinction lauds technology's ability to accomplish the miraculous and turn a profit as well. Far from suggesting that our over-reliance on technology may create problems, Countdown to Extinction reveals that our awe of technology is well-placed and further, this technology worship shapes our understanding of what nature is. Disney World exploits the postmodern ability to suspend disbelief while concurrently marvelling at the technological effects that construct the environment. The awe supposedly generated by an attacking dinosaur is not a respect for the immensity of nature, as Malmberg suggests, but is rather the opposite, an awe in the face of technology's ability to transport us in time and space to a remarkably realistic representation. We are in awe of the simulated, not the real. By celebrating nature and reality manipulated by technology, the techno-industrial set of The Dino Institute's time travel sketches a terror more deadly than a raging carnotaurus. Countdown to Extinction teaches us that advanced science knows no "natural" boundaries.

The ride reinforces the technological solution to ecological problems—in this case, extinction. One of the most potent arguments for environmental reform is the cry "Extinction is forever." Countdown to Extinction, while clearly a fantasy, plays upon our belief that technology will eventually ride to the rescue. By the time we've lost the last elephant, we will be so technically advanced that we can simply travel back in time to retrieve a breeding pair. On a more serious tack, if time travel is a far-fetched idea, we still feel that a solution to our problems is not a matter of

cultural reform, but simply a matter of time and Yankee ingenuity. We may not come up with time travel, but don't worry, we'll think of something.

DinoLand U.S.A.'s second narrative line is also concerned with extinction, but an extinction of a cultural way of life. After stumbling out of The Dino Institute, starstruck by glamorous science fiction, we follow the exit path to Chester and Hester's Dinosaur Treasures. Malmberg describes the roadside shop:

> Chester and Hester's Dinosaur Treasures is the ultimate affectionate tribute to roadside Americana. A former gas station, the place (so the story goes) was owned by amateur dinosaur aficionados Chester and Hester. Just outside the bounds of the Dinosaur Institute's property, the shop bristles with tacky, spangly signs and is crammed with merchandise of sometimes questionable educational value… Tiny plastic dinosaurs ride rickety, dinosaur themed trains suspended from the "grimy" ceiling while others flee fake lava flows in the highest corners. (95)

With its mixture of kitsch and over-the-top tackiness, Chester and Hester's epitomizes the low end of the entertainment and tourism industry, far from the spectacle of Walt Disney World. As they did with the Asian junk shop at Kali River Rapids, Disney co-opts the off-beat flavor and uniqueness of a mom and pop enterprise and embalms it into its megalithic entertainment conglomeration. Ironically, the store may be more elegy than tribute, when one considers the effect the massive theme park has had on many of the small businesses Chester and Hester's resembles. Orlando is frequently referred to as the great wall of Florida, because the success of Walt Disney World has created an entertainment logjam in central Florida that greatly restricts dollars from travelling further south. In addition, Disney's increasing consolidation of all aspects of tourism, from its theme parks to its restaurants, its resorts and even its prepackaged nightlife, prevents money from ever leaving Disney property.[20] The economic black hole has effectively ruined many of the smaller, more quaint tourist attractions that were once characteristic of the Florida landscape.

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[20] Disney reportedly even engaged in negotiations with Orlando's airport to build an extension of the Disney monorail from the parks to the airport terminal, putting guests under Disney control the moment they disembark from the plane.

The two narratives of extinction in DinoLand U.S.A., while often giddy and humorous in their look back, may also be occasion for concern when placed in context of the whole of Animal Kingdom. The absolute eradication of species, regardless of fantastic flights to the past, should underscore the fragility of the rare species in Africa and Asia. And the recreation of a disappearing American icon, like the roadside museum, should stand as a warning about the unintended effects of the postmodern, consumerist society epitomized by Walt Disney World.

Though DinoLand U.S.A., Africa, Asia and Camp Minnie-Mickey are the four main lands of Animal Kingdom, there is another section of the park that falls outside the realm of any actual land. In a remote corner of the park sits Conservation Station, a section devoted primarily to educational entertainment. Here is where Disney sets aside its fantastical stories to create a more informative and educational atmosphere. Compared to the traditional Disney theme park, this section inverts many of the themes of fantasy and escape. For this reason, it seems, Conservation Station is inaccessible to guests except by a riding the Wildlife Express train just outside Kilimanjaro Safari. Guests board the train in Harambe, at a station constructed of wood pillars, thatched roofs and faded crumbling stucco, all consistent with the palette and fabric of the fictional town. Soon, the storybook world of pretend is left behind, and Animal Kingdom takes a turn toward the functional. In a park where one's gaze is always directed at perfection and fantasy, the real world of labor intrudes as the train travels behind the scenes of Animal Kingdom. Instead of cartoon vehicles or horse drawn carriages, we get pickups and forklifts. The train passes along the unadorned, metal fenceline of the African savannah, a view unseen while on Kilimanjaro Safari. This is followed by a look at the evening housing for the elephants. No elaborate facades or architectural flourishes conceal these buildings. Industrial steel and concrete, parking lots and cages are all on display. Briefly, postmodern pastiche and facade take a back seat to form follows function. When guests disembark at Conservation Station, the architecture indicates that their journey has been much further than the mere few acres the train has travelled. Here, though the buildings are still adorned with festive, bright primary colors, wrought iron, and colorful banners,

there is no hint of any fictional back story for our narrative pleasure. Conservation Station is "reality," presenting another variation on the desire for an unmediated connection with the animals.

Yet transformation to "reality" at Conservation Station is, itself, a facade. Despite the apparent lack of a narrative framework, this section tells a story as much as Africa or Asia. Conservation Station is Animal Kingdom's story about itself. Here, amidst veterinarians, computers, cameras and petting zoos, guests are told the story of Disney's commitment to conservation and the well-being of its animal stars. Conservation Station is Disney's most intensive effort to broadcast the "reality" of animals in Animal Kingdom. Here is a petting zoo with exotic breeds of goats, sheep and pigs, various computer enhanced looks at animals and conservation, and picture windows onto the examination and surgical rooms of the veterinary hospital. We can actually see "behind the scenes" of Disney's production. Famous for their hidden utility corridors under Magic Kingdom, Disney uncharacteristically reveals access roads and mechanical equipment to its visitors in this part of Animal Kingdom. The unveiling indicates a commitment to authenticity in Disney's presentation of its collections. Disney is quite aware that its environmentally sophisticated visitors will be sensitive to any exploitation of its animals. Such scrutiny, when a few animals died before the opening of the park, only confirmed that the spotlight on Disney will be very bright.[21] Disney's reputation as a wealthy innovator calls not just for exceptional entertainment, but also a high degree of advancement over traditional zookeeping, and Conservation Station demonstrates that commitment. We are shown the wires and pulleys as a way of underscoring the serious educational component of Animal Kingdom. Rather than sweeping us away with the magic, Disney romances us, but only as sensible, concerned environmentalists. The hard facticity of veterinary science and state of the art housing facilities lend credence to the environmental rhetoric that is part of our enjoyment.

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[21] The deaths in early 1998 of four cheetah cubs, two otters, two West African crowned cranes, a white rhinoceros, and a black rhinoceros brought closer attention from the U.S. Department of Agriculture and some unpleasant media exposure. By most accounts, the deaths were deemed accidental or the fault of previous owners, and Disney weathered the storm. See Clary, Mike.

Yet, we have to consider that even this seemingly unfiltered view is a display under the control of Disney. The highly specialized veterinary exhibits, the computer terminal filled with facts, or the surveillance cameras on the animals' habitats are more seduction than education. They are informative to a degree, especially if one is fortunate enough to observe an actual operation by the vets, but even in this instance, there is no direct connection between medical procedure on an individual animal and environmental science. Conservation Station makes the same reduction from species to organism as Kilimanjaro Safari, using an emotional connection in place of a logical concern for ecosystems. Despite its name, Conservation Station is not focused on conservation. Rather it uses the idea of science to reinforce an emotional connection.

At Conservation Station, Disney uses science to underscore the park-wide claim that guests are experiencing an authentic recreation of nature, revisiting the importance of science first seen in DinoLand U.S.A. What we have is a peculiar use of seriousness to make the fantasy that much more elaborate. Through the silliness of the Dino Institute, big science is tweaked but ultimately lauded. At Conservation Station, science validates the entire Animal Kingdom project. Its magic is to change Animal Kingdom from just a theme park about animals into an ecologically informed utopia. It provides the politically correct window dressing for Disney's fantastic nature ride.

In one sense, the trip to this small section of the theme park does unmask some of the magic of Animal Kingdom. Seeing the animal pens and the industrial support system reminds us that the fantasy environments are a product of immense labor and technology. Curiously, though, this very unmasking reinforces the "naturalness" of the attractions in the rest of the park. Seeing the science and labor behind the illusion convinces the visitor that the savannah and jungle habitats are not just a facade or a painted backdrop. Like the magician who reveals nothing up his sleeve, the glimpse behind the scenes reveals that Disney truly has made the Africa savannah appear in central Florida. Or if not a true conjuring act, the scientific weight behind the recreations make them a true habitat. The typical visitor is meant to understand that Disney's monetary and creative might have made the wilderness appear before them. In a movement similar to DinoLand's glorification of technology, Conservation Station's exposure of the workings of Animal Kingdom strengthens the underlying

narrative that Animal Kingdom is indeed the most authentic re-creation of an exotic environment.[22] Conservation Station asks us to believe that the science we see in this small section is a microcosm of the whole park. The interplay between Conservation Station and the remainder of the park creates a mutually dependent nature. As Conservation Station's science confirms the authenticity of the park, the park's verisimilitude lends credence to the scientific workings at Conservation Station. The station's role as the lead educator at Animal Kingdom is enabled by the authentic environment of Animal Kingdom. The conclusions drawn claim their validity because they are predicated on such an authentic environment. The circular logic of the two constructs the reality of Animal Kingdom, one that earnestly and convincingly presents the park as a reproduction so authentic that it does not differ from the original.

In the end, Conservation Station accomplishes a number of goals for Disney. It presents the park as more than simply a zoo. Under Conservation Station's scientific white-washing, the park becomes a scientific experiment, with animals closely studied as though Animal Kingdom were a outpost for biologic field work. Relatedly, it reinforces the authenticity, exoticism and reality of the animals of Animal Kingdom. Seeing their pens, learning about their diet, and witnessing their healing reminds us that these animals are real—a necessary step in the epitome of make-believe. Finally, it reinforces Disney's role as the master storyteller by giving us a glimpse at the immense complexity needed to create the "story" outside the walls of Conservation Station. In terms of this project, Conservation Station may be seen as a commentary on the construction of nature. The various roles Conservation Station plays in solidifying Animal Kingdom's character are similar to the many cultural constructions that solidify nature's character. Science, culture, media images and social values interdependently create and reinforce our concepts of nature as a stable, material reality, grounding this elusive term in specific reference points much like Conservation Station grounds Animal Kingdom in terms of science and story.

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[22] The science and ecological sheen on Animal Kingdom is similar to that of Biosphere II, the immense artificial "world" created in Arizona.

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Returning from Conservation Station, we are drawn back to the fourteen-story Tree of Life. Towering over the park in a way similar to the Magic Kingdom's castle, the Disney-Imagineered banyan tree is painstakingly carved with animals on its trunk and branches. An impressive piece of sculpture, the tree's realistic detail grows out of the intricate iconography covering the tree from its roots to its highest branches. The tree represents a wonderful statement about how we see nature in the park by conflating artificial creation with organic creation. From a distance, the Tree of Life appears to be a towering, but normal tree. Upon closer inspection, however, we begin to see the results of human labor and artistic creativity. This change in meaning with change in focus can mirror a contemporary, materialist understanding of nature. If we look close enough at what we call nature, we can see that it is in fact a creation of immense human effort. Like the Tree of Life, "nature" is a sculpted work from physical materials, a product of human manipulation of the world into an iconographic symbol of our environment. Studying this construction of nature at Animal Kingdom, not just the Tree of Life but the entire project, is beneficial because the park so plainly reveals the constructedness of its product. To a certain extent, this is the attraction of Disney World. Animal Kingdom presents the absolutely authentic amidst the undeniably fake. The postmodern consumer of entertainment easily switches from participating in the simulated environment and then examining the techniques that create the illusion. Disney's most sophisticated entertainments, such as Countdown to Extinction and Conservation Station, allow the consumers to simultaneously hold two disparate ideas in their heads; they can immerse themselves fully in the simulated environment and at the same time appreciate the technological detail that creates the environment. This is possible because Disney markets itself as a manufacture of fantasy, and the typical visitor willingly suspends disbelief to engage that fantasy. Yet more sophisticated visitors will also remark upon Disney's ability to create that fantasy. This dynamic in many ways explains both the attraction to Disney and many people's distaste for Disney World. The Project on Disney quotes one visitor as saying "I don't like to go somewhere where they chew the food for you"

(109). Disney manages its fantasies so seamlessly that imagination ceases to be necessary for its visitors. The more active minds, refusing to be quieted, inevitably search for hidden cracks. Curious to see the mechanism at work, they turn around in the boat to see the backs of the scenery. Its fun to do this at Disney World. In Animal Kingdom, an overly curious cultural critic enjoys seeing how Disney manipulates its visitors into experiencing an Africa town or an Asian jungle. Outside the park, however, it can be disconcerting. When we turn around in the boat while paddling through "genuine" nature, we see that the term nature is as constructed as any nature in Animal Kingdom.

If in one respect Disney allows us to hold paradoxical ideas in our head, at Animal Kingdom we can encounter difficulty keeping our categorizations clear. Animal Kingdom's project often intentionally obscures the working hand of humans, especially when it exhibits live animals. In attractions like Kilimanjaro Safaris or Pangani Forest Exploration Trail, where live animals are exhibited, Disney so completely and expertly recreates the native habitat that it becomes near impossible to distinguish the techniques of the simulation. Suspension of disbelief, therefore, is all too easy. The only obstacle to a complete acceptance of this reality is an intellectual knowledge that this is central Florida and tigers are not seen in central Florida—especially around these crowds.

Disney's desire to exhibit nature in its most "natural" state seemingly contradicts the typical postmodern enjoyment of Disney's parks. We enjoy Disney recreations of a Kenyan village, or a paleontologic dig, or Main Street U.S.A. for that matter, because the detailed recreation carries the Disney signature of fantasy. The humorous touches at Chester and Hester's, the hotel at Harambe, or the popular pastime of seeking out Mickey's silhouette in unexpected places reminds us that this is an elaborate story told for our benefit. We are all merrily swept along by the master storyteller. But when we encounter the animals—when we go into nature seemingly unmediated—the hand of the storyteller must be occluded. Cages, of course, bespeak an external influence upon the animals, so they are effectively eliminated for nearly all the exhibits in Animal Kingdom. In the Kilimanjaro Safaris, non-threatening animals such as giraffe and gazelle are allowed near free reign of the savannah, coming in very close proximity to the visitors. For the more dangerous animals such as

cheetahs and lions, landscaping plays an important role. Wide moats and other barriers separate these animals from their natural prey and from the human visitors. Yet through the use of vegetation, landscaped berms and disparate land levels, the animals appear to be as free as their more docile neighbors. Unless we travel to Conservation Station, we never see bars, electric fences or huge moats separating us. In order for visitors to have "spontaneous" encounters, food is placed in strategic locations, and animals are rewarded for appearing close to the jeep's pathway. Besides the use of food, Disney also uses ingenious tricks to keep the animals on view without appearing to be manipulated or confined by unnatural sources. Heat presents a particular problem since most animals will prefer shaded, hidden areas during the hot Orlando summers. The tiger exhibit contains a tunnel between two viewing areas. Aware that the tigers may prefer the seclusion of this passageway, the park heats the tunnel in summer and cools it during winter, making it uncomfortable for the animals to remain underground. To keep its male lion on display, Disney installed a water-chilled rock at the optimum point for viewing the lion. Thus the king of beasts appears "spontaneously" and "naturally" for nearly all of the riders of the safari.[23] There can be no suggestion of outside manipulation or creation that might spoil the illusion of reality. As Donna Haraway puts it, "what is so painfully constructed appears effortlessly, spontaneously found, discovered, simply there if one will only look. Realism does not appear to be a point of view" (38), and the animals in Animal Kingdom appear in their "natural" state. Thus the aesthetic school of realism in fiction and other arts is mirrored in the presentation of nature in Animal Kingdom. We lose the whimsical postmodern complication of codes in favor of an illusion of unmediated contact. This realism, however, is always situated in a decidedly unreal context. Animal Kingdom's realism exists side by side with walking cartoon characters, theaters where bugs put on shows, and dinosaurs brought back to life. Here, both nature and fantasy are part of the same universe. What results comes very close to Baudrillard's hyperreal where the distinction between what is real and

[23] Occasionally, even this was not enough to keep the lion in view. Animal Kingdom keepers have chained a frozen rabbit in a block of ice to this area, and in extreme circumstances, placed a fan blowing on the lion. A visibly manipulated lion is better than no lion at all.

what is fake not only cannot be distinguished, but no longer really matters. We can easily accept unstinting fidelity to realism with self-referential postmodernism because both are consistent with Disney's logic of consumerist entertainment. Everything from stuffed toy elephants to environmental activism to Hemingway-esque safari is for sale.

In effect, the realism of Animal Kingdom's nature is marketed as a brand, one that carries over into its extensive line of merchandise, ninety percent of which is themed to attractions and characters within the park.[24] In discussing Animal Kingdom's merchandise, Malmberg tells us that "Every piece has a story, every piece tells a story, and every piece contributes to the story" (161), and that story relies upon the livestock of the park. They lend, by association, their authenticity to everything else in the park, including the staff. For the lands of Africa and Asia, Disney has recruited workers from these continents to staff food carts, serve as guides in the safari and on the animal trails, and perform as entertainers. The Kenyan drummer and the Indonesian fruit vendor carry the same brand recognition as the giraffe and fruit bat native to their countries. Alexander Wilson, again discussing the standardization of African safaris, notes that "Native human communities, moreover, might or might not be an acceptable component of the safari experience. If they are acceptable they're perhaps best presented in traditional, that is, archaic dress" (48). In Animal Kingdom, some are dressed in "archaic" clothing, namely those people who are artists and performers. Sometimes, however, the attempt at fantasy fails. A native of South Africa working at the park occasionally encountered guests who refused to believe he was African. Despite his accent and insistence, they could not overlook his white skin. He was perceived as fake because he did not conform to the image of Africa. Essentially, his product did not match its marketing.

As these workers are reduced to symbolic representation of indigenous cultures, so too do the animals succumb to the branding of nature. Taken from one context and inserted into another—no matter how accurately that context recreates their original one—the animals are stripped of their authenticity, becoming mere coded indications of wild "nature." Despite all of Disney's efforts at promoting the direct encounter with authentic animals, an unmediated contact

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[24] See Malmberg p 160.

with nature is quite ridiculous in Disney World, even with all of the company's ingenuity and resources. Industrialization has almost completely colonized the natural world so that the preponderance of meanings associated with nature are attached only through the use of an intervening medium. Expecting Disney to provide an unmediated experience is farfetched. Nature rarely comes to us unscripted or unmanipulated by an author's touch. And for tourist attractions that traffic in nature associations, even the authentic must, as Wilson says, "be rearranged to meet tourist expectations." In many respects, Animal Kingdom's authenticity transcends the mere accurate recreation of habitat. It ironically mirrors the Disney-fication of all nature as entertainment. Our gaze is always directed, framing nature in much the same way it is framed by a TV console.

However, this hyperreal, postmodern world of Animal Kingdom offers another way for understanding how humans construct nature. A day at Animal Kingdom is an unceasing categorization of what is natural and what is fake. The man-made savannah appears very real, just as the real Disney souvenirs make the Africa shops look fake. The very instability of reality allows for insight. Those aspects amidst the natural wonders of the park that cannot be coded as "natural," the freshly built ruins of the Royal Hunting Lodge or the ersatz safari vehicles of Kilimanjaro Safari, challenge what normally would be unquestioningly coded natural. When we are so aware of Disney's expertise at creating reality, we become sensitized to that creation. The constant work we need to do to categorize what is natural and what is fake makes us acknowledge that the line is not nearly so stable as many believe it to be. Despite Animal Kingdom's strong commitment to authentic recreation, Animal Kingdom inadvertently shatters the pretense of realism, leaving us to believe that almost anything can be constructed as natural, and fit into the frame of contemporary epistemology. Of course, most visitors refuse to learn this lesson from Animal Kingdom. They easily categorize all of what happens beyond the entrance gate as entertainment. With simulation technologies so advanced in movies and television that cartoons interact with real people, and contemporary actors interact with long dead historical figures, visitors have no difficulty explaining or no need to explain Animal Kingdom's juxtapositions. Animal Kingdom is simply accepted on

its own terms, terms which are abandoned once they leave the park. The park creates its own epistemological framework which unfortunately dissipates once outside its gates, unfortunate because that epistemology may help us in understanding the constructedness of the world outside.

Animal Kingdom represents a culmination of Disney's manipulation of the real and the fake. The defining style of Disney animation was always a push toward realism. The Project on Disney notes that Walt Disney was the Ibsen of the cartoon: "He brought the technological refinements necessary for realism to a medium that was, until his innovations, unable to be anything but unrealistic…Realism was the prize; Disney could not abide any other goal: every leaf must quiver and every blade bend in a Disney movie" (81). This drive for realism is reflected in the parks, where even the cartoon characters are given some sense of reality. Mickey has his own house with a bed and a phone. It is Pocahontas, princess of the woods, that teaches us about our stewardship of the forest. Fidelity to the original, however, is not exactly what Disney realism entails. There must be fidelity to an aura or mystique. This explains why Disney's most successful attractions are based in fantasy rather than reality. In the Magic Kingdom's Tomorrowland, for example, there is no original. For themeing to be most successful, it must lack referentiality. According to the Project on Disney, "the aura of a country, place or time—or at least a fictionalized mystique of the same—is tapped into most successfully by themeing that doesn't remind you of something that actually exists, something you may have seen in the original" (205). Thus Tomorrowland, the representation of a retro future that never came to exist, works better than World Showcase at Epcot, home of simulated Italy, France and Mexico. Travelling through Epcot's France pavilion, we see Disney re-create a Paris street scene. We might be impressed by the attention to authenticity, the bakeries, the wine, the Eiffel Tower looming overhead, but for anyone who has visited Paris, the aura pales in comparison to the real City of Lights. The experience feels flat, more like a two dimensional picture than a whole reality. But in Tomorrowland, we cannot find reference to an existing reality. In that fantasy, the theme expands from a future imagined by science fiction writers and artists of the twenties and thirties. It feels complete, genuine and enjoyable because it so completely embodies the aura of that never-realized future and, unlike Epcot, cannot be undercut by

knowledge that it is a poor simulation. Tomorrowland's perfect simulacrum is far better than even a first-rate simulation, especially compared to the sometimes frightening and deadly serious corporate controlled future of Epcot. The best parts of Disney World are faithful recreations of things that don't exist, such as the geographic puzzle of Jungle Cruise, or the pastiche of an idyllic small town American Main Street; one that existed only in the nostalgic dreams of Walt Disney and millions like him.

If Animal Kingdom is successful at creating an exciting experience of nature, it is because it is modeled after the Magic Kingdom rather than Epcot. Its Africa and Asia are continents that never really existed—closer to the nostalgic Main Street than an actual glimpse of a foreign environment. Perhaps worse, its environmental ideology has as much authenticity as the inverted St. Mark's Square of Epcot's Italy. Like the Doge's Palace, its environmentalism is on the wrong side. Disney has corrupted the sense of environmentalism, using its cachet as a corrective to the excesses of capitalism and consumerism: it has coopted them into the same project. Only the social construction of nature, the fact that there is no essential quality of nature, allows Animal Kingdom to label a grossly overwrought and excessive indulgence as an ecologically sound experience of the planet.

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In Animal Kingdom, Disney capitalizes on the public's desire for a stable, secure return to innocence that nature represents. Disney achieves this by layering an environmental sheen over the romantic portrayal of exotic lands, distant enough to enthrall us, but juxtaposed with enough green rhetoric to alleviate any guilt at escapism. Every aspect of Animal Kingdom is not only expected to amuse and excite, but is also designed to convince guests that, despite their artificial surroundings, they are immersed in nature. The unbleached eco-tint of snack stand paper products and the leopard-skin mouse ears inform us that even the most minor of acts at Animal Kingdom is an act in

nature. Nevertheless, what Animal Kingdom presents is not a nature-friendly park, but a nature themed park. Nature, here, is the aesthetic principle but not the moral or ethical guide for the park.

How could it be otherwise with such an undertaking? Animal Kingdom's environmental message does not reflect practice. True environmentalism, almost by default, must be a challenge to industrial capitalism. As a consequence, Animal Kingdom must severely temper its environmental message so as not to draw attention to the inherent contradictions in the very existence of a conservation theme park. Its rhetoric, therefore, is not descriptive but rather performative, uttered to produce the ideal consumer of its eco-friendly facade. Animal Kingdom presents, not an ecologically progressive environment, but a landscape of consumption that disguises every minor act of consumerism as a gift to nature. Animal Kingdom, however, is hardly a light footprint on the environment. The vast scale of resources devoted to more or less mindless entertainment and the crazed consumerism of Disney World are only the most obvious of unfriendly practices toward nature. More deceptively, Disney exploits the lukewarm but ever present desire of its visitors for happy animals and a healthy planet in much the same way nature-themed catalogs pressure readers to save the environment. They both redirect the broader, communal desire to improve the environment into a personal, orgiastic desire to accumulate. In *Reading Zoos*, Randy Malamud describes their strategy:

> The green marketing approach combines a few items that are actually ecologically beneficial with a great deal of other flotsam, ecokitsch, tailored to the design aesthetic—yet with little discernible difference from any other consumer products—of people who fancy themselves environmentalists. (95)

Disney's environmental message leans heavily on the park's status as a progressive zoo, saving endangered animals from extinction and educating the masses about sound ecological practices. The technique reflects what architectural historian Margaret Crawford has termed the "principle of adjacent attraction." In Crawford's explanation of such festival market places as Baltimore's Harborplace or Faneuil Hall Marketplace in Boston, the boundaries of commerce and culture are indelibly blurred as consumers, attracted to the quasi-historical architecture and attractions, transfer

their attributes to items for sale in gift shops and boutiques.[25] A very similar transference occurs at Animal Kingdom as Mickey Mouse Safari hats and Tree of Life snow globes become totems for genuine environmental action. Disney pulls those meanings Animal Kingdom encourages us to ascribe to nature out of context and reinscribes them into the ideology it wants to pursue, namely the commodification of nature. It is this consumerism that positions nature as a brand, one that Price sees as marketable when considered as a "counterpoint to modern everyday life" (189). But nature at Disney World reinforces the dominant trends of modern life: branding, commodification and entertainment. In linking this obsession for nature to souvenir hunting, Disney not only commodifies nature, it co-opts environmentalism's counter-cultural impulse.

Behind all the signs of environmentalism, there are no connections to strong environmentally sound practices. Disney boasts of its "attitude and commitment to our environment,"[26] trumpeting its conservation initiatives with The Nature Conservancy, its immense horticultural programs throughout the company, and even its mass transit capabilities. And to give Disney its due, it does make an effort to integrate environmental practices into its operations, especially when they are clearly profitable or reflect well in the eyes of the public. More often than not, however, Disney's environmental practices are merely coincidental, happy side-effects arising from different motives. One publicity pamphlet notes that "Our Guests are encouraged to use our mass transit systems, such as the monorails, ferry boats and an extensive bus fleet, to decrease the amount of fossil fuels used." The "green" spin placed on Disney's transit options disguises the fact that this system is designed to completely control guests' experience, down to the very means they approach the resort. For a park like the Magic Kingdom, "encouraged" is a euphemism for "required." Outside of the monorail, ferry boats and bus fleets, there is no other way to reach the park.[27] Disney wants its guests under their direction for as much of the vacation as possible. As

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[25] In Hannigan 55.

[26] *Environmentality* pamphlet (Disney 2000).

[27] The ferry boat is an especially specious example. Unlike the monorail, which at least can transport guests from the Magic Kingdom to Epcot, the boat's sole purpose is to ferry guests from the ticket counter to the park's entrance. Following these standards, one could lump the Wildlife Express train and the the submarines at 20,000 Leagues Under the Sea in the myriad mass transit options at Disney.

for Disney's commitment to reducing the amount of fossil fuels used, the acres of parking lots and Walt Disney World's deliberate isolation from Orlando and its hotels suggest otherwise.

Disney's work with The Nature Conservancy is primarily the result of an environmental mitigation agreement with government officials that gives Disney a near blanket approval for twenty years of development rights on its property.[28] The Disney Wilderness Preserve, now at 12,000 acres, was established in 1992 with the Disney purchase of the 8,500 acre Walker Ranch. Disney then donated the land to The Nature Conservancy to offset wetland destruction in building Celebration, a new town southwest of Disney World developed by the company. In addition, the construction of Celebration allowed by the land mitigation deal secured freeway interchanges and development permits that one Disney vice-president labeled "an economic development area that's probably unmatched currently anywhere in the country."[29] The good inherent in the Preserve is more than offset by the impending development in the northern part of the county.

The Disney Wilderness Preserve is a worthwhile venture on the part of Disney and The Nature Conservancy. Pleasantly free of Disney excesses, the preserve sits just off Lake Russell and is home to a large concentration of bald eagles, sandhill cranes and other protected animal species. The entrance is at the dead end of a back road in unincorporated Osceola County, the poor cousin to Orlando's Orange County. The entrance road leads to a simple interpretive center with a small store, bathrooms and a conference center. With the help of Disney engineers, the buildings were designed with eco-friendly materials and techniques, though they are scarcely reminiscent of any theme park building. They are sturdy and understated, allowing their surrounding environment to take center stage. The three trails that meander through a small portion of the preserve are not elaborate, but are well-maintained and bespeak a monetary influence greater than that typically seen at a nature preserve. Disney has invested money and expertise in the preserve beyond that which was required by its wetlands mitigation agreement. The presentation of nature at the preserve, despite its Disney signature, is clearly in a different realm than at Animal Kingdom. It is PBS

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[28] See Ross *Celebration*, 280.
[29] ibid, p281.

compared to ABC, subtle and unadorned unlike its flashy neighbor. And unlike Kilimanjaro Safari, the preserve gives no guarantee of seeing any wildlife, mostly just acres and acres of pine flatwoods ecosystem. The Nature Conservancy is now doing extensive repairs to the ecosystem damaged by years of lumbering, draining and cattle grazing.

Disney's attitude toward the Disney Wilderness Preserve is as curiously mixed as the attitude of Preserve volunteers toward Disney. The personnel at the preserve are gently insistent that the land is now under the control of The Nature Conservancy and is not a part of the Disney empire, yet they extol the influence and help of Disney in creating the preserve. Disney itself maintains a tenuous boundary separating its relationship to the preserve. The company is quick to cite it as an example of their dedication to conservation, yet it is content to let it remain a hidden treasure. A guest unaware of its existence would have only the slimmest of chances to learn of it. Inside the parks, the only mention of the preserve is buried amidst a myriad of hypertextual links on the Ecoweb computers at Conservation Station. Even then, the information is scant and only offers a phone number for directions. Disney summons up the preserve for those who are curious about the environmental impact the parks have, but the company recognizes that for the majority of its guests, this version of nature holds very little interest.

The Walt Disney World resort proclaims that an environmental awareness dictates many of its practices in its parks and resorts. The Disney term for its earth-friendly practices is "Environmentality," with Jiminy Cricket as the conscience mascot of the program. Concocting a neologism is appropriate for Disney's commitment to the environment. "Environmentality" is not quite environmental and relies mostly on the appearance of environmental concern. Malmberg writes that "The Walt Disney Company realizes one of the greatest contributions it can make to global conservation is raising awareness" (170), which is a particularly easy and uncontroversial way of claiming an environmental commitment. Such an emphasis on perception and attitudes depoliticizes the problem, allowing Disney to assume an environmental stance without engaging in any action that might prove contentious. Celebrating the beauty and importance of animals and bemoaning their fate engender very little disagreement. But this uncontroversial environmentalism

accomplishes little. It easily and safely overlooks the political and historical causes and, worse, suggests that increasing awareness is a positive step toward rectifying ecological damage, when in fact it does no such thing. It may even inhibit action as guests leave Animal Kingdom with warm feelings about their devotion to the planet, pleased with themselves that they have helped turn the tide of destruction. Such feelings may comfort them for their 300-mile mini-van journey back to their suburban sprawl.

Disney's environmentalism is a feel-good activism that offers very little in the way of actual change. This is largely because their message refuses to go beyond anything but the simplest character conflicts of man versus nature. Worse, Disney's environmental message is continually subverted by its devotion to consumerism. When environmentalism is crossed with commercialism, there is always the danger that the latter will overcome the former. Though most zoos are committed to safe and pleasurable habitats for their collections, and many are working to rebuild endangered species through breeding, the welfare of the animals is constantly weighed against the need to maintain income. Randy Malamud argues that nature, or at least an ecologically sound presentation, is in danger of being overwhelmed by a culture of commerce when zoos become "implicated in the processes of capitalism" (93). Such is the case at Walt Disney World. Animal Kingdom's patently false environmentalism works only to increase revenue, something not in and of itself an ecological danger, but the terms on which nature is presented are terms that sacrifice the health of nature for the pursuit of profit. The very scarcity of the animals Disney exhibits as its star attractions is caused by the pressures of worldwide consumerism. The unquenchable desire for more goods, more land, more of everything has put unbearable pressure on those realms outside of the capitalist system. The African savannah, the Asian jungle, and, not least, the wild spaces of America are systematically shrinking by the incessant need for capitalism to grow. At best, Disney offers us a zero-sum trade with wild spaces being protected while development rapidly rages. The consumerist project of Walt Disney World, its hard sell of commodities and its marketing of a world that is bigger and better than anything else, is part of the larger systematic destruction of habitat for the animals it claims to preserve. No matter what shade of green Disney covers Animal

Kingdom, and no matter how many acres it donates to placate government watchdogs, it still remains on the wrong side of the ecological scale.

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A day spent at Animal Kingdom is an unceasing sorting of what is real and what is fake. The process begins at the center of the amusement park with a tree that is not a tree. The bulk of the park contains live animals, but significant portions focus on extinct animals and those that are stuffed. Interspersed throughout the park are intricately designed village shops that are merely facades, and intricately designed village shops that actually sell things. There are white South Africans who fail to convince certain visitors that their accents are real, and there are Asians selling Coca-Cola. One of the major attractions of this giant money-fleecing machine takes place in a simulated third world tourist trap. There are real veterinarians, and there are animated tour guides. There are stuffed birds and immobile storks. The Backstage Safari tour will not show any animals, but afterwards, one can enter the cages at the petting zoo. We are certain that there are real things and there are fake things, but regularly we must consciously decide which is which. Sometimes, the distinction is impossible to make. The ultimate tromp l'oeil of this amusement is the incessant claim that Animal Kingdom is an ecological adventure both in spirit and in practice.

What Disney produced in Animal Kingdom was more than the forced hybrid of a zoo with spectacular rollercoasters or a more expensive and expansive zoological gardens. Rather, Animal Kingdom displays a remarkable environment where "nature" becomes the theme of the park, but it is a nature that is as much a fantastical creation as the imaginative lands in Disney's Magic Kingdom, a nature that is as constructed and manipulated as the movies of MGM Studios, and a nature that is as corporate and commodified as the futuristic world of Epcot. Disney presents its amusement park as an educational thrill ride that will teach its visitors about the importance of the environment without every letting us leave the amniotic magic of Walt Disney World. It purports to give guests a renewed sense of respect for the planet and its inhabitants through its message of

conservation. It trumpets its treatment of wild animals as the most progressive and enlightened of zoos world-wide. In nearly every instance, it fails to live up to these claims. What we find is an exceptionally well designed zoo that is the equivalent of a Park Avenue address for its lucky inhabitants, but one whose conservation philosophy is repeatedly contradicted by its unstated but obvious goal of turning a profit. Its uplifting message doesn't renew or engage us in a respect for the planet, but rather entices us to buy a piece of nature. Its commitment to education doesn't help us understand the complex relation of humans to the physical world, but rather it teaches us a simplistic and ultimately damaging lesson that environmentalism can be as much a commodity as anything else for sale at Walt Disney World.

Disney's "nature" purports to be an extraordinary replica of authentic habitats and locales where nature is purest, yet the fact that Disney is able to recreate so accurately an African savannah or an Asian jungle challenges our ideas of what can be labeled authentic. We know that no matter how faithful the reproduction, our experience with lions, elephants and tigers in central Florida cannot be an authentic encounter with wildness. Yet the reference points we have for an authentic nature are so overprocessed and the result of so much cultural baggage that what can be labeled authentic is hardly clear. Disney's theme park further twists and manipulates the markings of nature to the point that authentic and inauthentic are beside the point. Instead, we are overwhelmed by myriad details that signify nature, but never seem to equate to nature. In the absence of cages and borders, we seem to be enveloped completely in a system, but that system isn't exactly nature, nor does it feel like civilization either. Because of its hyperextension of "nature" into every single facet of the amusement park, Animal Kingdom isn't an authentic representation of animals in a recreated environment, but a near perfect technicolor simulation of our media-soaked creation of nature. What we find is that as Disney excels at perpetuating capital's penetrating and colonization of nature, its widespread infiltration succeeds in blurring the boundaries between the real and the simulation, confirming that nature is a social construction rather than an absolute.

Three

Ultimately Unmappable: the Bad History of *Mason & Dixon*

Mainstream awareness of environmental degradation has dramatically increased in the last decades of the twentieth century. Though there have always been a concern over various forms of pollution—be it industrial smog or unchecked horse droppings—and a desire to protect the most scenic of our natural landscapes, late-century environmentalism has expanded its interest. While stopping specific polluters and protecting specific landscapes still play an important role in contemporary environmentalism, the more significant development has been the understanding of ecological destruction in systematic terms. It has become more important to save entire habitats rather than to protect simply one species. Progressive environmentalists target corporate cultures rather than simply targeting corporations. Green thinkers seek deeper explanations for ecological devastation, reasons beyond the immediate factors. Eventually, the search for reasons why our contemporary landscape is so disconnected from nature leads us to the historical structures on which our society was built.

Thomas Pynchon's most recent book, *Mason & Dixon*, allows us to examine the origins of the contemporary relationship between humans and the physical world. Pynchon creates an ecologically-informed past that suggests the root causes of our contemporary problems. The novel, set in the late eighteenth century, depicts a world poised between two epochs, the Age of Miracles and the Age of Reason. During the seven years in which Charles Mason and Jeremiah Dixon traverse the towns, settlements and wilderness of the Pennsylvania-Maryland border, Pynchon depicts the beginning entrenchment of the Enlightenment in America and, consequently, the death of the miraculous as it is discovered, confined and explained away. The Mason-Dixon line not only separates two states, it also divides these two epochs, defining the borderline between what was once possible and what is now allowed. Contemporary ecology teaches us that the borderlands of ecological systems are chaotic and fertile, with exceptional diversity of species. The same can be

said about the border between the Age of Miracles and the Age of Reason. The age of *Mason & Dixon* is one where the miraculous uneasily co-exists with excesses of reason, where ghosts, talking dogs and flying ducks occupy the same geography as meticulous science and mathematically pure lines.

Pynchon's eighteenth-century American landscape twists and bends under the competing currents of two definitions of reality and nature. The lockstep movement of rationality, represented by Mason and Dixon's ever-westward line, marches from Europe and the eastern seaboard, seeking out rational explanations for all of nature, and enclosing its infinite spaces within rigid boundaries. With each push further west, this Enlightenment force further encroaches upon an entirely different understanding of the natural world. Termed wilderness by the colonizing Europeans, the western American lands contain phenomena unexplained by the tools of reason, in effect, an alternate definition of nature. Each mapped acre along Mason and Dixon's line further envelopes the enchanted world in finite series of calculations that will inevitably reduce the land to mere resource, property to be staked. But the land refuses to submit peacefully to this new epistemology shipped over from Europe.

Part of Mason and Dixon's surveying assignment refuses to conform to any rational calculation. In addition to their famous line, the two surveyors are hired to fix the borders of Delaware. But the task of reconciling straight lines, tangents and arcs demanded by landowners with the reality of the landscape illuminates an incompatibility of abstract mathematics with the all too messy earth. The boundary between Pennsylvania, Delaware and Maryland—the inscrutable Delaware Wedge—simply cannot be made to fit the commands of Kings and Lords. This secondary project provides an omen for the larger undertaking to come:

> [A] spirit of whimsy pervades the entire history of these Delaware boundaries, as if in playful refusal to admit that America, in any way, may be serious. The Calvert agents keep coming up with one fanciful demand after another, either trying to delay and obstruct as long as possible the placing of the Markers, or else,— someone

> must suggest,— giddy with what they imagine Escape, into a Geometry more permissive than Euclid, here in this new World. (337)

Despite the best efforts of the surveyors, the lines never match the reality dictated by royal decree. Even as their science creates the "purest of intersections mark'd so far upon America" (469) at the Northeast corner of Maryland, the Delaware Wedge mocks their desire for perfection. For Pynchon, the Wedge comes to represent those aspects of America, nature and reality that Mason and Dixon will never fully understand. This small geographic anomaly comes to symbolize the elusiveness of nature and the American continent. Even in this, a tiny sliver in the tiniest of states, there lies an infinite world:

> Yet there remains to the Wedge an Unseen World, beyond Resolution, of transactions never recorded,—upon Creeksides and beneath Hedges, in Barnes, Lofts, and Springhouses, in the long Summer Maize fields, where one may be lost within minutes of entering the vast unforgiving Thickets of Stalks,—indeed, all manner of secret paths and clearings and alcoves are defin'd,—push'd over or stamp'd into being, roofless as Ruins, for but a few fugitive weeks of lull before autumnal responsibilities come again looming. The sun burns, the gravid short Forests beckon. The Soil, when enough is reveal'd, becomes another sand Arena. Anybody may be in there, from clandestine lovers to smugglers of weapons, some hawking contraband,—buckles, lockets, tea, laces from France,—some marking off "Lots" for use in some future piece of Land-Jobbery. Insect pests are almost intimidated into leaving, but sooner or later come back. (470)

Mason and Dixon's project to accurately map the boundaries of three states ushers in a new age of rational science that claims to explain all of nature. The roots of this Enlightenment confidence lie in the belief that nature is ultimately explainable through physical laws and mathematical principles. Instead of forces attributable to gods or spirits, Enlightenment philosophers believed that all effects could be traced to logical, demonstrable, material causes. The world was but a machine, and the

scientific method would slowly but inexorably reveal all the working parts. But as the notorious Wedge demonstrates, the earth will invariably confound all attempts at enclosure.

Confounded by the paradoxical, political nature of the Wedge, Mason and Dixon will soon encounter numerous phenomena that cannot be explained by their new-found tools of Enlightenment. Pynchon's description of Chesapeake Bay presents a world that resists the complete understanding that science and reason promise. "[T]here exists no 'Maryland' beyond an Abstraction," one character notes, "a Frame of right lines drawn to enclose and square off the great Bay in its unimagin'd Fecundity, its shoreline tending to Infinite length, ultimately unmappable" (354). The infinite shoreline is an allusion forward to the fractal sciences of chaos that also confound the tools of the Enlightenment. The two complex geographic forms, the Wedge and the coastline, are only precursors to a rash of inexplicable phenomena across the continent, industrial lead-mines run by Indians, telluric surges that confound compasses, serpent mounds pre-dating even the native histories, and tribal warriors with cartographic skills exceeding even Mason and Dixon's own.[30] The two struggle to reduce the fantastic encounters in the new world to factors suitable for their equations, but Pynchon suggests that they need look to alternate explanations. Understanding nature may require a collaborative effort that respects the Age of Miracles' fascination yet one that replaces superstition and myth with a postmodern, post-Enlightenment science that acknowledges the infinite complexity of nature.

Mason and Dixon (and *Mason & Dixon*) find themselves at the borderline of differing epistemologies. The ways of understanding reality are shifting, and the Enlightenment claims of exactitude are incrementally disassembling all structures that cannot be expressly reduced to calculation. Mason and Dixon, champions of the Enlightenment, are in opposition to Captain Zhang, the practitioner of *Feng-Shui*, the Eastern philosphy that sees animate forces coursing through the landscape. In their relation do we see the Enlightenment mechanistic explanation crash

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[30] These physical irregularities are magnified by the irrational social structure of early American life. Slavery, Indian-killing, treason and all other sorts of unreasonable social relations suggest that this country will not be (nor has become) the great Enlightenment project we claim it to be.

headlong with an epistemology that refuses the reduction of nature to formulas. Zhang clings to an ancient understanding of reality, an understanding of the land as inhabited by a spirit. His landscape is enchanted and alive, suffering under the scar of property lines cut at right angles across the natural lines of force and power. Remarkably, Pynchon crafts this border dispute from a similar border dispute three centuries later; the other side of the property staked out by the Enlightenment. At the dawn of the twenty-first century, the Enlightenment grip on the understanding of reality appears to be loosening. At the cutting edge of science and mathematics, the formulas so reliable refuse to produce the predicted outputs. In the fractal coastlines of chaos theory and the neo-vitalism of emergent evolution we see the progeny of the Delaware Wedge and Zhang's *Feng-Shui.* The exhaustive mapping of the finite world has paradoxically uncovered the infinite. On either temporal side of the Enlightenment, Pynchon gives us the twin epistemologies that invest more than Euclidian mathematics in the landscape, where the inert calculations of distance give way to animism and spirit.

The minor plot conflict between Zhang and Padre Zarpazo, the Spanish Jesuit known as the Wolf of Jesus, captures in two characters the larger themes of *Mason & Dixon.* In these two characters Pynchon compresses the battle between a view of the physical world as alive and infinitely complex, and a view of the world reduced to manipulation according to abstract laws. "*We* happen to be the principal Personæ here, not you two!" (545) Zhang informs Mason and Dixon, and to a certain extent, he is correct. The line, as he describes it, is merely a "Stage-Setting, dark and fearful as the Battlements of Elsinore"(545), the backdrop to a conflict on a more global scale. These opposing philosophies repeatedly collide as the line creeps further west.

Zhang is Pynchon's spokesman reminding us that there are numerous epistemic relations with the world. His use of *Feng-Shui* is not simply another of Pynchon's inspired anachronisms. The philosophy is intimately concerned with the relationship between humans and the physical world, the self-same issues that give rise to border disputes and property lines as well as environmentalism. *Feng-Shui,* however, does not rely on abstract mathematics and instrumental reason in an effort to force the physical earth to submit to human reason. Rather, the philosophy

refuses this hierarchy and instead attempts to integrate humans and the physical world cooperatively, positioning humans and their artifacts amidst the flow of natural boundaries and energies. The Chinese geomancer exists in a spiritually animated world where the earth is viewed as a living being:

> Earth, withal, is a Body, like our own, with its network of Points, dispos'd along its meridian,—much as our medicine in China has identified, upon the Human body, a like set of Lines invisible, upon which beadwise, are strung Points, where the Flow of *Chee* may be beneficially strengthen'd by insertions of Gold Needles. So, this arrangement of Oölite Shafts, at least partly inserted into the Earth,— you see, it is suggestive. (602)

"Suggestive" is what lies behind the philosophy of *Feng-Shui.* Zhang relates to the environment through *irrational* means, ones that rely on intuition, analogy and indirect correspondences rather than the factual, calculable realm of hard science. His practice of *Feng-Shui* calls for a deeper sense of belonging to the earth, a relationship between human and environment that is more spiritual and cooperative than the domination of western science. Zhang seeks out the spirit of the earth, the dragon represented by the currents of energy coursing through the landscape. Such an approach to nature even parallels the post-Enlightenment concepts of ecosystems where ecological restoration abandons notions of reducing the complexity of the system, and instead relies on the interworkings of the ecosystem to renew itself. In more progressive nature management, "management" is increasingly excised from the process. To practice *Feng-Shui* is to understand the flows of energy, and contemporary understanding of ecosystems may be best displayed by a few watery examples. In light of a new understanding about the role of rivers and streams in ecosystems, dams are blown apart to allow the rivers to run again. Floodwalls are knocked down allowing the inevitable high water to expand instead of being channelled downstream with increasing force. The Army Corps of Engineers has recently begun to wipe clean the myriad channels and ditches that drained and nearly destroyed the Everglades, allowing that massive body of water to return to a state where its flow is not impeded by man-made obstacles. The new understanding of water reflects an almost *Feng-Shui*

like understanding of how the landscape operates, with water a suitable representative of the flow of *Chee.* Zhang's understanding of a healthy relationship with nature demands that dams, floodwalls and barriers of all type be brought down so that the earth's energy may flow unhindered.

Through the practice of *Feng-Shui,* Zhang orients his life to the patterns and flows of the earth. In Mason and Dixon's line—and in the Enlightenment—he sees *Feng-Shui*'s opposite, a scar that cuts across the dragon, forcing the earth to obey a rigid, man-made structure:

> Ev'rywhere else on earth, Boundaries follow Nature,— coast-lines, ridge-tops, river-banks,— so honoring the Dragon or *Shan* within, from which Land-Scape ever takes its form. To mark a right Line upon the Earth is to inflict upon the Dragon's very Flesh, a sword-slash, a long, perfect scar, impossible for any who live out here the year 'round to see as other than hateful Assault. How can it pass unanswer'd? (542)

Such practices are anathema to *Feng-Shui* which sees life and the environment in patterns, cyclical as opposed to the stark linearity of the line. Zhang's earth is systemic and chaotic, multi-linear and self-similar. He respects the immense complexity of the ecosystem, and rather than seek to confine or control it, he immerses himself in its flows, its chaotic swirlings and refractions. In effect, Zhang's practice of *Feng-Shui* is remarkably similar to contemporary systems theory and chaos theory. The system is too large and too complex to control: such attempts only result in failure, with the more massive efforts at control leading to the more spectacular failure. Again, the example of water may again make this clear. The massive flood control systems of the Mississippi were unable to control the river when the inevitable heavy rains came. The result was a series of tragic floods in the mid-nineties that were arguably magnified by flood control systems that allowed tremendous amounts of water and force to build downstream until their cresting or breaking of floodwalls produce tremendous damage: damage that would have been minimized or even non-existent if regional and local planners along with the Corps of Engineers had respected the river's power and allowed it to expand instead of futilely attempting to contain it. Zhang suggests that such may be the case with the Visto, a line like a floodwall that will build and concentrate energy

until its inevitable break leads to massive destruction. In *Mason & Dixon*, Zhang possesses a precise understanding of how these systems work. He argues that working in cooperation with earthly forces instead of against them can produce spectacular results. The philosophy relies upon an understanding of the earth as a highly complex system where very small changes can cause spectacular results—the famed "butterfly effect." Zhang's *Feng-Shui* philosophy, though it predates it by some 200 years, builds upon the same precepts as the sciences of chaos, complexity and fractal mathematics.

Above all, *Feng-Shui* is analogic, coming to an understanding of the world through correspondences in otherwise unlikely pairs. For Zhang, the earth is a mirror of heaven, just as the body mirrors the earth. Interpreting the world in this manner is of crucial importance to *Mason & Dixon*. Analogy provides the means to bypass reason and its blindnesses, allowing for a new map of the landscape to be drawn. Zhang—and Pynchon—draw a new land where cause and effect are not always equal, where one plus one does not always equal two, and where reason's method is not always the best explanatory method. Deep in America, Dixon stumbles upon a rabbinical sect that literally interprets the land: "Forms of the Land, the flow of water, the occurrence of what us'd to be call'd Miracles, all are Text,—to be attended to, manipulated, read, remember'd […] A smaller Pantograph copy down here, of Occurrences in the Higher World" (487). Another character recalls a sermon where:

> each point of Heaven be mapp'd, or projected, upon each point of Hell, and vice versa. And what intercepts the Projection, about mid-way (reckon'd logarithmickally) between? why this very Earth, and our lives here upon it. We only think we occupy a solid, Brick-and-Timer City,— in Reality, we live upon a Map. (482)

For Pynchon, analogy provides the tools for a more appropriate map of the historical territory. The manner in which Pynchon chooses to tell his tale parallels the very ideas that challenge reason and the Enlightenment project. Pynchon's historical tale, told through an unreliable narrator, suggests that history may not be best understood through a one-to-one relationship between facts and truth.

Rather, like Zhang the geomancer, the understanding of history may rely more upon a mixture of the miraculous and the reasonable, the linear and the cyclical, and, in short, through analogy.

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Pynchon presents the novel as an historical fireside tale told by the Reverend Wicks Cherrycoke to his extended family in Philadelphia. The expansive story, some 700 plus pages, chronicles a mostly first-hand account of Mason and Dixon's survey of the Pennsylvania-Maryland border. The Reverend Cherrycoke first meets the pair when he finds himself on the same ship as the two voyage to the southern hemisphere to observe the Transit of Venus. He remains with them, at least in spirit, until they complete their survey and indeed, their lives. Though he may not always be in the presence of Mason and Dixon, Cherrycoke has no difficulty streaming his Scheherazade tale over the course of three continents, two islands and countless cities, towns and settlements, recounting (if not creating) an epic story to amuse and instruct his young nieces and nephews. Cherrycoke's well-being depends upon it. As long as his story entertains, he resides comfortably as the guest of his brother-in-law, but should he fail to keep the young ones occupied, his tenure will be cut short. Cherrycoke's "Mason & Dixon," then, resides in the same murky genre as Pynchon's *Mason & Dixon*, an historical recounting that makes no attempt to hide its fictionality. Yet for all its claim to fictionhood, Cherrycoke—and I believe Pynchon as well—declare their histories to be as truthful, if not more so, than the standard record.

Mason & Dixon is as much about how we understand history as it is about the people and events of the past. Cherrycoke challenges traditional notions of historical accuracy, suggesting that "Who claims Truth, Truth abandons" (350). The frame tale foregrounds the issue of mediation, perpetually destabilizing any grounding in fact or authenticity as Cherrycoke admits to and is playfully accused of fabricating various parts of the record. Always underlying the events of the novel is the suspicion that Cherrycoke is departing from the facts. Though Cherrycoke quotes from Mason's journal and letters, and occasionally Cherrycoke's facts are supported by his brother-

in-law, his particular historical account is never fully authenticated. Coupled with this wavering of fact and fiction, however, is Pynchon's choice to simulate an authentic eighteenth-century text through his use of archaic language, syntax and convention. If, at one level, we suspect that Cherrycoke's tale may be as much fiction as documentary, Pynchon's *Mason & Dixon* seems to suggest that the tale of Cherrycoke is a bona fide artifact of the late 1700s. Of course we know better, and Pynchon knows we know. In manipulating these various signatures of authenticity, undermining them at one stage, reinforcing them at another, Pynchon never lets us forget that "authenticity" is a slippery term, and that the true account of the past can never be verified. Through the various levels of representation—"official" documents, Cherrycoke's personal account, and Pynchon's deceptive archaism—the past can be no more than another text, one to be read more in the fashion of *Feng-Shui* than the Visto. Rather than seek a linear, direct line of account, we should read the text as a pattern, one where truth may not lay in exactitude but in suggestion, analogy, allusion and repetition.

As an amateur historian, Cherrycoke bridges the gap between eighteenth-century and late twentieth-century concepts of history. He declares facts to be but game-pieces in a rhetorical contest. "Facts are but the Play-things of lawyers" he claims, flipped and tossed from one past to another, but never indicative of the truth. In a quote from the apocryphal *Christ and History* (penned by the Reverend himself), that serves as an epigraph for chapter 35, Cherrycoke dismisses the myth of a single line of history, refusing it chronology or remembrance: "History can as little pretend to the Veracity of the one, as claim the Power of the other" (349). Rather than a chain of single links creating a one true line back to the past, Cherrycoke's history resembles Zhang's nature: "a great disorderly Tangle of Lines, long and short, weak and strong, vanishing into the Mnemonick Deep, with only their Destination in common" (349). In putting the story of Mason and Dixon in the hands of an admitted fabricator, Pynchon reminds us that history is a fiction and we only erect false boundaries when we separate fact and fiction. The past is malleable, its existence dependent upon those, like Cherrycoke and Pynchon, who choose to shape it.

With this in mind, I want to examine another facet of the mediation of the past, specifically how Pynchon uses the artificiality of history as commentary on the present. Through the use of anachronisms, Pynchon conflates contemporary America with the America of the eighteenth century. Initially, we see the humor as postmodern sentiments are placed in the mouths of decidedly antiquated characters, and contemporary artifacts are mirrored in such characters as a sailor who remarkably resembles Popeye. These anachronisms are the flotsam of Pynchon's overloaded knowledge of pop culture, but the repeated conjunctions of past and present reinforce Pynchon's notion that this history is a creation that readily admits its twentieth-century predilections. Influences are peddled both ways.

Partially as a result of this conflation of two worlds, we read *Mason & Dixon* as allegorical. Anachronism gains it power from eliminating the chronological gap, and allegory, similarly, eliminates a gap, allowing us to see the events of two hundred years ago as mirroring the events of today. More conservative critics attack Pynchon for such a strategy. Despite a prevalent use of allegory among postmodern authors, to call a text allegorical still retains a pejorative aura for certain critics. James Wood, writing in *The New Republic*, leads off his review of *Mason & Dixon* with a strike against allegory, "It is a problem for allegory that, while going about its allegorical business, it draws attention to itself." For Wood, Pynchon's comedy and, by extension, his ideas fail because they do not arise from character but from culture: "this is rarely comedy about people; it is comedy between cultures, the old and the new." Wood's assumption, of course, is that the comedy of culture is somehow less than the comedy of character. His criticism of Pynchon arises from a standpoint that privileges gaining insight into a work through examining the complex psychological development of character. Yet allegory challenges these very assumptions, and in Wood's analysis, this is why Pynchon's writing fails. Allegory, in ways similar to Zhang's analogic understanding of the landscape, questions these systems of knowledge that categorize the world, suggesting that there are other avenues to understanding than cause and effect. The problem is not that allegory calls attention to itself. It has to. Rather, this self-referential aspect of allegory represents a different epistemological approach, one more in line with the tenets of Zhang's *Feng-Shui.* The way

Pynchon recreates the eighteenth century as a duet with the contemporary opens up space for a uniquely eighteenth-century postmodernism, where the truth does not necessarily have to conform to reason's boundaries.

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In a novel about surveying, it comes as no surprise that Pynchon may offer us a map to his novel. We first encounter Mason and Dixon in their preparations to observe the Transit of Venus in 1761. This rare celestial event, the planet Venus passing before the sun, will allow for the accurate calculation of the solar parallax, in turn determining the length between the earth and the sun. To accomplish this, numerous teams are sent to disparate parts of the globe. The scattered vantage points result in slightly different views of Venus crossing the sun. Through the "magick of Celestial Trigonometry," as Cherrycoke notes, astronomers determined the size of the earth in seconds of arc as seen by an observer on the sun. The critical factor of the operation concerns the position of the observations. They must be significantly far apart for the calculations to have any accuracy.

Determining the solar parallax holds great importance for *Mason & Dixon.* It frames the American portion of the novel, acting almost as an overture, introducing themes that will be expanded upon in that section. But the process of calculating the solar parallax itself, specifically of viewing the same incident from widely separate vantage points, suggests a manner in which we can read *Mason & Dixon.* Allegory works as a parallax. As the far-flung observers of Venus noted a displacement in the apparent path of the planet across the sun, so do we note, through the use of allegory, a displacement in the course of historical events of the eighteenth century. And as the astronomers of the eighteenth century were able to calculate the distance from the earth to the sun by gauging this apparent shift, Pynchon's allegorical tale enables us to gauge the distance between past and present. The temporal displacement of historical allegory is metaphorically represented by the astronomical unit. As Mason and Dixon's telescope acted as a "Vector of Desire" (96),

transporting the astronomer to the surface of the sun, so too does *Mason & Dixon* provide us a vector of desire, transporting us across the gulf between past and present in the attempt to find that point outside our culture, so that we can gauge culture's size, its arc. With an equation far more complex than the intersecting orbits of three celestial spheres, Pynchon obliquely defines the precise measure between the nascent founding of America and its contemporary culmination, approaching his themes from oblique angles. The result is an accurate, if unorthodox, rendering of an American culture both past and present. Our sightlines converge on Cherrycoke's tale, and in noting the puns and anachronisms, allegorical and other illogical connections, we gauge the displacement in the apparent story. As Cherrycoke's tale passes across the years of the eighteenth century, we can draw conclusions from the shift in perspective between the past and the present.

In describing history as a construction, Pynchon leads us to discover another important revision of reality. In *Mason & Dixon*, the systems that heretofore articulated reality are in flux, with one explanatory schema replacing another. The title given to one of Cherrycoke's works, *Christ and History*, is apt. History, in Cherrycoke's frame, no longer conforms to a single authoritative description. There is no true past that holds within it an all-powerful explanation of the events leading up to the present. The conjoining of Christ and History in Cherrycoke's title reminds us that Christianity often assumes the role of that singular explanatory schema, providing a teleological narrative of the past. Christianity's teleological philosophy and its anticipation of the second coming of Christ provide meaning for the past, for everyday life, and for future decisions. Adopting Cherrycoke's philosophy of history, that there is no one chain linking present back to past, severely undermines Christianity's import, ridding it of its ultimate explanatory power.

Besides undermining the authority of Christianity's explanatory power, Cherrycoke's philosophy also undermines the explanatory power of the newest epistemic paradigm, reason. The dogmatic obedience to the powerful Christian narrative was the strongest Western historical epistemology before the Age of Reason. Reason, in the face of the Age of Miracles, now claimed truth for its own. The transfer of epistemic explanation from a god to a Newton, Bradley or Royal Society carried with it a similarly strong devotion. "We are men of Science," Mason and Dixon

repeatedly claim as a koan of faith, typically when the world seems at its most unreasonable. Pynchon deliberately positions the scientists as acolytes in the faith so as to reinforce not only the pervasiveness of reason throughout this new age, but also its unquestionable authority in defining the physical world—and by extension, history. We are led by Pynchon to the conclusion that as history is amenable to any construction laid over it, so too is nature a social construction, not so much defined by those who study it as *created* by the epistemological systems of the times. Mason and Dixon are the vanguards creating a new discourse through which nature—as modernity knows it—will come to exist. They are in the service of a totalizing system that purports to record accurately and completely all of nature, but in effect creates a narrow knowledge system that is the *only* way to know nature.

The Jesuits, especially Padre Zarpazo, the Wolf of Jesus, shrewdly recognize the power of joining these two explanatory systems together. The conjunction of faiths in reason and God completely eliminates any resistance or alternative to the new epistemology. There is one world, created by one God, defined by one method. In harnessing the power of straight lines and mathematical rigidity to the hard discipline of their faith, the Jesuits believe they can control history as well as the world. Captain Zhang, the practitioner of *Feng-Shui*, argues that when the link between reason and authority dominates the notion of progress, the results are tragic:

> To rule forever […] it is necessary only to create, among the people one would rule, what we call… Bad History. Nothing will produce Bad History more directly nor brutally, than drawing a Line, in particular a Right Line, the very Shape of Contempt, through the midst of a People,— to create thus a Distinction betwixt 'em,— 'tis the first stroke.— All else will follow as if predestin'd, unto War and Devastation. (615)

The Mason-Dixon line lies in direct conflict with the systemic cycles of the natural world, disregarding the natural means of delineating borders. This geographic conflict, Zhang predicts, will be reflected in the social arrangements. In another version of "As above, so below," the line marking the division of North and South beneath the feet of men will lead to the most severe separation of the as yet unfounded nation.

Zhang becomes the conscience of the surveying party in America, never allowing the men of science to forget that their's is an act of aggression across the face of the earth. Their firm belief in reason commits them to acts of domination and manipulation of the physical world in order to make it conform to their ontological definitions. Bad history is nothing less than the result of an arrogant disregard of any realm that cannot be reduced to some form of science or mathematics.

In the allegorical structure of *Mason & Dixon*, the sweeping, straight border line contains a myriad of symbolic nuances. Primarily, the line metonymically symbolizes the encroaching totalizing system of instrumental reason. The desire to cut such a line through miles of town, country and wilderness epitomizes the technological progress in map making, organization, astronomy and bureaucracy. Yet the high point of technique also carries with it the arrogance that Zhang fears. In the wild and unsettled new continent, the cutting of the Visto, and the subsequent extension of law further west, slowly erodes the possibility and variety of a land uncompromised by the weight of European history. If Zhang conceives of the world as a spiritual entity that actively resists the imprint of reason upon its landscape, a similar resistance to a tyranny of logic can be seen in the conception of America as the unconscious of the reasoned world. With its sprawling wilderness, geographic isolation and population of crackpots, visionaries and demons/Indians, the new world is like the unmapped realms of the unconscious mind, a place where connections, actions and narratives are not governed by reason. All seems possible.

Yet there is a dark side to that possibility, especially when it is tapped by the will to dominate that Pynchon associates with the encroachment of the Visto. "Does Britannia, when she sleeps, dream? Is America her dream?" Cherrycoke wonders just before he recounts Mason's visit to Lancaster Town. At this town, the site where twenty-six defenseless Indians were massacred by colonists the previous year, Cherrycoke alludes to the unmapped psyche that America represents. The description is yet another dichotomy laid over events. Britain represents the force of reason and logic, and America the chaotic, illogical and fractal possibilities outside of reason. Here, at the location of the worst of American depravities, Pynchon first has Cherrycoke rhapsodize about the unrealized potential of the American wilderness:

> All that cannot pass in the metropolitan Wakefullness is allow'd Expression away in the restless Slumber of these Provinces, and on West-ward, wherever 'tis not yet mapp'd, nor written down, nor ever, by the majority of Mankind, seen,— serving as a very Rubbish-Tip for subjunctive Hopes, for all that *may yet be true*,— Earthly Paradise, Fountain of Youth, Realms of Prester John, Christ's Kingdom, ever behind the sunset, safe… (345)

Just over the horizon, America always presents the potential dream of the perfect society. It is the endless possibility, the romantic frontier mentality that stands at the core of the American psyche, both then and now, and it is intricately connected with the idea of an untapped, uninhabited (at least by white Europeans) wilderness. Like Tantalus in his pool, this romantic dream, however, is doomed to perpetual frustration. Each attempt at settling paradise inevitably corrupts it:

> safe till the next Territory to the West be seen and recorded, measur'd and tied in, back into the Net-Work of Points already known, that slowly triangulates its Way into the Continent, changing all from subjunctive to declarative, reducing Possibilities to Simplicities that serve the ends of Governments,— winning away from the realm of the Sacred, its Borderlands one by one, and assuming them unto the bare mortal World that is our home, and our Despair. (345)

This brief meditation by Cherrycoke equates the ever-creeping survey with the widening ferocity along the borderlines between the Europeans and Indians. Pynchon begins this passage by playing upon a standard trope that offers America as the land of endless possibility to Europe's closed and encrusted history, but that possibility is in direct conflict with a way of life practiced by the Indians and articulated by Zhang. For their paradise to be complete, the advancing settlers must invariably introduce a civilization based upon domination and subjugation of the land, Machiavellian greed, and unchecked genocide. Whatever mythic dream of innocent paradise is contained in the uncharted America, the encroachment of European settlers and the line bring with them a rude awakening for those hoping for paradise. Penetration into the frontier brings both the horrors of Western civilization and the brutality of wilderness. The concept of paradise, however, refuses to

die, and this irreconcilable struggle between myth and reality perpetuates the Western desire for control over the land being settled and perpetuates the desire to move farther west, in search of the new ever-receding paradise beyond the last house on the prairie. Always out of reach, paradise is sentenced to be harnessed by the eternal mapping and containment that already confines Europe and the eastern cities of America. As the line progresses, what could be is inevitably reduced to what has always been.[31]

Later in the novel, as Mason and Dixon top the Allegheny Divide and are truly in the west, Pynchon hints at the nightmare that the line foreordains. Around the campfire one night, discussion leads to one character's future plans for settlement of the west. Colonel Bouquet's plan for America may be the earliest harbinger of the modern suburban sprawl: "His Scheme is to tessellate across the Plains a system of identical units, each containing five Squares in the shape of a Greek Cross, with each central square controlling the four radiating from it" (617). Though the rigidity of the plan seems ludicrous, it eerily reflects the motivation behind the line and prefigures the contemporary grid of state highways that crosses the midwestern plains. Zhang labels such a scheme a prison, "Settlers moving West into instant Control" (617), and though a member of the party suggests all these type of schemes fail, Zhang notes that this only brings closer the day when one will succeed. The inevitable result of the Visto is a West imprisoned under an inescapable series of lines.

The further west the line progresses, Cherrycoke and Zhang's distrust of the survey gradually infects Mason and Dixon. "Whom are we working for, Mason?" (347) Dixon asks. On the surface, the question reflects Dixon's disgust at the Americans' behavior, horror that he and Mason are employed by such people. Underneath Dixon's question, however, is Pynchon's concern with an encroaching authority that will encompass more than a mere boundary dispute. Dixon initially links the violence of the Americans to something unleashed by the wilderness of

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[31] Pynchon revisits this same metaphor when Mason and Dixon reach the Great Warrior Path just before their furthest point west: "as the latent Blades of Warriors press more closely upon the Membrane that divides their Subjunctive World from our number'd and dreamless Indicative[…] Ah Christ,-- besides West, where else are they heading, those few with the Clarity to remain?" (677)

America: "something ancient, that waited for them, and infected their Souls when they came" (347). Yet it is this same will to dominate both the wilderness and the Indians that directs the line westward. Dixon's disgust at the Americans, while appropriate, hints at an even deeper abhorrence at the systems that propel the line, leaving a disaster like Lancaster and its twenty-six dead Indians in its wake.

This civilization that the line represents is especially worrisome to the Indians, who conceive of the line as a living thing. As the indigenous population of America, they are subject to the same conquering fixation that needs to categorize and map the physical land. As renegade humans, the Indians exist outside of the grid, apart from civilization and as such dangerously uncategorized. Often nomadic, their lives are not *coordinated* by strict lines that define Philadelphia or Boston, but instead governed by a symbiotic relation with natural features. Their's is a philosophy not dissimilar to Zhang's in that their lives are governed by the infinite fecundity of their ecology. When confronted with the Visto, they endow it with a potency far beyond what the Euro-Americans give it. Dixon senses that the Indians see a "great invisible Thing that comes crawling Straight on over their Lands, devouring all in its Path" (678). He describes the only interpretation conceivable by the Indians:

> This is how far into your land we may strike, this is what we claim to westward. As you see what we may do to Trees, and how little we care— imagine how little we care for Indians, and what we are prepar'd to do to you. That Influence you have felt, along our Line, that Current strong as a River's— we command it… We might make thro' your Nations an Avenue of Ruin, terrible as the Path of a Whirl-Wind. (679)

In seeing the line through the eyes of the Indians, Mason and Dixon conceive of it as something more than the sum of its parts. It seems to have a motive and a will. So powerful are the things the line symbolizes—reason, progress, expansion and domination—that the cold, abstract mathematics that are its genesis create a living, monstrous entity. The abstractions of mathematics become the tools of an amoral force out to imprison all of America under its control.

Lest Pynchon seem too dogmatic in this characterization, he does not universally condemn the fruits of progress. The Visto occasionally assumes a benevolent aspect in place of Zhang's evil characterization. At Conococheague, the site of another Indian massacre, the line seems to offer the palliative to the violence associated with the Paxton Boys and the mob mentality responsible for the Indian massacres:

> [Y]et what in Lancaster was but an hour's Thrill, out here in this sternly exact Desert might become an uncontrollable descent into whatever the Visto was suppos'd to deny— the covetousness of all that liv'd…that continued to press in at either side, wishing simply to breach the long rectified Absence wherever it might,— to insist upon itself. (499)

In this case, the cool reason of unprejudiced science represents a counter to the unabated passions of the American wilderness. In a certain sense, reason may seem to act as a brake on the immense greed and lust for domination given reign in the West. But notice how Pynchon has Cherrycoke characterize this particular assault. As a "descent into whatever the Visto was *suppos'd to deny*," Cherrycoke implicitly damns the Visto for denying what is in fact always present: humans cannot be reduced solely to reasoning beings, even in the best of circumstances. The lesson of Conococheague and Lancaster is that reason alone cannot control us. The larger lesson is that though the Visto may offer reason as a respite from savagery, the philosophy behind such scientific advancement negates the benefits of taming those instincts. In *Mason & Dixon*, instrumental reason and the scientific method invariably are used to mask the same instincts unconcealed in the vicious attacks on defenseless Native Americans by the Paxton Boys.[32] The motives of greed and domination synergistically combine with an often arrogant science to subsume all of the American landscape under a grid of control, one governed by the same totalizing system that has been exported to India, South Africa and other parts of the globe by the colonizing empires of Europe.

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[32] It might be noted here that the account of the raid in Lancaster is accurate (as are presumably most historical facts in Pynchon's work), but one may also be reminded that Native Americans also were instigators of vicious attacks against unarmed and defenseless settlers. The settlement of the West saw the worst in both sides.

The predominant characteristic of such a landscape is the elevation of a mechanistic explanation of all phenomena. Analogy, typology, spirituality or any other route to understanding are all excluded, labeled as false and dangerous misdirections away from the one true reason. Those phenomena that cannot be rationally explained are not judged by a different standard. Rather they simply do not exist and are consigned to the trash heap of madness and delusion. Yet the eighteenth century has not yet completely submitted to the manacles of reason. Mason and Dixon encounter a talking dog and a sentient, amputated ear among other unreasonable creations. Mason refuses to explain away his dead wife's frequent appearances, and Dixon encounters a ghostly carriage in the sky. The demarcation between rational and irrational is still open at this border between ages. And like the eighteenth-century borderline, the twenty-first century borderline no longer securely separates fact from fiction. As the Human Genome Project seems to culminate the scientific pursuit of reducing all aspects of life to that of a coding problem, the highest levels of physics and mathematics reveal that the codes are incapable of behaving logically. In a more absurdist sense, apes and chimpanzees now speak to us in sign language, and alien abductions and crop circles seem to be on the rise. The border is once again in a fluid state.

Back in the eighteenth century, reason is always encroaching upon the realm of the unexplainable. Like the westward movement of the line, reason continually demystifies that which was once unexplainable. It appears to slowly colonize all of human experience the way the line will apparently creep across the entire continent. At points, however, the new found rage for reason sometimes exceeds its control. Pynchon shows an eighteenth-century culture not ready to relinquish its worship of a higher authority simply because its creations have been explained away. This insistence on a higher power doesn't manifest itself in a blind devotion to the supernatural, however. Instead, the worshipful masses transfer their allegiance to reason itself, the vanquisher of the previous god. For some, like the uneducated axmen of the surveying party, reason becomes a new faith. Without understanding, they worship the mechanical creations like Vaucanson's duck or the electrical shamanism of Benjamin Franklin. For the more educated, like Mason and Dixon, the members of the Royal Society, and the Jesuits, reason occupies the place of faith, and so snug is the

fit that all the related spiritual structures of a faith in God seem now to point to reason. An explanatory system with this potent support structure is ripe for excess.

In the episode of The Octuple Gloucester, the giant wheel of cheese has its genesis in a vicar "worshipping at the wrong Altar" (167). This sentinel of God mistakes the excessive extension of reason as a testament to spirituality. In a perverse way, The Octuple Gloucester is an act of faith, a belief that even a ludicrous expansion is inherently good if it is accomplished under a golden sheen of precise calculations. The "Quincentenariduodecimal Gloucester" (its "true" name an exercise in prefixial excess) promises to reflect the beauty of human intellect, producing a creation worthy of a vicar's devotion. The vicar's transference of faith in God to faith in reason results in comedic exaggeration and near catastrophe for Mason when the giant cheese nearly rolls him flat; an early warning of the dangers of reducing the world to mathematical dimensions.[33]

A similar faith in the unlimited ability of reason lies behind one of Pynchon's most exotic creations. Jacques de Vaucanson's mechanical duck represents the epitome of the Age of Reason's firm commitment to explaining all of nature. In Pynchon's description of the duck's history, we can see a metaphor for how the Age of Reason transforms a description of reality into reality itself. The Age of Reason is a rebellion against a description of reality that claims subjectivity, possibility and divine intervention. Enlightenment thinkers refuse such a description. They resort to one of abstraction, creating what Neil Evernden, in *The Social Creation of Nature*, describes as a system that eliminates the irrelevant elements. What Pynchon creates with Vaucanson's duck is the physical embodiment of the Enlightenment idea of nature. In the Age of Reason, the duck—be it Vaucanson's or any average fowl—can be reduced to its mechanical components. This new descriptive model rejects the miraculous as an explanation of any phenomenon and purports to explain all of reality in its own terms. But not only do the Enlightenment thinkers claim this model as a better description of nature, they declare it to be literally true. And Vaucanson's duck does

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[33] Mason, recounting this memory to Dixon, may invest as much concern about historical accuracy as Cherrycoke. We may discern Mason's own worries about such excesses in the name of science in this tale of meeting Rebecca—his savior from the Enlightenment.

indeed become, for all purposes, a real duck. Reason is not an alternate explanation, it is *the* explanation. The model replaces reality.

However, this is not a pleasant Pinocchio story. Though Vaucanson's duck may achieve reality, he does so under certain conditions. In his early career, Vaucanson's duck was always to be *Vaucanson's* duck. Creator and owner, Vaucanson always insisted upon showing the intricate innards of the duck: "He would never allow anyone the least suspicion that I might after all be real. Inside me lay Truth Mechanickal,— outside was but clever impersonation. I was that much his Creature, that he own'd the right to deny my soul" (668). In this system, nature is *a priori* owned by the describers. Nature can only be encountered in this hierarchy that puts its qualities at the mercy of the descriptive model, and that model finds truth only in the mechanical.

Yet Vaucanson's duck does escape. He is a rebel from the Age of Reason, refusing to be owned by his creator. Like the Learned English Dog, the duck is owned by no one. An ingenious creation of meticulous clockworks, he achieves sentience when Vaucanson provides the means for sexual reproduction: "Who knows? that final superaddition of erotick Machinery may have somehow nudg'd the Duck across some Threshold of self-Intricacy, setting off this Explosion of Change, from Inertia toward *Independence, and Power*" (373, Pynchon's emphasis). What gives the duck independence and power is that which cannot be reduced to a mechanical operation: love. The illusion that this descriptive model is indeed reality collapses in the face of desire, and the duck reveals that the model does not and cannot account for all nature and, therefore, is not reality.

Padre Zarpazo, however, fervently believes that the model is reality. Devoted to straight lines and right angles, Zarpazo is described by Zhang as "Lord of the Zero," a man "sworn to Zero Degrees, Zero Minutes, Zero Seconds, or perfect North" (544). Such absolutes do not allow for a realm between points, whether it be a magnetic north that is too responsive to the forces of the earth or a duck that is neither machine nor animal. "The Impurity of this Earth keeps him driven in a holy Rage" (544), Zhang says of Zarpazo. The priest exhibits exactly the qualities of an introverted viewpoint of reality. Evernden uses Carl Jung's basic divisions of "extroversion" and "introversion" to describe the transformation from an empathetic, subjective world-understanding to one relying

upon abstraction. The extrovert's attention is directed outward to the external world, seeking to animate the encountered world. He encounters a world that is all, in a sense, like him. This is the Age of the Sacred, where Captain Zhang resides, and where the Visto is a threat to the spirit of the earth. An extrovert like Zhang perceives "an underlying similarity between the human and the natural world" (Evernden 41), where subject and object are fundamentally akin. He resides in a world "in which each element is potentially meaningful, and which must be read like a book, not dismantled like a machine" (Evernden 43). The introvert, like Zarpazo, recoils at this world that seems animated with subjectivity. It is a world, Evernden notes, that is "fundamentally incompatible" with the introvert's viewpoint:

> Hence the introvert's effort to defuse the power of the object by withdrawing from it, creating instead an inner realm in which elements abstracted from the world are imprisoned in a conceptual edifice designed to contain them. (46)

Zarpazo reacts in exactly this manner. Eliminating any irrelevant elements, he reduces the world to an abstraction. It is this abstraction—the "objective" reality—that becomes nature. It is a nature separate from those human qualities that would give it life. In the barren emptiness of his cell, Zarpazo calculates a world willingly subject to exacting discipline and order:

> "The Model," the Wolf of Jesus addressing a roomful of students, "is Imprisonment. Walls are to be the Future. Unlike those of the Antichrist Chinese, these will follow right Lines. The World grows restless,— Faith is no longer willingly bestow'd upon Authority, either religious or secular. What Pity. If we may not have Love, we will accept Consent,— if we may not obtain Consent, we will build Walls. As a Wall, projected upon the Earth's Surface, becomes a right Line, so shall we find that we may shape, with arrangements of such Lines, all we may need, be it in a Crofter's hut or a great Mother-City,— Rules of Precedence, Routes of Approach, Lines of Sight, Flows of Power,—" (522)

The transformation to the Age of Reason results in this dead conception of nature. Zarpazo's vision of the future is autocratic and fascist. David Cowart, in his essay "The Luddite Vision: *Mason &*

Dixon," notes that Zarpazo "embraces carceral imagery in language that betrays him (language that Foucault has taught us how to read)" (348). Cowart isn't the only critic to note Zarpazo's will to power. The Jesuit's own student foresees the logical extension of Zarpazo's vision: "[I]s this not to embrace the very Ortholatry of the Roman Empire?— that deprav'd worship of right Lines, intersecting at right Angles, which at last reduc'd to the brute simplicity of the Cross upon Calvary—" (522). It's an incisive point that reveals the merciless reduction of life. Zarpazo's philosophy seemingly has no room for his own savior, doomed to perpetually reenact the crucifixion.

When another student questions exactly which Rome the Jesuits are sworn to, Zarpazo further reveals his fascist leanings: "Perhaps there is no Disjunction […] and men, after all, want Rome, want Her, desire Her, as *both Empire and Church*" (522-3, Pynchon's emphasis). Zarpazo's vocation is an attempt to return the world to a time of one rule, perhaps before Luther's rebellion, before the unchecked differentiation of sects, and before the unruly variation of beliefs that prohibits an iron control. It is a nostalgia for what he calls "that undifferentiated Condition," a desire for that "Holy Silence which the Word broke, and the Multiplexity of matter has ever since kept hidden" (523). In his response to his student's impertinent question, Zarpazo aligns himself with the historical narrative that imposes a system upon the physical world, and how history reflects that system as reality rather than an interpretation or model. Zarpazo's model for the world will not tolerate being just another version of reality, as his religion will not tolerate being one of many paths to God. The model does not interpret reality. It is reality, and for Zarpazo, history should reflect that.

What Zarpazo wants is a return to a zero point of history, a point where alternative courses of action are homogeneous, so uniform that history—the narrative of choices made in the past—ceases to exist. For the Jesuit, the purity of God is compromised by the creation of imperfect man, his Holy Silence corrupted by narrative. "In the beginning was the Word" can only mean the corrupting influence of history, the introduction of the subject. The desire to remove subjectivity can be seen in how Zarpazo and Enlightenment thinkers work to remove nature from history. In

Zarpazo's drastically reduced, but totalizing epistemology, nature is not an historical creation of man, but a pure abstraction seemingly without purpose beyond God's unknowable will. Zarpazo, as well as the Enlightenment project, seeks to silence nature in the same way the Jesuits seek to silence the Protestant Reformation, and for the same reasons: all history is bad history because it is a product of a fallen humanity. The straight line, true north, and the purity of the cross deny the multiplexity of matter that make up history. Zarpazo's worship of the zero is a desire to return to a time before history, to a time more like the purity his system ascribes to nature. Seen in this manner, the Jesuit recruitment of Dixon is understandable. The Visto is ground zero for the evacuation of nature's "voice."

Pynchon foreshadows this desire in his discussion of the Black Hole of Calcutta. The East India Company can be seen as the corporate equivalent of the Wolf of Jesus. A desire for complete domination motivates the company in the same way as Zarpazo's holy rage for Jesuit dominance. The company has its zero point of history as well; June 20, 1756—the night of the Black Hole. From this point, "all the Marvels to follow,— Quebec, Dr. Halley's Comet, the Battle of Quiberon Bay, aye and the Transit of Venus, too,— would elapse as fugitive as Opium dreams, and mattering less" (152). The colonial rebellion against the seemingly impenetrable rule of England opens a break that allows history to begin. Previously, all events were contained under an epistemological umbrella nearly as pure as Zarpazo's dream, the undifferentiated success of exploitation of the colonies by the Company and England. India seems divided by a Mason-Dixon line of its own, bisected by a line of race. The artificial division of black and white creates as much bad history as the border between Pennsylvania and Maryland will. As the most dramatic resistance point to racial reduction, the Black Hole is the reference point for Imperialism's decline. The teleology no longer holds weight, and events escape their previous containment.

We can understand these zero points of history in *Mason & Dixon* as critical fissure points appearing in the unrelenting absolutism of authority.[34] The desire of authority—Zarpazo, the

[34] See page 664 where the team awaits the end of the Visto as a game of darts to zero, the last fatal double.

Company—to return to a time when events were contained in a single history reflects a desire to eliminate any other histories from existing. When history consists of only one chain to the past, that chain excludes any narratives arising from groups not in power. Such totalizing systems invariably will have eruptions that cannot be contained; the Black Hole of Calcutta or the Protestant Reformation being good examples. The Visto represents the most powerful tool in the project to carry a similar dominant system into the realm of nature. The Age of Reason will eliminate nature from history, confining it to the strict, conceptual edifice that places it under control of those who study it. For Pynchon, the discourse of the Enlightenment is a will to dominate articulated by Zarpazo and enacted by the East India Company. These seeds of tragedy are planted in the American landscape as surely as the great institution is created under Enlightenment principles.

In his 1984 essay in the *New York Times Book Review*, "Is it O.K. to be a Luddite?" Pynchon discusses the industrialization of the western world. In a Luddite response to the contemporary world, he sees a probable means to contest the hegemonic whitewash of the techno-political order and its bureaucratic control made possible and profitable by the devotion to reason and scientific progress: "To insist on the miraculous is to deny to the machine at least some of its claims on us, to assert the limited wish that living things, earthly and otherwise, may on occasion become Bad and Big enough to take part in transcendent doings" ("Luddite"). From Pynchon's own words it seems that at least partial motivation for his novel is a response to the Age of Reason. We may see the allegorical Pynchon, gleefully smashing the modern-day equivalents of the stocking-frame. Pynchon sees the factory system, more than any other advancement, as the real and major result of the Industrial Revolution. The system has expanded, he notes, "to include the Manhattan Project, the German long-range rocket program and the death camps, such as Auschwitz" ("Luddite"), a condemnation made much more emphatic in *Gravity's Rainbow. Mason & Dixon* responds to the horrific mechanization at its historical source, at the historical moment when the Age of Reason had not taken over the entire spectrum of human life. We can see the parallels between the Visto-making machine comprised of surveyors, axmen, cooks, prostitutes and many others and the horrific bureaucratic control of Nazi Germany evident in *Gravity's Rainbow.*

In particular, we note the nearly identical fanaticism of the zero between Zarpazo and Captain Blicero of *Gravity's Rainbow.* Pynchon argues that the former inevitably leads to the latter. Perhaps Pynchon has his own zero point of history in *Mason & Dixon*, that point where the undeniable momentum of technological progress was perhaps held in check by the miraculous, the mythical and the irrational; a point where the indicative may still be held in check by the subjunctive.

Yet *Mason & Dixon* is not such a bleak portrayal of the future as the above implies. Despite the defects imbedded at the founding of the country, Pynchon's allegorical America seems always tempered by a potential for greatness unavailable in the brutal repression of South Africa, India or Germany. Near the end of the surveyors' time in America, Dixon laments the prevalence of slavery throughout the world and the hypocritical stance of Western Europe's piety: "No matter where in it we go, shall we find all the World Tyrants and Slaves? America was the one place we should *not* have found them" (693 Pynchon's emphasis). What is the singularity of America that triggers Dixon's optimism? Pynchon suggests that, while the Age of Reason may give birth to the horrific reductions embodied in Zarpazo, the Company, the V-2 rocket, Auschwitz and Dachau, it is also a product of men like Mason and Dixon, who combine their belief in rational thought with a moral fiber that refuses the cold economic logic that reduces humans to commodities.

Though Mason and Dixon are the standard bearers of this emerging techno-political order, they do possess some measure of awareness of the scope of the crime they implicitly endorse. It is this hazy awareness that gives the novel a vaguely conspiratorial air, a necessary spice for any Pynchon work. The first whiff of conspiracy occurs early on in the novel when Mason and Dixon's ship, headed for Bencoolen in Sumatra, is attacked by a French frigate. After barely escaping with their lives, Mason and Dixon realize that the Royal Society must have known the French would attack their ship. The two indignantly rebuke the Royal Society for endangering their lives and suggest another location for observing the Transit of Venus. The letter they receive in return haunts them throughout the remainder of the novel. Chastised for their impudence and threatened, they sense a power that is perhaps greater than the simple mechanizations of hierarchical politics and social jockeying. Mason quotes one line from the letter, "Whenever their

circumstances, now uncertain and eventual, shall happen to be reduced to Certainty" (45), that will echo loudly in America, the land where the endless subjunctive is slowly confined to a certain indicative by Mason and Dixon's line. For a moment, it looks as if the Royal Society will occupy the same space as W.A.S.T.E. in *The Crying of Lot 49* or Them in *Gravity's Rainbow*, becoming a shadowy entity that controls much more than anyone expected. But the Royal Society, while complete with powerful figures and obscure motivations, seems too bumbling, especially when the pathetic and manipulative Maskeleyne becomes Royal Astronomer. Even the mysterious and potent Clive of India, Maskeleyne's brother-in-law, never fulfills his potential, providing the new Royal Astronomer, not with lavish riches and powerful clout, but only clownish "official" robes that make Maskeleyne look like an arrogant fool.

The East India Company also aspires to the role of conspirator. Police Agent Bonk, seeming very much like a refuge from Joseph Conrad's *Heart of Darkness*, hints at the Company having a vast amount of control when he asks Mason to report favorably of him at "the Desk":

> "What Desk is that," ask Mason and Dixon.
>
> "What Desk? In London, off some well-kept Street, in a tidy House, there will be someone at a Desk, to whom you'll tell all you have seen." (102)

Sure enough, Mason does find himself recounting his Cape experiences to an official of the Company. Bonk himself leaves the company when they begin exerting almost total control over his life, escaping to the hills and out of reach. But the Company holds little sway in America. As a conspiracy, its reach is confined to the other side of the world.

And of course there is always the Jesuit conspiracy, a factual detail from the period that Pynchon aptly employs. The perceived threat of a Catholic insurgency out of Scotland carries over into America. The new world, with vast amounts of land that could contain untold number of secret sects, seems the perfect realm for establishing a Jesuit foothold. The far northern Quebec, with its French influence, becomes a conspiratorial playground for Pynchon. Even the Ghastly Fop serial succumbs to paranoid fantasies about the Sino-Jesuit conspiracy.

Dixon is first approached by the Jesuit Father Christopher Maire in the interim between the first Transit of Venus and his voyage to America. Without divulging his true interests, Maire attempts to recruit Dixon as a Jesuit spy: "we only wish Assurance that someone we know is there, materially, upon the Parallel" (230). Dixon refuses, but here begins the first hints of a Jesuit conspiracy that seems to range world-wide, equipped with communication technology that far outstrips the fastest ship or carriage, and somehow connected with the astronomical mapping of lines of longitude and latitude. "Your success with the Transit of Venus was a mark of God," Maire tells Dixon, "that He remains in Sympathy with our Designs" (225). Later, we learn of a number of Jesuit observatories all over the world, and in America of the Jesuit telegraph which, through the delicate timing of balloons and mirrors, can instantly transmit messages across the continent. The conspiracy broadens when Benjamin Franklin offers the Sino-Jesuit conjunction—converted Chinese operate the telegraph—as the great threat to Christendom. The Jesuits seem committed to building a vast infrastructure, dependent upon accurate astronomical data, that will allow them instant knowledge of simultaneous world-wide events.

The workings of these three institutions—the Royal Society, the East India Company, and the Society of Jesus—hover just beyond the intellectual grasp of Mason and Dixon, but not so far beyond that they do not feel in some way manipulated and used for purposes not their own. In this fashion, Pynchon is able to use the liminal identity of Mason and Dixon to reveal a more powerful force than any mere conspiracy, be it religious, political or economic. The three institutions that seem to benefit through covert manipulations of Mason and Dixon are representative of a new epistemology that Mason and Dixon are ushering in. Proficient in bureaucracy, technology and communications, The East India Company, the Royal Society and the Jesuits together comprise the major components of the factory system. These three aspects work in concert to alter human relationships between each other and between humans and the physical world. The new technologies ushered in by the Enlightenment disguise temporal and spatial relations so that in many ways they appear to no longer be obstacles to humans. New communication technologies inspire a Foucauldian social control based on information databases and instantaneous transmission

of knowledge. Finally, bureaucratic control insists on reducing humans to objects, considered only as interchangeable parts of the machine.

Pynchon's trademark use of conspiracy works remarkably well in *Mason & Dixon* as a metaphor for a totalizing system almost beyond comprehension. The Age of Reason seems to be that invisible force Dixon feels is using them. As figures surveying the very border between the Age of Miracles and the Age of Reason, Mason and Dixon are paranoid, suspicious that aspects of their lives are no longer in their control. Paranoia, then, is the emotional response to the reconfiguration of the world by the forces of reason. If reason displaces faith for those devoted to the Enlightenment project, paranoia creeps in for those who question the enterprise. Where human destiny once seemed tied to gods, now it is a product of unseen forces privileged to advanced technology and mechanistic bureaucracy that individuals lack access to or understanding of. Mason and Dixon's conspiratorial paranoia simply reflects the very real transformation from a world where people were intimately connected with their physical surroundings and their personal relationships to one where the physical world is dominated by mathematical abstractions and personal relations are filtered through a faceless, mechanistic bureaucracy. The Enlightenment demanded that the mystery of the Age of Miracles be revoked in favor of a secular humanism. For unexplained events that cannot be attributed to fate or godly manipulations, paranoia becomes the natural response when lives take unforeseen turns.

Zhang offers a tantalizing glimpse of what might bring all the suggestions of conspiracy together. At the point furthest west on the Visto, Mason and Dixon learn that the supposedly uncivilized natives have access to the highest tools of map making. For generations Iroquois Nations have used meridian lines as boundaries to separate them one from another. While it is possible, the Indians tell the party, that they learned such surveying from the Jesuits, they also suggest that powerful strangers may have taught them much earlier than the Jesuits. Zhang identifies these strangers:

> "The same," declares Zhang, "whose Interests we have continu'd to run across Evidence of,… who for the Term of their Absence are represented by Jesuits,

> Encyclopedists, and the Royal Society, who see to these particular Routings of *Sha* upon the Surface of the Planet by way of segments of Great or Lesser Circles." (649)

In common with all these proxies is a heavy reliance on reason, especially an instrumental reason that believes the workings of the planet can be reduced to a series of advanced calculations.

At the point furthest west on the Visto, both the book and the novel are at the very cusp of American history. Although the surveyors always live at the furthest western point of the Visto, they have spent a portion of that time cutting the line through already populated areas. If the novel has a climactic point, it resides in the dangerous geography beyond the summit of the Alleghenies. Here the lay of the land means that water flows west into the unsettled and unknown continent. This natural division stands as the physical foil to the abstract Visto Mason and Dixon have been carving. A real boundary, they cross it with an artificial one, and a voice above the trees informs them, "You are gone too far, from the Post Mark'd West" (635). In the tense and uncertain land furthest from the "civilization" of the eastern coast, the surveyor's knowledge expands beyond their calculations and observations: "They know by now where they are, not only in Miles, Chains, and Feet, but respecting as well the Dragon of the Land" (635). In the far west, Mason and Dixon start to understand Zhang's ideas of *Feng-Shui.*

Pynchon closes the America section of the novel with an imagined journey where Mason and Dixon continue their line nearly to the Rocky Mountains. The chapter begins as a romantic paean to the vast American landscape. Cherrycoke imagines the two pushing further west, where "the landscape turns inside out, with Groves upon the Prairie now the reverse of what Glades in the Forest were" (706). With few mountains and fewer trees in the flat plains, the Visto machine moves rapidly across this surveyor's paradise. Cherrycoke's vision of the inner continent conjures up the sublime beauty of the uncolonized landscape:

> Descending great bluffs, they cross the Mississippi, the prehistoric Mounds above having guided them exactly here […] They subsist upon Roots and Fungi. They watch Lightning strike the Prairie again and again, for days, and fires rage like

> tentacles of a conscious Being, hungry and a-roar. They cower all night before the invisible Thunder of Bison herds, smelling the Animal Dust, keeping ready to make the desperate run for higher ground. (707)

They winter over on the line, cutting loose all ties with Philadelphia and the Atlantic coast. Their movement west is all-encompassing, "The under-lying Condition of their Lives is quickly establish'd as the need to keep, as others a permanent address, a perfect Latitude,— no fix'd place, rather a fix'd Motion,— Westering" (707). They are the embodiment of the American spirit, always moving west, fulfilling their manifest destiny to conquer the continent. Among the suggested encounters Cherrycoke imagines is one whereby Mason and Dixon, through the help of a strange tribal sect, discover the new planet Uranus. Suddenly pure science conflicts with their more political project. The discovery guarantees their fame and fortune. They turn back, freeing the far west from the "Tyranny of residing either North or South of [the line]" (709).

Yet their return is not smooth. The countryfolk are annoyed and angry to see them again, accusing them and their line of causing their unhappiness: "How dare you come back now, among these Consequences you have loos'd like Vermin?" (710). Villages are divided, wedded couples fall apart, and no one has the time or leisure to appreciate their remarkable planetary discovery. Finally they reach the coast, with praises and celebrations from the scientific world. When asked what they shall do next, Mason and Dixon's fantastical reply is the logical consequence of the philosophy underpining the survey. They will inscribe a floating Visto upon the Atlantic ocean:

> In time, most Ships preferring to sail within sight of these Beacons, the Line shall have widen'd to a Sea-Road of a thousand Leagues, as up and down its Longitude blossom Wharves, Chandleries, Inns, Tobacco-shops, Greengrocers' Stalls, Printers of News, Dens of Vice, Chapels for Repentance, Shops full of Souvenirs and Sweets,— all a Sailor could wish,— indeed, many such will decide to settle here, "Along the Beacons," for good, as a way of coming to rest whilst remaining out at Sea. A good, clean, salt-scour'd old age. Too soon, word will reach the Land-Speculation Industry, and its Bureaus seek Purchase, like some horrible Seaweed,

> the length of the Beacon Line. Some are estopp'd legally, some are fended directly into the Sea, yet Time being ever upon their Side, they persist, and one Day, in sinister yet pleasing Coral-dy'd cubickal Efflorescence, appears "St. Brendan's Isle," a combination Pleasure-Grounds and Pensioners' Home, with ev'rything an Itinerant come to Rest might ask, Taverns, Music-Halls, Gaming-Rooms, and a Population ever changing of Practitioners of Comfort, to Soul as to Body, uncritickal youngsters from far-off lands where death might almost abide, so ubiquitous is it there, so easily do they tolerate it here. (712-13)

In just six pages, Pynchon has moved from the splendor of the unsettled plains to the choking civilization that will doom the landscape, revealing in the fanciful settlement of the Atlantic sea the inevitable fate of the American landscape. His brief chapter duplicating the swiftness with which the newly organized country will reduce its magnificent landscape to an infinite corridor of strip malls, Wal-Mart's, Gaming-Rooms, and a Population ever changing of Practitioners of Comfort.

Mason and Dixon will retire on the Atlantic line, Cherrycoke imagines, as "Plank-Holders of the very Scheme." And Plank-Holders they are, not just in the transnoctially chartered "Atlantick Company," but stakeholders in the Enlightenment project, whose domination will not end at the land's edge. They are liminal figures standing on many more borderlines than simply the Visto, avatars who, perhaps unwittingly, usher in various perverse and destructive social structures and relations. But they are also reactionaries, dimly aware of their responsibility for immense change, but who never seem to relax in their role as men of reason. Amidst all the doubling of *Mason & Dixon*—two transits, two states, Pitt and Pliny, Hsi and Ho— Mason and Dixon can never resolve their status: they can never decide on which side of the line they stand. In their retirement on the Atlantic, Cherrycoke describes them feeling neither British nor American: "They are content to reside like Ferrymen or Bridge-keepers, ever in Ubiquity of Flow, before a ceaseless Spectacle of Transition" (713). As the engineers of an epistemological bridge, they stand sentinel over the transition into the Age of Reason.

Mason and Dixon's status as liminal figures allows them to impress themselves in one epistemology and then just as easily exit back to their previous understanding. They move into reason then back to the miraculous. The theme of departure and return is a controlling structure of *Mason & Dixon*. The broad structure of observing the Transit of Venus, travelling to America, and then returning to again observe the Transit of Venus is mirrored throughout the novel with numerous and varied departures and returns. The Visto itself is a series of departures west in spring and returns back east when winter arrives. Cherrycoke's depiction of the arrival in America sparks a discussion on music with Ethelmer playing what appears to be the blues, with its departures and returns to tonic. Aunt Euphy makes the connection to the Visto's quality of departure and return as well.

All these departures and returns suggest that *Mason & Dixon*'s circular structure may stand in opposition to the eternal westering of the Visto and American civilization as a whole. As liminal figures, Mason and Dixon repeatedly go the to edge of progress only to always pull back. Though dimly aware, they act as a corrective to the master narratives of history, destiny, progress and exploration that fuels the Age of Reason. The eighteenth century, just before the Revolutionary War, is the time when many of these most potent narratives are solidified in the creation of the new nation. No longer British, Mason and Dixon feel the excitement of the advancement, but not quite American, they possess an internal regulator that prevents them from harnessing their westward engine and riding it across the continent regardless of the consequences.

Turning back from their approach to the Warrior Path, Mason and Dixon have gained too much knowledge for there to be any simple return to the west point next spring:

> Here are the last Cadre, out in the uninterrupted Visto […] fairly out in the Hundred-League Current of *Sha*, where ev'ry Step is purchas'd with a further surrender of Ignorance as to what they have finish'd […] they may yet have journey'd further into Terrestrial Knowledge, than will allow them to re-emerge without bargaining away too much for merely another Return following another Excursion, in a Cycle belonging to some Engine whose higher Assembly and indeed

> Purpose, they are never, except from infrequent Glimpses, quite able to make out. (683)

Their final return, "the last fatal Double" (664) in their game of darts, sees Mason and Dixon understanding their role in marshalling in the Age of Reason, guiding it towards its ever westward drive, reducing the fantastic potential of America into a monolithic certainty.

If Mason and Dixon's story is a cyclical series of departure and returns, the line itself is the story of America. "Our story may lie rather behind and ahead," Mason suggests, "only with the Transits of Venus, never here in the Present, upon the Line, whose true Drama belongs to others" (610). The statement echoes both Zhang's comment earlier that Mason and Dixon are only bit players in someone else's history (545), and Mason's suspicion very early in the novel that they received a part of someone else's history (44). They recognize that the Americans live in their own perpetual present, able to forget such tragedies as Lancaster and Conococheague. They are eternally focused on the future with only departures to worry them, never returns.

The Visto is the dawning and drawing of the United States. Prior to Mason and Dixon's project, America is the land of the subjective, full of potential and variety. The line can be seen as the first markings on the ground, mapping the structure that will become the United States, the nation built on the principles of reason ushered in by men like Mason and Dixon. The Forge-keeper at the Rabbi of Prague informs us that the line should be read as a text, "East to West, much as a Line of Text upon a Page of the sacred Torah,— a Tellurian Scripture, as some might say" (487). What they read in the line is an accurate prediction of the colonization of America by the forces of reason:

> [T]his Age sees a corruption and disabling of the ancient Magick. Projectors, Brokers of Capital, Insurancers, Peddlers upon the global Scale, Enterprisers and Quacks,— these are the last poor fallen and feckless inheritors of a Knowledge they can never use, but in the service of Greed. The coming Rebellion is theirs,— Franklin, and that Lot,— and Heaven help the rest of us, if they prevail. (487-88)

Of course they do prevail, and Franklin and his lot build a nation state founded upon a knowledge that too often is used only for greed. Just before leaving for America, Mason worries that chartered companies like the East India Company "may indeed be the form the World has now increasingly begun to take" (252). It is an ominous note that Pynchon sounds as they set sail for the new world. Though they turn back from crossing the Warrior Path, Cherrycoke imagines what the four corners of the major highways will produce when the path is inevitably crossed:

> Sure as Polaris, the first structure to go up would be a Tavern,— the second, another Tavern. Setting up Businesses upon the approaches, for miles along each great Conduit, there would presently arrive waggon-smiths, stock auctioneers, gun-makers, feed and seed merchants, women who dance in uncommon Attire, Lanthorns that burn all night, pavements of strange metaling brought from afar, along with all the other heavy cargo that now streams in both directions, the Fleets of Conestoga Waggons, ceaseless as the fabl'd Herds of Buffalo, further west,— sunlit canopies a-billow like choir-sung promises of Flight, their unspar'd Wheels rumbling into the soft dairy night-falls of shadows without edges, tho' black as city soot. (650-51)

The nightmare that Cherrycoke paints is none other than our own contemporary nightmare of suburban sprawl, metastasizing from the cloverleafs of interstates. Mason, unable to resist the allure of America, returns near the end of his life. On his deathbed, he imparts to Franklin his last best glimpse at that conspiracy perpetually escaping his discovery:

> '"Tis a Construction, " Mason weakly, "a great single Engine, the size of a Continent. I have all the proofs you may require. Not all the Connexions are made yet, that's why some of it is still invisible. Day by day the Pioneers and Surveyors go on, more points are being tied in, and soon becoming visible, as above, new Stars are recorded and named and plac'd in Almanacks." (772)

America becomes that great single engine. Mason's deathbed vision is of the United States, a nation firmly enmeshed in the web of right angles desired by Zarpazo and feared by Zhang. The dragon of the earth has been all but ignored in the pursuing the fulfillment of an epistemology that too

often ignores everything outside its own limited scope. The precise geometrical reduction of America's subjectivity to the United States' declarative simplicity has reduced the continent to a great single engine running in the pursuit of planetary domination (or at least that part within our borders) and ever increasing control of the larger by the smaller.

The Mason-Dixon line is America's zero point of history. The introduction of a mathematical abstraction erased a personal connection to the earth in place of a purely instrumental relation between humans and between humans and the physical world. A novel about the Mason-Dixon line, even one that takes place entirely before the creation of the United States, carries with it all the historical baggage: the impending Civil War, the bureaucratic advancements that separate people, the amoral technological progress that leads to mass warfare and killing, the political rationality that can make use of that technology, and most of all, a racial divide often perpetuated and justified by claims of science. In addition, the line represents the often unthinking adoption of technology regardless of the consequences. Pynchon's allegory provides us with the observation point far above the surface world where there are an "uncommon lot of trees about" as Dixon would say. From this vantage point, we can make maps, compute the parallax, and determine how the various lines of American history converge to the point we are at today.

Four

Life in Balance: Jonathan Franzen's *Strong Motion*

Thomas Pynchon's *Mason & Dixon* reveals the historical construction of nature as it existed around the time the United States were coalescing into a country. In Jonathan Franzen's novel *Strong Motion*, we take a step into the contemporary moment only to step back further in history to explore even more basic structures underpinning the social creation of nature. Franzen presents a complicated story with interrelated themes of environmentalism, business, familial politics, gender, and reproductive issues. As these themes are presented in a narrative of the late twentieth century, their connections seem superficial at best, the random manipulations of the author. But Franzen digs deep into history to show the fundamental structural components of culture that link these issues together. The novel takes us as far back as sixteenth-century America to map the faultlines of our culture. Through the various historical levels of *Strong Motion*, we see a construction of nature predicated upon hierarchies and domination that value men, reason and technologies over women, emotion and ecologies. Franzen lets us see that the crucial component of how we socially construct nature is a logic of domination that determines categories of nature and progress.

Jonathan Franzen has taken the lead as spokesman for a class of angry and ambitious young novelists. His two large and complex novels, written in the late eighties and early nineties, drew attention to his talent, but 1996 saw Franzen's name appearing across the map. He became a regular in *The New Yorker*'s stable of writers, examining the place of the written word in light of the digital revolution and reminiscing about his own personal connection to the Unabomber. *The Village Voice* gave him the starter position in their collaborative novel, "The Fifth Column." *Granta* named him as one of the best young American novelists. In *Harper's*, he wrote the April Folio piece, "Perchance to Dream," mapping out the territory of contemporary fiction and attempting to find "In the Age of Images, A Reason to Write." His essay caused a flurry of letters from both the

old guard (Kurt Vonnegut) and the new breed (David Foster Wallace). A writer who once admired and tried to emulate the silence and seclusion of authors like Thomas Pynchon, Don DeLillo and William Gaddis, Franzen suddenly became a personality.

In 1988 he staked his claim as a significant voice with his first novel, *The Twenty-Seventh City*. Laura Shapiro, writing in *Newsweek*, called it "a big lavish novel" and "downright revolutionary" (59) Richard Eder, in the *Los Angeles Times*, allotted Franzen "A sprawl of talents; sometimes a tangle of them" ("America's" 3) Four years later, in 1992, Eder wrote that Franzen "has a teeming and seemingly unreined imagination. He will try for more than he can achieve; but he tries for, and achieves, more than all but two or three in the successor generation to Pynchon and DeLillo. He may well be one of the successors" ("Shaky" 3) Franzen packed his first novel full of weighty issues and ideas. He profiled the midwestern city of St. Louis, outlining the crumbling structure inside the beltways, and predicted the world-wide changes that could create a new urban identity. Eder writes that "*The Twenty-Seventh City* made a cosmos, real and surreal, of the city of St. Louis" ("Shaky" 3). The novel interweaves no less than eight subplots around a sinister urban renewal project. Franzen juggles the chief of police, the mayor, important media figures, the head of the local business organization, the heir to a brewery, an Indian princess, and all their spouses and families. The novel stretches to include a healthy amount of East Asian culture with numerous characters from India operating both in St. Louis and on the subcontinent. Characters cross from story to story, with Franzen connecting the most far-flung through coincidental meetings and intricate, elaborate plotting. The novel stockpiles so many details about so many characters and their lives that gradually, over the course 517 pages, a sense of an entire city personality grows. In *The Twenty-Seventh City*, the sum is greater than the parts. St. Louis becomes as much a character as the many that make up the city.

If *The Twenty-Seventh City* was a cosmos, *Strong Motion*, no less ambitious, reads like a core-sample of America in the 80s. Yet where Franzen's vaulting ambition was praised in his debut, the reviews of *Strong Motion* were mixed. Though an obvious fan, Eder qualifies Franzen's talents: "Franzen writes beautifully for the most part; though sometimes to excess" ("Shaky" 7). Jonathan

Yardley, taking off the gloves, writes, "Franzen has courage. But what *Strong Motion* demonstrates is that courage is not enough" (3). He gives Franzen an "A" for effort—"Franzen's second novel is populous, ambitious, expansive and long—important and admirable characteristics"—but he still unleashes a vicious punch: "Franzen is a writer of abundant energies and not-inconsiderable gifts, but he has turned them here to trivial purpose: a tired anti-American screed masquerading as a novel" (3). For Yardley, Franzen's ambition and expansiveness have led to arrogance and excess. While big ideas can be forgiven, even praised, in a young writer's debut, it appears the mature second novelist should have a strong sense of self-control. Even those that praise Franzen's work praise the small, manageable aspects, implicitly damning the more expansive. Eder praises his minor characters: "They help restrain a narrative that is often overheated and sometimes threatens to spill in all directions at once" ("Shaky" 7). Herbert Mitgang in *The New York Times* raves about Franzen's knowledge of "when to shift gears from lecture platform back to plot" (20). As for Franzen's didactic streak, Yardley, making no attempt at softening the blow, hopes, "he's gotten this out of his system" (3).

Despite attacks like Yardley's, I think that *Strong Motion* is the better of Franzen's two novels and does make him a successor along with Richard Powers, Wallace and William Vollmann. Paranoia may stand as the touchstone for that previous generation, and it is certainly present in Franzen's work, but what Franzen accomplishes is a detailed explanation of why we should be paranoid. There are indeed forces that influence our lives, but Franzen doesn't hide them behind a nameless "them." Rather, those forces turn out to be the insidiously prosaic and deceptively natural ways by which we make economic, emotional and ethical choices in our lives. What we see in *Strong Motion* is the deeply buried foundation on which we've structured our lives, a foundation that confines us to categories and hierarchies based on domination. For Franzen to bring these cultural building-blocks to light, he must have more at his disposal than a polite, restrained story. Of course there are moments when Franzen's novel veers into didacticism. The reviewers are quick to characterize these as flaws, seeing in didacticism a failure of aesthetics. Franzen's didactic streak, however, is crucial to the make up of *Strong Motion.* The novel does have its pedantic moments,

but they typically come from pedantic characters in a power struggle over ways to interpret reality. At other times, Franzen brackets his excesses in linguistic flourishes apart from the narrative.

These excesses of language are at the crux of *Strong Motion*'s reevaluation of a social structure. Language, both metaphorically and literally, stands as that structure, and only language can be used to deconstruct the structures of power. Realism, of the such that amuses and delights critics, presents a world view just as didactic language does. As a style, realism abets the masking of social constructions by confining discourse to one style labeled "natural." The traditional realism that Franzen employs for most of his book must be ruptured by language that escapes the encrusted constructions. In *Strong Motion,* the outbreak of excessive prose or didactic language hints at the social changes that will erupt into the predictable normal hierarchies of social relations. The use of numerous and disparate styles, including didacticism, is integral to the novel's ambition.

The negative reviewers of *Strong Motion* fail to ask why Franzen exceeds conventions of more restrained narratives, why the scope must be so expansive. Instead, they mistakenly focus on the conservative aspects of Franzen's talent, his ability to create the believable and interesting character, the well-wrought piece of plot. As a talented craftsman, Franzen flourishes in a style that can be appreciated by fans of more traditional, realistic fiction. Yet his well-formed characters are used to explore the economic, ideological and environmental structures in which they live. What these reviewers see as excessive, self-indulgent diversions from the story are, in fact, the very territories that make Franzen an important writer. His vast backdrop doesn't simply serve as picturesque setting for a tale of two lovers (Rhett and Scarlet against the cinematic scope of Sherman's March). Instead, the catastrophic events that shake Boston and the love story of its two protagonists are the same story, built on the same foundation and rupturing along the same fault lines.

Franzen examines how such a powerful country as America fell short of its promise. He asks why the late twentieth century is a monolith of technological consumerism and why a country with such immense natural wealth is so deep in debt. *Strong Motion* is about a country with prodigious gifts heading toward paradise when it takes a wrong turn. The novel decries the system

that allows a select few to achieve mastery over both land and people on a continental scale. Franzen's America is at the mercy of an ideology that places white men at the top of the hierarchy and gives them permission to use everything else for their benefit. These individuals abuse their position, wreaking havoc through both social and environmental systems. Franzen's book ostensibly focuses on the lives of a few individuals in Boston, yet these guides allow Franzen to reveal how patriarchal privilege has shaped the culture of America from its very beginnings. The prodigious waste evident in the destruction of Boston pales in comparison to Franzen's depiction of the waste of America, its natural resources and its promise. New England's lush forests are stripped, its wildlife depleted, its rivers and bays poisoned, and by the end of *Strong Motion*, the land is violently rent, flooded with toxins and completely uninhabitable. Though centered in Boston, Franzen's wave of ecological destruction spreads from New England to Oregon, covering America from the colonization of the new world to the destruction of the last remaining virgin forests. Franzen wants readers to acknowledge that we are in some sense implicated in this prodigious waste, both perpetuators and victims of a system that rewards waste on massive scales. To force us to this conclusion, he designs his narrative as an analog to his theme. *Strong Motion* is an earthquake in prose.

As prodigious waste stands as a theme of the book, the novel itself is prodigious in its method. Massive and immense in its scope, the novel imitates the structure of its main theme. Like the layers of earth that one of its main characters studies, *Strong Motion* packs evidence upon evidence to build its case against the runaway greed and power of America's culture. Franzen maps the faults under the surface of America's seemingly infinite prosperity. As the novel progresses, the seemingly disparate touchstones of the novel—environmental destruction, reproductive rights, gender relations, family politics—are all stacked and compressed on a flawed bedrock, the skewed logic that allows white males the freedom and rationale to abuse whatever they need to reinforce their power and position. As Franzen shows more and more layers placed upon this unstable premise, the buildup of enormous pressure becomes evident. Far too much of the culture relies upon this faultline staying stable, and when one company pushes too hard for dominance, the whole

structure crumbles. As Franzen shows this logic of domination to be untenable, families fall apart, relationships crumble and the environment is devastated. The faultline cracks and sends aftershocks throughout the whole culture. By the time Franzen pushes Boston to its breaking point, he will show how the domestic scale and the larger conspiracies are not simply metaphoric parallels, but are similar manifestations of the same cultural logic.

The novel begins with Louis Holland, the conscientious objector to his white male status. Louis is a prodigy in potential. As a boy, his whiz-kid talents with crystals and ham radios showed promise of a successful engineering career. He is intelligent, willful and independent. From the age of fourteen on, he refuses to ask his parents for any money and earns his cash from odd jobs and manual labor around the neighborhood. Going to college, he enrolls at Rice because its exceptional educational qualities are provided at a very low cost. Franzen builds Louis as the self-made man the Reagan years were so fond of spotlighting and Texas so adept at cultivating. He has all the markings of a nascent Ross Perot, but Louis lacks the will to dominate others in order to succeed. Instead, he opts out of his decade's preoccupation with money and financial success. Rather than leap headfirst into a career in industry or business, he majors in French and takes a dead-end job in the radio business, cuing records and recording public service announcements. Louis defines himself in opposition to those people occupied with following fashion, acquiring goods, getting money. Intelligent and self-conscious, he feels himself special for this abstinence from conspicuous consumption, but Louis flounders in search of a direction. He has no clue where to go, only a tremendously strong feeling about where not to be.

Where not to be is where his sister, Eileen, and his mother, Melanie, reside. Growing up, Eileen especially irked Louis. Selfish and spoiled, she early in life "had acquired the ability to beg from Melanie and live with herself afterward" (SM 61). Throughout their late childhood, Louis has watched his older sister demand money for sweaters and concert tickets, nearly always getting what she wanted and pouting when denied. Quite the opposite of her brother, Eileen chooses Bennington College, "the most expensive undergraduate institution in the country" (SM 63). Louis's mother offers few restraints on Eileen's desires. Though Melanie would like to give money

equally to her children, Louis never asks, and it becomes "more convenient to just give the other child everything she wanted" (SM 63). As though a certain balance of greed must be maintained, Louis's frugality and self-discipline lead to Eileen's excess and indulgence. Melanie has few apparent problems with this arrangement, and her husband Bob is content to allow things to drift by in a marijuana-induced haze. Louis, however, keeps things complicated:

> It was joyless, this conspiracy between mother and daughter, but it worked. The end of the conspiracy was to keep the money unpoisoned, and to achieve this end only Louis had to be tiptoed around… Only Louis—odd, grumpy Louis—had the power to poison money. (SM 63)

Louis is "odd" only because he places himself outside the greed that is the norm. Instead of a future entrepreneurial leader, Louis is more like a budding young Marxist. Eileen and Melanie rightfully feel that their indulgences with money, either giving or receiving, would be untainted were it not for Louis. His refusal to participate and to make universal—at least within the home—this social exchange reveals that relations between Eileen and Melanie are not normal. Rather, Louis's abstinence reveals that Eileen and Melanie rely on the transfer of money and goods to take the place of love, nurturing, and all other aspect of familial life that cannot be quantified in economic terms. The happiness, or at least the smooth operation of the family, depends on Louis keeping quiet: "The others' comfort depended on his restraint. And he deliberately let Eileen be spoiled, and only once, when he confronted her in the upstairs hall, was there any hint of all the poison pooling up inside him" (SM 63). As Melanie allows her relationship with Eileen to be more and more reliant upon money, she finds it difficult to relate to Louis, the child who refuses to have money as a substitute for love and attention.

Aware of the direction Eileen and Melanie have taken, Louis moves the opposite way. He pares down his lifestyle. He learns to do without and to simplify:

> He'd basically been content with his life and its conditions. A person accustoms himself to what he is, after all, and if he's lucky he learns to hold in somewhat lower esteem all other ways of being, so as not to spend life envying them. Louis had

> been coming to appreciate the freedom a person gained by sacrificing money, and to pity or even outright despise the wealthy. (SM 45)

Louis becomes Franzen's monkey wrench in the system. As an adolescent, Louis has an unconscious aversion to the way Melanie wants to structure her family. As an adult, Louis will have a more refined distaste for people who arrange their lives around economic exchange to the exclusion of nearly everything else. Louis's abstinence unsettles his family, and throughout the novel, this same refusal to participate will highlight relationships reduced exclusively to economic exchange. Louis goes on hating the wealthy, identifying himself as not one of them, but his identity is scarcely more than that. He draws a circle proscribing what he is not, but waiting to find out what he should be.

Then *Strong Motion* is rocked by its first earthquake. Relatively small, the quake still manages to kill Louis's grandmother, Rita, and provide a windfall for his mother. As Rita Kernaghan's largest beneficiary, Melanie inherits an estate in a Boston suburb and twenty-two million dollars of stock in Sweeting-Aldren, a large chemical corporation in Boston. Suddenly, Louis's nagging family squabbles over money and love become a twenty-two million dollar battle, drawing all hidden resentments to the surface. In addition to Melanie's inheritance, the quake reveals another connection between Sweeting-Aldren and Louis. Eileen's current boyfriend, Peter Stoorhuys, discloses that he is the son of a Sweeting-Aldren vice-president. Louis, the economic exile, finds himself tossed into the midst of obscene wealth and corporate greed.

When a second earthquake strikes Ipswich, the suburban site of Melanie's new mansion, Louis meets Renee Seitchek, a Harvard graduate student and seismologist. A prodigy fulfilling her potential, the thirty-year-old Renee is the shining star of Harvard's Geophysics department. Her graduate career has been zipping along at a swift pace, and as she nears completion Renee already has an offer of a research fellowship from Columbia University. While not so full of rage as Louis, Renee also dislikes the culture in which she lives. Like Louis, she strips her life of all extraneous matter, living in a Spartan apartment: "It was a bare, clean place. There was nothing on the kitchen counter but a radio/cassette player, nothing in the dish rack but a plate, a glass, a knife, and a fork"

(SM 132). Renee doesn't even own a TV. She is entirely aware of her commitment to eliminate from her life those things that cause her distraction or disgust. Renee's distress at the world is magnified by an extreme self-consciousness. Concerned with avoiding any appearance of superficiality, she cultivates an awareness of her appearance more acute than her country-clubbing mother. Her self-consciousness keeps her from cooking in ways like "well-educated thirty-year-olds on TV, or like gastronomes who became orgasmic over nice pasta" (SM 266). She's careful about where she buys the few things she needs, shopping in the "naive flea market" (SM 266) in Boston, but avoiding "vintage" clothing stores because of their hipness. Her need to be rid of distractions ironically becomes a debilitating distraction. A dedicated punk/new wave groupie in college, Renee pares her collection of tapes down to a single song because she doesn't like to be defined as another pathetic aging punk with a leather jacket and fifties sunglasses. Perhaps most distressing for Renee is that her hyperactive self-consciousness forces her to realize she is spending huge amounts of time worrying about decor, clothes and cooking in an attempt not to be like the superficial people she fears becoming.

The joining of the two protagonists propels *Strong Motion*'s plot. A casual line dropped by Eileen's boyfriend, Peter, about his father's company leads Renee to believe that Sweeting-Aldren may be responsible for the recent earthquakes. She theorizes that the company, in order to save money, may be injecting their toxic waste deep underground, causing instability in the geographic structure under Boston. Sweeting-Aldren becomes an outward manifestation of the culture of greed that Louis and Renee hate. As the heads of the chemical company violate EPA laws and lie to the public, the swirling unease Louis and Renee feel about Boston and America crystalizes. The actions of the Sweeting-Aldren executives represent the matrix of power that allows for such rampant destruction in the pursuit of profit. Louis delights in having his worst paranoid fears confirmed. In incremental steps, Franzen begins to expand his novel from the compressed description of a family hierarchy to those same roles of dominance being worked out on a larger scale. The relations that antagonized Louis's adolescence have been overheated by the influx of

twenty-two million dollars, and the sacrifice of love and caring for money now has its parallel in environmental exploitation in pursuit of profit.

Melvin Jules Bukiet, discussing the protagonists of Franzen, Pynchon and Richard Powers, writes that their troubled characters "find in the external world the embodiment of [their] own discontent" (Bukiet 16). Bukiet recognizes the dilemma, but gets the causality backwards. Louis and Renee are troubled because of the external world. The internal malaise they felt at America's out-of-control greed now has a real, external manifestation. Franzen, in his *Harper's* piece, asks, "Does the distress I feel derive from some internal sickness of the soul, or is it imposed on me by the sickness of society?" (*Harper's* 36). Louis and Renee may have asked themselves the same question. Franzen portrays both these characters as slightly neurotic, and they do have a sickness of the soul. Yet this internal sickness is not a flaw so much as an sensitivity to the skewed structure of American culture. Franzen may tease us by suggesting that Louis and Renee are paranoid, but when he displays the societal sickness demonstrated by Sweeting-Aldren, we recognize that whatever obsessions Louis and Renee might have, they have been inflicted from outside.

The two prodigies, now focused, begin investigating the recent history of Sweeting-Aldren, looking for proof that an injection well was dug in the 60s and that the company has been illegally dumping its waste since 1970. In passing, Louis mentions to his father, Bob Holland, that Melanie's new-found wealth might derive from an unethical and illegal company. To Louis's surprise, Bob Holland, a professor of history specializing in the economic growth of New England, has his own version of the Sweeting-Aldren story. Louis soon learns that Sweeting-Aldren's record of malfeasance stretches much further back than just the late 60s and stretches beyond the boundaries of the company. Bob's explanation of Sweeting-Aldren begins in the early sixteenth century. This expansion of scope reveals that, for Franzen, the Sweeting-Aldren executives are far more than just unethical businessmen. They are the culmination of an economic system stretching from the founding of the country to the present, a system of greed and excessive indulgence without restraint. In the historical recounting of the rise of Sweeting-Aldren, Franzen again revisits the synergy between a greedy and rapacious family and the larger, economic exploitation.

In what might be seen as one of Franzen's "self-indulgent" diversions, he describes New England in the sixteenth century:

> The Countrey, according to the first Englishmen to see it, more resembled a boundless green *Parke* than a Wildernesse. From the rocky shores inland as farre as a man could journey in a week, there stretched a Forrest suche as teemed with Dere, and Elke, and Beares, and Foxes; with Quailes and ruffed Grouse and wilde Turkies so innocent and *Plentiful* that a man could cast aside his Musket and hunt them with bare hands. (SM 374)

Franzen creates a paradise through Bob's anachronistic words. The archaic style of spelling and capitalization suggest that Franzen may be relating more than simply what American prose was like in the sixteenth century. In this new chapter with no prelude, we assume that Bob, the historian, is the speaker. Yet Franzen has not previously departed from a standard style, and the sudden shift in style draws attention to both the language and the large gap in time. Franzen explores the language as if it were the fossil record of tectonic shifts in the culture. Here we are at perhaps the deepest layer of Franzen's exploration; how language itself constructs the process by which we think. Far from being a gimmick, these stylizations surface in much the same way Franzen will allow cultural values to surface. By using such language in the midst of an entirely contemporary novel, Franzen suggests that the structures of the past can and do intrude in the present. What may appear as archaic shows itself to have persisted into the contemporary. The values ascribed to the new world in the sixteenth century will persist through the late twentieth century.

Franzen's dramatic introduction of archaic language implies that the way we describe our world is critical to our relationship with it. Annette Kolodny, in her book *The Lay of the Land*, describes the oldest American/New World fantasy of understanding the land: "A daily reality of harmony between man and nature based on an experience of the land as essentially feminine—that is, not simply the land as mother, but the land as woman, the total female principle of gratification" (Kolodny 4). Two images prevail, that of the nurturing, protective mother and the fertile, unclaimed virgin. For the new settlers, "the total female matrix of attraction and satisfaction offers not only

protection and nurture, but also arouses sexuality and the desire for exclusive possession" (Kolodny 58). The reality appeared to be that the land, this feminine object, must be dominated for survival. This social construction solidifies under pressure of religion, language and familial relationships. Kolodny writes, "the success of settlement depended on the ability to master the land, transforming the virgin territories into something else—a farm, a village, a road, a canal, a railway, a mine, a factory, a city, and finally, an urban nation" (Kolodny 7). Assuming one adopted a certain rationale, the land was abundant and prodigious, providing beyond any imaginable desire. Viewing this enormous, almost monstrous abundance, early settlers determined to control and harness the harvest, seeing economic success for cultivation as "dependent on a very literal understanding of the title 'husbandman'" (Kolodny 56). When Franzen places the relation of man to nature in terms of masculine to feminine, he gives new meaning to the drive of the English settlers: '"Fill the earth and subdue it'" (SM 376). The figurative language of colonial writers found its best form in expressing dominance through gender relations. From these early assumptions and views, Franzen builds his description of the American culture that creates Sweeting-Aldren. As Franzen digs deep into the layers of culture, coming very close to the faultline, the precariousness of linking domination to gender comes into focus. As Franzen's novel progresses, we begin to see that Boston, if not all of America, seems to be inevitably leading to environmental catastrophe. By tracing the history of this catastrophe all the way back to the European settlement of the country, Franzen places the cause much deeper than simply the misjudgment and greed of Sweeting-Aldren executives. Slowly Franzen is showing us that the key to understanding both *Strong Motion* and contemporary American culture lies in the intertwined relation that links gendered relations to the interaction of humans and nature, both grounded in structures of dominance and violence.

Ecofeminism provides a sophisticated analysis of the ideologies that Franzen illustrates. In his book *Contesting Earth's Future*, Michael Zimmerman positions ecofeminism as a branch of radical ecology addressing the feminist critique of patriarchy. In particular, Zimmerman describes cultural ecofeminism, a branch holding that:

> deep-seated cultural attitudes—philosophical, religious, and psychological—have shaped gender in ways that gave rise to patriarchal, nature-fearing, militaristic, hierarchical politicoeconomic systems. (Zimmerman 234)

Cultural ecofeminists argue that patriarchy is responsible "both for oppressing women and destroying nature" (Zimmerman 241). This seemingly mirrors the ideas that Franzen presents. But for some ecofeminists, the theory that patriarchal oppression is the root cause fails to account for all aspects of domination. The connections between dominance of the land and dominance of women show a common cause. The problems in *Strong Motion* cannot be reduced to just patriarchy. Though most of the violence and exploitation does come from men in *Strong Motion,* Melanie and Eileen Holland differ only slightly from their counterparts at Sweeting-Aldren. Patriarchal oppression is only one avenue of expression for something more basic. Karen J. Warren proposes a theory that moves beyond cultural ecofeminism. Rather than make patriarchy the key to oppression, Warren suggests that it should be considered as one of many facets of "the logic of domination," an oppressive skeleton that shapes the culture. For Warren, this logic of domination has three specific features:

> (1) up-down (hierarchical) thinking; (2) value dualisms, in which one pair of the duality is regarded as inferior (e.g., male versus female, mind versus body, culture verses nature, thought versus emotion); and (3) a substantive value claim, which justifies why the allegedly superior pole should be permitted to dominate the inferior pole. (Warren 20)

This logic behind the system allows for domination of women as well as domination of nature. Such a view explains the logic of Franzen's early New England settlers projecting feminine attributes upon the land, allowing for domination of it. The early settlers determine what nature will be. Franzen demonstrates that the qualities of nature are not pure, ahistorical, or self-evident. Rather, they are contingent upon the social values and categories imposed upon them by humans. The settlers construct a nature that is female, and as such, susceptible to domination. A radical change is necessary to overthrow this hierarchy:

> Unless the logic of domination, the foundation for *all* oppressive conceptual frameworks, is revealed and uprooted, attempts to end the oppression of women will inevitably come up short, for the 'logic' needed to support a fresh wave of oppressive patriarchal practices is still in place. (Zimmerman 261)

The logic behind white male domination is first revealed by Franzen in the widespread destruction by the new settlers. This section of the book is perhaps the most critical moment of *Strong Motion.* Louis and Renee are on the cusp of proving that Sweeting-Aldren are the architects of the recent earthquakes. Were Franzen writing a "tired anti-American screed," *Strong Motion* could quite easily wrap things up with the unravelling of how Sweeting-Aldren was allowed to bypass EPA laws, deceive the public and cause irreparable harm to the environment; twenty or so more pages ought to do it. Instead, Franzen tips us over the edge into a prodigious scale of waste and destruction dating back to the founding of the country. If up to now we saw a narrative implicit with ecofeminism, namely that the evils of Sweeting-Aldren can be traced back to its male executives, we now are forced to reevaluate nearly everything that came before. Instead of writing a tightly wrought industrial thriller, Franzen unravels the culture that allowed Sweeting-Aldren to exist in the first place. Franzen expects this moment—as much a rupture as the big earthquake to come—will force us to see his domestic story as part and parcel of the environmental destruction, the economic greed intertwined with the sexual confusion and reproductive debates. He offers us the logic of domination as the key to understanding the company, the characters, the book, and all of America.

From the sixteenth century, Franzen slowly brings us up through the layers, away from the fault toward the surface of contemporary America, along the way showing how the logic of domination allowed for the abuse of anything or anyone less powerful than the white settlers and their descendents. He portrays Melanie Holland's ancestors structuring their lives along the same lines as the Holland family. The men of the household dominate and control the women. The heads of companies exploit slaves, workers and most of all, the bountiful land given them. With each passing century, Franzen shows how, by time and tradition, the logic of domination is further

encrusted as the indisputable way things are done. The use of such logic destroys entire Indian villages. Chicken pox, smallpox and typhus eliminate 80 percent of the Indians in New England. In puritan New England, the logic of domination hides under the guise of Western religion. Franzen writes, "'God,' said John Winthrop, 'hath hereby cleared our title to this place'" (SM 377). The sixteenth-century paradise disappears by the late eighteenth century. The lush forests are cut for lumber, burned for ash, or clear cut and left to rot, the land to be used for farming. Cattle trample the soil, intensive agriculture depletes the scarce nutrients, and erosion takes away what little topsoil was left. What remains are bogs and swamps, floods and dry gullies, failing farms and choked harbors. Franzen notes that the wealth of the land appeared to have just melted away, but in reality it had only been concentrated: "A plot of land that had once supported five Indians in comfort was condensed into a gold ring on the finger of Isaiah Dennis, the great-uncle of Melanie Holland's grandfather" (SM 381). Wealth assumes an unnatural state.

By the eighteenth century, runaway capitalism disguises the logic of domination. The expansion of environmental abuse spreads both in space and in time:

> Melanie's great-grandfather, Samuel Dennis and his industrialist and banker accomplices had learned to burn not just the trees of their own age but the trees of the Carboniferous as well, now available as coal. They'd learn to exploit the wealth not only of their own home soil but of the cottonland of Mississippi and the cornland of Illinois. (SM 382)

The system that has adopted the logic of domination gives Melanie's ancestors the right to this wealth as the top of the hierarchy. But for all their wealth gained, they become more and more in debt to the labor of the people they exploit. Melanie's grandfather, Samuel Dennis III, sits on top of immense wealth. He is:

> the depot of old, old dollars; dollars with beaver blood on them (and mink blood and cod blood), dollars that smelled of black pepper and Jamaican rum, piney dollars from clear-cut Dennis landholdings, rusty war dollars, dollars damp and sour with the sweat of female loom operators. (SM 383).

Though the Dennis wealth is a conversion of the natural wealth to unnatural commodities—luxuries, objects with no inherent value—the source of the wealth is still tied to the land. The connection between raw materials and product is still stamped on the money. Yet when Samuel Dennis installs the even more unnatural stock ticker in his office, his empire collapses. All the accumulated wealth stolen from the land disappears in a flurry of paper and ink and ineptitude. The collapse drives Samuel to his death.

Samuel's collapse provides a clue to understanding how the logic of domination becomes "naturalized." The stock ticker or the ring on Isaiah Dennis's finger are the false relations of capitalism. Signs and symbols acquiring value disconnected from the worth of their objects are taken to be true, that the signifiers are the signified. Samuel's inability to see beyond this illusion, to see the true worth (or lack thereof) of his paper value, leads to his ruin. Subsequently we will see other members of this industrial clan ruined through their disassociation from the land and objects that give them their wealth.

The Dennis clan is temporarily saved by their son-in-law, Jack Kernaghan, Melanie's father. Jack is a new breed of capitalist, one capable of managing the high-speed economy of the nineteenth century. Just before his death, Jack convinces Samuel Dennis to give him the house and the debts surrounding it. Through every ounce of his credit, Jack is able to keep the Dennises in the beloved Boston home while the rest of the fortune dissipates.

A lawyer from the backwoods of Maine, Jack may be seen as the amoral prodigy of *Strong Motion.* He embodies and embraces the logic of domination more than any of the white male executives in the book. As disciplined and independent as Louis, Jack slowly rebuilds his family's worth, keeping the Dennis women in fine clothes, a summer cottage and servants. He operates as a tyrant over both the family and the fortune he slowly rebuilds. But he is a benevolent tyrant. He sees himself as protector and provider, responsible to a capitalist *noblesse oblige.* Yet when his only son dies in the care of the Dennis women, Jack reverts back to a more basic privilege. He blames the women for the death and makes them pay by cutting off all luxuries and wealth. Like a revelation, Jack sees their inferiority:

> That family showed me what this country would be like if it was run by women. It's simple—you spend someone else's money. Let's spend a hundred billion on the poor, let's spend a hundred billion on the Negroes. All the sentiments are very fine, but where's that money going to come from? Industry's what puts bread on their table. (SM 390-91)

Jack articulates perfectly the logic of domination: men over women, rich over poor, white over black, industry over everything. Clearly a prodigy, Jack is the only character to come close to understanding the true relation between power, gender and domination coursing through the novel. After the death of his son, he feels that only through domination and violence can he accomplish what he wants. Barely concerned with the repercussions of his actions, Jack clearly understands how the culture works. No one can touch him.

After his awakening, Jack expertly manipulates the flow of power along this matrix of domination. He puts his pursuit of profit and power into high gear. He orchestrates the merger of Alfred Sweeting's nitrate plant (transforming clean air and water into ammonium nitrate—the stuff of high explosives) and J. R. Aldren Pigments (makers of gray and olive drab military paints). The young Jack Kernaghan has the Midas touch. Tremendous growth follows the merger thanks to World War II. As Kernaghan gains more power in the company, he pushes it toward the manufacture of pesticides:

> a decision which, given the fifties mania for good-looking apples and tomatoes and for suppressing all infestations of indoor vermin however faintly reminiscent of Communists, was the single most profitable in the company's history. (SM 392).

Even with this simple touch, Franzen notes that the logic of domination underlies both conceptions of insects and Communists as less powerful, less valuable others, acceptable targets for elimination.

At age fifty-six, Jack becomes the senior vice-president at Sweeting-Aldren. Still with the magical touch, he increases the production of defoliants shortly before the Vietnam war, then follows by doubling the company's spandex-producing G line. By the nineties, as an omen, the most visible presence of Sweeting-Aldren is their trademark Warning Orange dye. Like a ghostly

criminal returning to the scene of the crime, Sweeting-Aldren's public relations paint stands guard over the destruction and mayhem of contemporary life—traffic cones, safety vests, fences cordoning off the rubble of the twentieth century.

Jack not only glories in his mastery over nature as a chief of industry. He takes full advantage of the logic of domination with respect to women. Franzen even suggests that the rise of Sweeting-Aldren was powered, not by Jack's prodigious talents, but by "harnessing" the power of patriarchy:

> Those were the golden hours for the patriarchy, when every executive in America wore pants with a zipper down the front, and every one of them had a secretary who wore a skirt with a zipper down the side and who, though often more intelligent, was always physically weaker than her boss (her delicate wrists arched over the IBM keyboard), and who sat on a little chair designed to reveal as much as possible of her figure from the greatest number of angles, and who wore a wife's makeup and cheerful smile and obeyed her man's orders and spoke in whispers, and the power of so many million heterosexual pairings harnessed by industry made the United States, in the space of a few years, the greatest economic force in the history of the world. (SM 392-3)

In the 60s, the culture is firmly in place. The logic of domination allows Jack, and any other white male, the freedom for greed, sex and power to run unchecked. But Franzen always undercuts Jack Kernaghan as the boy wonder of industry by repeatedly showing his reliance on domination, not only of the people in his company, but of the planet as well. We never forget that Jack's success is made possible only at the expense of others.

Even Louis struggles against the hierarchy that, willingly or not, places him over women. Franzen shows the tremendous history of privilege given to the default gender. While arguing with Renee, Louis feels the weight of power on him:

> The odious Male seeking control over a virtuous and difficult woman won't scruple to exploit whatever weakness he can find in her—her age, her mannerisms, her

> insecurity, and her loneliness above all. He can be as cowardly and cruel as he wants to as long as logic is on his side… These archetypes forced entry to the apartment on Pleasant Avenue like vulgar relatives. Louis wanted to turn them away, but it's not so easy to slam the door in your relatives' faces. (SM 194).

Eventually, he succumbs to the power of male privilege. When Louis dumps Renee for a younger, prettier woman, he feels what its like to take advantage of that hierarchy: "*I am a rapist too. I am a sadist too* as he hurt her for his pleasure, doing it with his silence and understanding what people meant when they talked about how a penis can rule a man" (SM 215). The logic is as insidious as it is powerful. By placing these thoughts in Louis's head—a male character who has refused to capitulate to the structures of society—Franzen makes the point that the logic of domination has become so ingrained that it is nearly synonymous with a biological urge. When Louis dumps Renee, his half-hearted attempt at rationalizing his callousness is to shift his conscious decision to an uncontrollable biological desire. He resorts to justifying his social behavior through nature. But Louis's behavior is not sanctified simply because he disguises its social origin. He is merely constructing another aspect of nature, one that builds upon centuries of male privilege using nature to justify their position in society.

By the end of the 60s, Sweeting-Aldren begins to feel the pressure of a burgeoning environmental movement. As the company reevaluates the disposal of their waste stream, Franzen's ecofeminist critique seamlessly melds the domination of women and the domination of nature. In 1969, Jack is repeatedly thwarted in his attempts to seduce Anna Krasner, a pretty young chemist in his company working on a theory that immense amounts of oil and natural gas lay deep under the earth's surface, deeper than any normal well would be dug. Unable to seduce her through his regular means, Jack promises to have such a well dug only if she sleeps with him. It would seem a high price to pay, but Jack has an ulterior motive for the well. Jack Kernaghan uses sexual favors and intimidation to open up an inexpensive, though highly dangerous, means to rid Sweeting-Aldren of its toxic wastes. Sweeting-Aldren is coming under more and more pressure to dispose of its toxic waste in a safer manner. A twenty-thousand foot deep well would allow Sweeting-Aldren

to inject their waste underground for years before suspicion arises. Jack gets Anna cheaply, gaining a woman and a waste outlet for no real effort or risk. As Franzen so accurately puts it, the environment was "always this nice soft thing they could screw over any way they felt like" (SM 124). The mining drill becomes the focal point of an orgy of power and dominance over women and nature. Bob Holland describes a new production line Jack showed him:

> The structure was an orgy of metal forms, twenty cottage-sized modules straddling and abutting and embracing one another tightly, each with its own voice of thermodynamic ecstasy and all with their fat appendages rammed deep into steel-collared orifices; but a rigid orgy, full of power, never ending. (SM 399)

Franzen's imagery of an unfruitful potency is mirrored in Jack's sexual appetites. Jack's voracious sexual drive is redirected into the pulsing, toxic machines. Soon after the well is dug, Jack no longer has sex with anyone. According to Anna Krasner, "He can only do it… with Dom Perignon bottles!" (SM 402). Jack's pursuit of power and profit completely separates the sexual act from its connections with gender. Instead, Jack uses sex only as an intimate metaphor for the power he has over people and the land. A voyeur instead of a participant, he secretly watches his new son-in-law, Bob Holland, sleep with Anna, "Watching him raise her hips from the carpet and replow the warm, moist, trembling earth" (SM 402). Again, Franzen connects the compressed domestic situation with the more expansive destruction. Jack's substitution of power and greed for sexual passion is a direct antecedent to Melanie's substitution of money for love of her family.

Like a severe leak from one of Sweeting-Aldren's holding tanks, insensate sex and toxic waste flow over and invade every aspect of *Strong Motion.* It becomes impossible to separate sexual dominance from ecological abuse. Once Franzen forces us to inevitably conclude that both flow from the same source, certain moments from the beginning of the book take on tremendous resonance. Louis's dreams from part one now seem prescient. Having already dreamed of his mother having sex with Sweeting-Aldren executives, his subconscious revisits the same nightmare, only with a different Sweeting-Aldren executive, his grandfather:

> Louis recognized him from the painting above the fireplace. The neat, bald skull, the lusting black eyes. Catching sight of Louis, he at once turned away and did something to his pants, adjusted something in front. This was when Louis realized that the entire room was slick with semen, greenish white semen deep enough to cover the soles of his shoes, and he woke up quaking violently. (SM 93)

Only through Franzen's exploration of deep faults can the reader fully understand and map the connections present in this dream; that the sexual exploitation of women is linked with the exploitation of the environment. Later, at a Red Sox game, Louis sees the CEO of Sweeting-Aldren with a twenty-year-old girl. Louis imagines him taking her "off to some overfurnished room to penetrate her warm orifices in privacy, the same privacy in which even now, in all probability, his other effluents were being pumped into the yielding earth" (SM 189-90).

Franzen's ecofeminist critique extends beyond just the overt connections between dominating women and dominating land. Deeper under these connections lies a postmodern, feminist critique of the idea of progress, specifically progress as defined in very limited, masculine ways. These notions of progress depend upon an understanding of nature as that which can be manipulated by man. Only that which can be quantified is true. Only that which can be dominated by man is true. According to the intellectual historian Val Plumwood, "this ideology of the domination of nature plays a key role in structuring all the major forms of oppression in the West" (Plumwood 74). For Plumwood, all oppression springs from a consideration of nature as that which must be dominated. Using Plumwood's ideas, we can connect the logic of domination to the rise of reason as the dominant judge of value. In other words, the logic of the Enlightenment can be linked to a logic of domination.

This logic of domination created the cultural foundation that allowed Sweeting-Aldren's rapid "progress" to occur. By taking concepts that should have a neutral quality and forcing them into a hierarchy of values, more powerful classes can invoke reason and progress as justifications for their dominance. Thomas Docherty explains how these hierarchical structures solidified as the Enlightenment set out to define the natural world in abstract, formal terms. The Enlightenment

"aimed at human emancipation from myth, superstition and enthralled enchantment to mysterious powers and forces of nature through the progressive operations of critical reason" (Docherty 5). As a result, the knowledge that men sought to gain in the Enlightenment becomes intertwined with issues of power: "Knowledge is reduced to technology, a technology which enables the *illusion* of power and domination over nature" (Docherty 6). The domination over nature is illusionary because reason fails to account for that which it cannot categorize or quantify, those other qualities often characterized as feminine: subjectivity, emotion, spirituality. Progress becomes a purely masculine pursuit, accomplished by men or pursued in a direction that benefits a masculine perspective, often at the expense of women, those not defined as men (slaves), and the environment. The masculine perspective becomes the norm.

In *Strong Motion*, Franzen entitles his first section "Default Gender." What appears natural in the world, the direction of progress and its accepted costs, are concepts constructed from a strictly masculine purpose. What appears neutral is actually biased. Janis Birkeland calls this the "androcentric premise," which "prevents our questioning the necessity of power relationships per se" (Birkeland 25). The androcentric premise conceals the ideological basis of oppression by making male bias appear neutral. If mankind is, "by nature autonomous, aggressive, and competitive (that is, 'masculine'), then psychological and physical coercion or hierarchical structures are necessary to manage conflict and maintain social order" (Birkeland 25), hence giving rise to the logic of domination. Renee Seitchek recognizes this when she says the "men's moral superiority was structurally guaranteed" (SM 263), because the qualifications for superiority are inextricably linked to the logic of domination. As the most intelligent character in the novel, Renee repeatedly balks at the default gender. But despite her intelligence and stubbornness, she is unable to account for any change. Her frustration cannot even take solace in destruction, because even in a culture reduced to rubble, the zero point at which everything begins always seems to be coded masculine. Progress, as defined by the West, can move in only one direction.

The androcentric premise defines where progress will go. Among the values elevated in the eighteenth century—reason, rationality, autonomy and science—it is science that achieves a pre-

eminence that begins to dominate all thinking and evaluation. The pre-eminence of science also limits the idea of what constitutes relevant knowledge. Society appears to understand nature only in relation to what it can control. In other words, we understand nature only through the device of the scientific method. Aaran E. Gare, in his book *Postmodernism and the Environmental Crisis*, sees science as "the expansion of a technological orientation which reduces the world to manipulable objects. The use of mathematics and the design of experiments are such as to reveal the world only insofar as it is controllable" (Gare 53). The increasing hegemony of science disguises its manipulative perception of nature, again, the illusion of dominance. The scientific view of nature as object becomes the only way of seeing the environment. Nature becomes a commodity like anything else. Once nature is defined as a series of objects, those objects acquire value. But ascribing value to nature is to debase it, for that value is only a measure of what is valued in man's estimation (Gare 90). Despite its seemingly positive effect, ascribing "value" to nature is itself androcentric because it rests on this Enlightenment scale of what is valuable, a scale that has been shown to be intrinsically destructive to nature.

This is the setting that events play against in *Strong Motion*; an increasing hegemonic view that ascribes value to everything and derives that value from ideas rooted in a concept of progress that reduces the culture to a monochromatic consumerism. Franzen portrays an America marching toward a time when:

> your tap water will be bright red and taste like Pepsi, and the only birds will be educated sparrows chirping 'Just say no!' and blue jays crying 'Sex!'… and all the forests will be planted with the same kind of pine tree or the same kind of maple tree, and even a thousand miles out from shore the bottom of the ocean will be covered with rusty scum and plastic milk jugs, and only tunas and sardines and jumbo shrimps will swim there, and even at night on a remote mountaintop the wind will smell like the exhaust vent of a McDonald's. (SM 305)

Progress consists of manipulating nature for our convenience. Despite surface talk of spirituality, emotion and transcendence, the culture represented by Franzen strictly ignores those qualities in

everyday life. The culture is so masculine in structure, so objective and "logical" that it becomes mechanical, devoid of spirit: "all the vital functions of the average American intelligence can now be simulated by a program running to 11,000 lines supported by six Phrase libraries and one Opinions library together totaling less than eight megabytes" (SM 301-2). Franzen sets his characters in a degraded system, one that is regressing towards two functions: fulfilling basic needs and shopping. In his diagrams, feminine qualities such as subjective experience, emotion or cooperation have no place. They are irrelevant. Subjectivity is relegated to a lesser role. Those concepts opposite of reason and logic, such as emotion and feelings, are derided within the system:

> [I]f you let emotion trick you into thinking there's something unique or transcendent about human subjectivity—you might find yourself wondering why you've organized your life as if you were nothing but a machine for the unpleasant production and pleasant consumption of commodities. And why, in the name of responsible parenthood, you are fostering in your children the same ethos of consumption, if the material is not the essence of humanity: why you're guaranteeing that their life will be as cluttered with commodities as yours is, with tasks and loops and input and output, so that they will have lived for no more purpose than to perpetuate the system and will die for no more reason than that they've worn out. (SM 304-5).

In the final analysis, the highly objective, mechanistic, scientific approach to nature fails to provide a reason to live. Franzen ironically remarks:

> And so for your own piece of mind, since nothing can be proved or disproved anyway—since your science disqualifies itself from answering precisely those questions that concern the mind's ability to feel that which is, in an absolute and verifiable sense, not there—isn't it safer all around to assume machines have their own virtual souls and feelings? (SM 305)

Not only does the scientific view of nature and progress leave us without soul or hope, it leads to a more immediate, physical threat. The runaway pursuit of profit culminates in a life out of balance.

The view of nature as an object for use by man inevitably concentrates too much of the world's wealth, resources and power in one section. Franzen suggest that the gains made under such a system are temporary, and while the rewards may seem to confirm the logic of domination, such a view is short-sighted and simplistic. The natural world operates by rules more complex than the strongest survive, and this aberration of androcentric power will be corrected. "The system can be irritable when overburdened" (SM 299), Franzen writes, ominously suggesting that the natural system will correct whatever imbalance irritates it. His earthquakes are the rumblings of a strained system.

On one level, the logic of domination severely upsets the ecological balance of the world: the direct result of environmental abuse is the earthquake that cripples Boston. But Franzen's earthquake is also a metaphor for intellectual upheaval. He expects a political engagement from his readers. He structures his novel to rupture Boston's complacency, but also to instill strong motion in us as readers. Franzen is worried by the same problem as the intellectual historians mentioned earlier. If Enlightenment philosophy confirms itself, causing an engagement with the world that only results in a purely formal proof of reason, how can there be political engagement? How can we see beyond this mirror? Franzen is asking for that engagement from us. An engagement that Thomas Docherty says is "characterized by the… eruption of history into the consciousness in such a way that the aesthetic or formal structures of consciousness must be disturbed" (Docherty 8). Franzen's earthquake is that eruption of history.

In *Strong Motion,* Sweeting-Aldren is ironically the means to that eruption. As Sweeting-Aldren is analogous to all environmental polluters, the city of Boston is the microcosm of America. The illusionary stream of wealth created by the Reagan years was particularly profitable for Boston and Massachusetts. But the nineties have revealed the illusion: "a receding flood of dollars had left countless new condominiums stranded in fields that were muddy and barren and rutted with Caterpillar tracks" (SM 46-7). From the vantage point of an airplane, Renee sees greed-caused imbalance:

> A hillside vomited smashed cars and clots of rusted waste. Proud mansions spread their green velvet skirts on land wedged between the old brick phalluses of industry and the newer plants—flat rectangles with gravel on the roof and trailers crowding to feed at troughs in back. The most permeable of membranes separated a country club from acres of bone-colored slag piles streaked with sulfuric yellow, like the pissings of a four-story dog. Low-rise condos with brand-new parking lots and BayBank branches were perched above algae-filled sinkholes littered with indestructibles. Everywhere wealth and filth were cheek by jowl. (SM 287)

When Renee travels to Chelsea, she crosses a bridge between the wealth of those with power and those forced to pay for that power:

> Renee looked up at the solid counterweight suspended above her (it was the size of a mobile home) and considered how the glassy wealth of downtown Boston required a counterweight in these industrial square miles, where vacant lots collected decaying windblown newsprint, and the side streets were cratered, and the workers had faces the nitrite red of Fenway Franks. (SM 316)

In Boston, the counterweight has grown too heavy. The whole structure is precariously close to collapsing.

Near the end of the novel, Franzen once again revisits the roots of the impending catastrophe. By quoting one of the great thinkers of the Enlightenment who protested unnecessary consumerism, Franzen connects the Enlightenment directly to the results of Sweeting-Aldren's runaway greed. Like most Europeans, John Locke saw America as something of a paradise. The historian Bob Holland posts a passage from Locke on his study door:

> For I ask, What would a Man value Ten Thousand or a Hundred Thousand Acres of excellent *Land*, ready cultivated, and well stocked too with Cattle, in the middle of the in-land Parts of *America*, where he had no hopes of Commerce with other Parts of the World, to draw *Money* to him by the Sale of the Product? It would not be worth the inclosing, and we should see him give up again to the wild Common of

> Nature, whatever was more than would supply the Conveniences of Life to be had there for him and his Family. (SM 365)

Locke sees America as a capitalist *tabula rasa*, a potentially untouched land, apart from the excesses of the marketplace. The yellowed quotation taped to Bob's study assumes a wistful air, a hope for what might have been.

Instead, America has embraced and perfected the immediate rewards of capitalism. The full-tilt pursuit of short-term gain has pushed the country to acquire more and more debt to the poor and underprivileged in the present, and the countless (or numbered) generations of the future. Success in the post-Cold War era has costumed America as the culmination of civilization. Philip Stites, a minister devoted to closing down abortion clinics in Boston, comments on how easy it has been to hypocritically hide the incredible debt under America's surface prosperity: "God gave America so many fantastic riches that even total idiocy could make a showing in the short run, if you don't count thirty million poor people and the systematic waste of all the riches God gave us" (SM 328). Bob Holland rips off that veil of success to show how dependent we are on people outside of America's success:

> Even if you're not rich, you're living in the red. Indebted to Malaysian textile workers and Korean circuit assemblers and Haitian sugarcane cutters who live six to a room. Indebted to a bank, indebted to the earth from which you've withdrawn oil and coal and natural gas that no one can ever put back. Indebted to the hundred square yards of landfill that will bear the burden of your own personal waste for ten thousand years. Indebted to the air and water, indebted by proxy to Japanese and German bond investors. Indebted to the great-grandchildren who'll be paying for your conveniences when you're dead. (SM 382)

Even Louis, Renee and Stites, despite their lifestyles, are forced to live in a culture that sinks them deeper into debt everyday. The mere act of living in America puts one's life out of balance. For the executives at Sweeting-Aldren, that imbalance pays great dividends at first. Franzen's America is like a see-saw. As the balance shifts to the side of Sweeting-Aldren and its ilk, the plank accelerates

slightly. The more that balance shifts, the acceleration increases. Sweeting-Aldren's progress is reliant on that shift. By the nineties, the company is cruising at high speed. But the plank is rushing toward the ground, and eventually will hit bottom.

When the geophysical structure under Boston can no longer absorb the injected waste of Sweeting-Aldren, the anticipated big quake hits. And not only has the physical structure erupted, but the social structure has undergone upheaval as well. Renee and Louis break apart when Louis can't control his desire for a docile, beautiful younger woman. Melanie and Bob are nearing divorce. Renee has an abortion, and on the way home, is shot by David Stoorhuys, vice-president of Sweeting-Aldren and Peter's father. The earthquake magnifies the culture's reliance upon domination. Franzen suggests this drastic shift is what the logic of domination leads to.

The Sweeting-Aldren executives are, of course, the most clear-cut villains of *Strong Motion.* Their blithe denial of the destruction they were creating causes a catastrophe that brings Boston to its knees. But Franzen's accusatory finger points in many directions. Throughout the novel, we've seen the causes of the disaster engaged on a smaller scale within the various families. Franzen refuses us the consolation of blaming only those people running the plant. Such a righteous indignation is itself a denial of blame. Ironically, it is a Sweeting-Aldren executive who acts as Franzen's final moral condemnation. When David Stoorhuys's wife asks him about the shooting of Renee and the environmental problems his company has caused, he lashes back, directly connecting personal choices with environmental consequences:

> Well, maybe you're a little late. Maybe you're about twenty years too late… You made your choice, you chose the children, and now you think you have the right to ask me *questions?* And *blame* me? Who do you think has gotten the benefit of those twenty years? (SM 453-4)

Unfortunately, Stoorhuys is correct. It is too late to be morally superior. The silence of the past twenty years has implicated the others. The rage that Louis has built up against Sweeting-Aldren dissipates as he recognizes how far culpability spreads. When faced with the knowledge that Sweeting-Aldren only existed because everyone wanted pesticides, spandex bathing suits, and

explosives, he can hardly muster up any anger against the company that caused such massive destruction and nearly killed his girlfriend. Sweeting-Aldren may have acted as the catalyst, or as a solid manifestation of a corrupt system, but responsibility for a system out of balance lies elsewhere. The people of Boston sue Sweeting-Aldren, but with little likelihood of success. The factory has burned to the ground, the executives have all resigned and, with their pensions and their trophy wives, escaped to the island of St. Kitts, avoiding extradition. The people of Boston sue the Commonwealth of Massachusetts. The Commonwealth sues the Federal government, all claiming somebody else was responsible for allowing this to happen. "But," Franzen writes, "in no case did the American people themselves feel responsible" (SM 481). Dow, Monsanto and Du Pont pick up the slack left by Sweeting-Aldren's absence: "products for which demand was only increasing in America" (SM 480). And by August, stock prices are up for all three companies. Sweeting-Aldren begins to appear as just a blip on the screen, going the way of Union Carbide and Exxon; demonized by the media and the masses, but forgotten when pulling up to the pump, or when ants invade the kitchen. Even the prodigious destruction caused by the earthquake is placed in perspective. The four to five billion dollars in damage, "roughly what it had cost Americans to service the national debt over the Memorial Day weekend" (SM 477), is rendered miniscule by the comparison. The American people refuse to recognize that it is their desire for a simplistic, manageable, controllable nature that is producing this monumental stream of waste, this fantastic imbalance in the world.

Bukiet remarks that Franzen's fiction "still manages to be redemptive" (Bukiet 21). Franzen admits to the same, saying that "the formal aesthetic rendering of the human plight can be… redemptive" (*Harper's* 52). The bleak world still offers some hope. In *Strong Motion*, that hope lies with Louis and Renee. Despite the chaos around them, and their personal failings, they manage to return to each other. Louis finds that "love could teach him," and that love "carried you upward with a force comparable in strength to the forces of nature" (SM 486). Just as Franzen gives his characters something redemptive in the act of love, he gives himself redemption in the act of writing.

Battling the depression that comes from being a novelist in the age of images, Franzen's search for a reason to write leads him to this redemptive quality of fiction.

Robert Stone, in the introduction to *Granta*'s *Best of Young American Novelists*, writes that *Granta*'s selection of novelists reflect "a resurgence of realism that, during the late sixties, seemed to overcome the postmodernist experiments of writers like John Barth, John Hawkes, Albert Guerard, the Barthelmes etc." (*Granta* 13). Perhaps "overcome" may be the correct word for most of contemporary American fiction. But authors like Jonathan Franzen, Richard Powers and others that have adopted the experimentation of the postmodernists have moved to another realm, taking the experiments with them. Critics of Pynchon have noted a gap between his extravagantly structured abstract ideas and his cartoonish characters, seeing this as a major flaw in his writing. They have similar complaints about Gaddis and DeLillo. Authors like Franzen work to fill this gap, elegantly combining Pynchonian abstraction with that "grounding in human reality" that Pynchon felt was lacking in his early fiction. Perhaps we care more about Louis and Renee than Tyrone Slothrop, but without the exploration of the culture that shapes them, Louis and Renee are empty of any significance. Only with the deep and penetrating exploration of culture do Louis and Renee achieve their full realization as characters.

In *Harper's*, Franzen searched for a reason to write in an age of images. He feels he is no longer writing for what could be called a mainstream audience, believing such an audience no longer exists. When the success of a novelist is measured by units moved, success in the mainstream is likely not to come to an author like Franzen. Instead, like the protagonists in *Strong Motion*, Franzen reacts against his culture. He calls his fiction "tragic realism," the point of which is to "highlight its distance from the rhetoric of optimism that so pervades our culture" (*Harper's* 53). He reacts against an androcentric culture that views art as manipulative objects, commodities, outlines for multimedia extravaganzas. Franzen writes with goals that lie outside such a superficial culture, preserving what that culture refuses to acknowledge as worthwhile. He sees novelists, "preserving a tradition of precise, expressive language; a habit of looking past surfaces into interiors" (*Harper's* 52). "Tragic realism" acknowledges that progress has a cost, and that America

is not the chosen nation. Franzen's realism, "preserves access to the dirt behind the dream of Chosenness—to the human difficulty beneath the technological easy, to the sorrow behind the pop-cultural narcosis: to all those portents on the margins of our existence" (*Harper's* 53). Franzen writes to restore balance to the world. By digging in the dirt, Franzen has found a way to keep the see-saw from crashing to the earth so soon.

Five

Richard Powers, Ecocriticism and the Pursuit of *Gain*

> *There's no cancer germ is there? No, no cancer's it's an expression of life gone wild, these exuberant living cells suddenly cutting loose, multiplying all over the place having a grand time they're all metaphors for reality right here on earth*
> *William Gaddis,* A Frolic of His Own

Thomas Pynchon framed *Mason & Dixon* inside the eight-year span between the two Transits of Venus. His allegorical revisioning of eighteenth-century America was structured according to the principle of parallax so crucial to observing that astronomical phenomenon. The apparent change in position of the planet Venus when viewed from differing lines of sight was duplicated by Pynchon's intersecting planes of historical recreation and contemporary sensibility. At the intersection, Pynchon's parallax revealed a complex dimension of the birth of the American nation.

The principle of parallax similarly shapes Richard Powers's sixth novel, *Gain*.[35] In a 1998 interview with Sven Birkerts shortly after the publication of *Gain*, Powers remarked that he was influenced by Joyce's *Ulysses* and his use of two frames that create three dimensions in the mind of the reader. Powers describes much of his artistic work as similarly incorporating two dialogic aspects designed to create a third dimension of knowledge about reality, a dimension that allows for commentary on the acquisition of knowledge. For Powers, that dimension enabled through parallax can be achieved through looking at those large social systems that constitute our culture. He is especially concerned with the relation between little and big. In a 1998 interview with the Internet magazine *Salon*, he discussed this dialogue with Laura Miller:

> There's this desire to see how the parts of the whole can see the whole, come to know it, suffer the consequences of it. Fiction may do that—implicitly, anyway.

[35] For a more complete articulation of this idea, see Harris.

> There's always a way of reading a book—however minimal, however well behaved, however domestic—as a consequence of systems that lie just offstage in the lives of the people whose tragedies you're being caught up in. What may make my books my own is this desire to bring those offstage elements on, and make them characters.… Look, the world isn't simply taking place at eye-level view, there's lots going on above us and below us. And why not make those levels part of the dramatic structure or the narrative structure? (Miller par. 30)

In *Gain*, these levels are directly related to our ecosystems. From below, *Gain* is informed by an understanding of how nature operates on a molecular level as well as the human manipulation of those molecules. From above, *Gain* is informed by the knowledge that large social structures not only influence our behaviors, but these structures are directly reconfiguring our physical world. Capitalism and its engine, marketing, are altering the physical structures of the planet to such an extent that we are struggling to adapt. The change effects us not only at a cultural level, but at the smallest levels of matter, as newly designed molecules are introduced into the ecosystem.

The laws of incorporation mask an ultimate pursuit of profit by presenting the illusion of a corporation as a "citizen," a fictional individual with rights akin to a biological human. But, of course, corporations have no humanity, and as their growth and complexity increase, whatever motives beyond profit that real human beings exerted dissipate in the faceless exploitation and destruction of resources. *Gain* shows us the danger of the corporation becoming naturalized, a socially constructed reality that has escaped control of its creators. Just as the idea of nature seems self-evident and easily definable, so does the idea of the corporation seem inevitable and commonsensical. Clare, Inc. is the twentieth-century, amoral successor to Vaucanson's duck from *Mason & Dixon.* Some addition to the company's machinery has given it life beyond its creator's control, and now no one seems to own the company—not the shareholders, not the company presidents, not the country that granted it its charter to operate.

Gain is about the questionable results that arise when we allow business to determine our environmental realities. Business instills in us a world view that considers every aspect of reality a

factor in its quest for profit. The reduction of nature to mere standing resource is a narrow and deadly understanding of nature. A more destructive version of the materialist epistemology, this economic construction sees nature existing primarily for the needs of business. While portions of nature may be reserved for recreation and preservation, these qualities are defined in economic terms, weighed in cost/benefit ratios that attempt to place monetary values on fresh air, spotted owls, flood plains and mountain tops. No matter where one might draw the lines that determine the categories of "nature," business will classify everything as resource, ranking nature's assets in terms of profitability. Those facets determined unprofitable will be willingly, eagerly designated as "nature worth preserving." All else, from the Alaskan National Arctic Wildlife Refuge to the Florida Everglades, will be deemed too "valuable" not to exploit. Drilling and building will commence. Like the materialist view of nature, this economic understanding believes we can easily understand what is nature. Too rugged to build? No minerals easily mined? Too many lawsuits if we kill these birds? Okay, then, that's nature. Nature is what is not valuable. What *Gain* shows is a social construction of value overlaying a materialist concept of nature, the discontinuities of which gradually disappear over time until the business world view is the "natural" way of discussing the role of nature.

These two levels are in keeping with the idea of parallax as well as numerous other dualities in *Gain.* The novel is Janus-faced. Its dual plot begins with the lowly birth of an industrial giant and the death of a teenage girl. In connecting these two incidents, artistically though not causally, Powers immediately implies an equation that will structure the whole novel. Gain is always accompanied by loss. The rise of Clare, Inc. from a three-man soap and candle works to a multinational conglomerate finds its balance in the last year of life of Laura Bodey, victim of ovarian cancer. The interlacing structure of the novel allows Powers to reveal the ruthless equation that keeps these two plots balanced. The intertwined narratives of Clare, Inc. and Laura Bodey present two faces of capitalism. Soap itself is a "Janus-faced intermediary" (46), a molecular process where household wastes such as fats and ash are turned into the very agent that cleans the household. And finally, Powers ends *Gain* with the creation of "a chunk of [computer] code whose

ambidextrous data structures looked out Janus-faced to mesh with both raw source and finished product" (355).

Another dual facet of the novel is its central theme of business and technology both giving and taking away. The company creates desire with advertising and then satisfies what the culture desires. America's full-scale commitment to capitalism fuels a fire storm of want—a positive feedback loop that spirals upward and outward, consumers consuming everything in their path. "We have created this life that once did our bidding," Powers tells Miller, "and now is calling the shots" (par. 10).

With *Gain* Powers takes us back into the nineteenth century to reveal how America's wide open scramble for profit was an exercise in deficit spending, with the bill now coming due. The novel depicts a culture whose knowledge is almost entirely reduced to an equation, where every aspect of life is assigned a numerical value, and those aspects unquantifiable are perforce seen as worthless. On one side of the equation is Laura's perfect health and full life at the start of the novel. These personal assets balance the struggles and failures of Jephthah Clare and his sons as they attempt to rebuild their economic lives in nineteenth-century America. By the end of the novel, Clare's runaway success is matched by the equally rapid decline of Laura's health. Excess of business matched by excess of cells. In depicting our culture's increasing concern with the bottom line, *Gain* brings to mind the warning from the gospel of Matthew: "For what is a man profited, if he shall gain the whole world, and lose his own soul?" (16:26). The culture of business has achieved remarkable successes, but has it done so at the expense of our humanity? This is the central question of *Gain*.

Throughout the course of the novel, Powers will implicate a company that finds success in exploitation, using their history to show how the desire to grow bigger is a desire that eventually consumes. The company is like an invasive species, one so successful in exploiting an ecosystem that it balloons to unsustainable proportions, exhausts all resources, and finally collapses under its own success. Yet Powers also implicates the culture that creates and feeds the company. Clare, Incorporated may be a monstrous creation, but Powers reveals that the very foundations of

twentieth-century economics created Clare. William Clare, one of the last Clares to stand at the head of the company, conceives of humanity's history as a buildup to this culminating point. "Money was a theory of universal conversion," he believes:

> Everything was procurable by the sacrifice of *x* units of any other object, effort, or interval of time that you might care to sacrifice for it. The history of humanity was the history of higher and higher orders of convertibility. Barter, money, insurance, corporations: equivalence for equivalence, transfers for transfers, until all cogs turned every other in the self-replenishing whole. (266)

His theory is remarkably seductive, to such an extent that it remains the ether in which most contemporary environmental debate occurs. Environmental practices are positioned against economic growth. Pollution credits are purchased by factories, power plants and conservation groups. Vast tracts of land are purchased by the Nature Conservancy, buying the protected wilderness that otherwise would be developed. In just this fashion, environmental thought is encompassed in an economic theory that relies on money as the universal arbitrator of value. David Harvey, in *Justice, Nature, and the Geography of Difference*, conceives of this as a moral issue:

> Capitalism is… beset by a central moral dilemma: money supplants all other forms of imagery (religion, traditional religious authority, and the like) and puts in its place something that… has no distinctive image because it is colorless, odorless, and indifferent in relation to the social labor it is supposed to represent…The effect is to create a moral vacuum at the heart of capitalist society. (156)

Capitalism, by putting this universal translator of value at the center of the culture, distances value from intrinsic worth. The repercussions of this are manifested everywhere in *Gain*.

* * * * *

Powers begins with the very source that allows for any gain on the earth, the sun:

> Day had a way of shaking Lacewood awake. Slapping it lightly, like a newborn. Rubbing its wrists and reviving it. On warm mornings, you remembered: this is why we do things. Make hay, here, while the sun shines. Work, for the night is coming. Work now, for there is no work in the place where you are going. (3)

Forever frustrating the second law of thermodynamics, the sun's energy provides the bountiful gift that keeps the cycle running. The town of Lacewood seems like a mid-America paradise in these opening pages. It is economically sound, good-hearted and possessed of a strong work ethic. Lacewood wants to make the best use of its bounty, like Laura's plants that "catch a teacupful of the two calories per cubic centimeter that the sun, in its improvident abundance, spills forever on the earth for no good reason except that it knew we were coming" (7). Yet this ideal American town has bargained unwittingly for more than it wanted. The town of Lacewood, home to the North American Headquarters of Clare Agricultural Products Division, has allied itself with the fortunes of Clare and capitalist enterprise. At the end of the millennium, it's finding the price of the alliance too high. Lacewood's population may be slowly dying, poisoned by the backbone of the town's economy, the Clare Industrial plant.

Clare, Inc. has small, but laudable beginnings. In 1830, Resolve and Samuel Clare, sons of the failed trader Jephthah Clare, take to manufacturing soap and candles as a way to begin anew their business. They join with the Irish immigrant Robert Emmet Ennis to produce products of impeccable craftsmanship. In this rosy beginning, Powers portrays the company fathers sympathetically. Samuel is a devoted Christian who refuses to cheat his customers, insisting on maintaining the real weight of their products when the going practice is to cheat. Ennis demands perfection in the manufacturing of his soaps, going so far as to sell his products at a loss rather than compromise his work. Resolve, the most mercenary of the three, is not deliberately dishonest, but simply committed to the bottom line. His business sense allows the three to profit from helping a nation cope with the increasing grime of an industrial age. While not altruistic in their goals, the Clares are engaged in a beneficial service. Ennis even takes his share of profits and builds a mausoleum to his dead wife: "A monument paid for by cleanliness, hygiene that might have saved

her life, as it now saved so many others" (133). The start of Clare is innocent enough, even praiseworthy to some extent: the business is a harmonious relationship between a need and a natural solution, and the production methods are natural, built on a human scale.

Things start to go awry when Samuel and Resolve's younger brother Benjamin is forced into the business. Benjamin is a scholar, more at home among his books and in his lab than in the business environment of his brothers. While the nascent Clare company does well, Samuel and Resolve are content allowing Ben to pursue his higher education. Yet they soon find reason for calling Benjamin to his place in the firm. When Benjamin, on a field excursion to the Southern States, witnesses Cherokee marching on the Trail of Tears, his thoughts turn bitter about the progress of man. Samuel, "fear[ing] for his younger brother's doubting soul" (47) calls Benjamin back. A botanist and explorer, Ben has no real interest in the company, preferring to devote himself to pure research rather than the more sullied applied science. Escaping from the calling of his family business and disturbed by his encounter in the South, Ben joins the U.S. Exploration Expedition to the southern polar regions.

Powers portrays the scientist as a disciple of the Enlightenment. "Discovery was man's duty, until all the earth's surfaces were lit" (53), Ben believes; this is the pursuit of knowledge as the engine of progress. Knowledge is conceived in nearly colonial terms. Just as the "civilized" world had a duty to bring civilization to the darker corners of the world, Enlightenment scientific pursuits were a duty to bring the understanding of man to the hidden corners of knowledge. Man would go forth to put all of nature under its control. Knowledge, like civilization, only exists when it is revealed and controlled by man. Without man's intervention, especially Western man's presence, Ben sees the world as dark, uncivilized—both in its peoples and in its hidden secrets.

The expedition is seemingly a positive one, yet the goals are rooted in a colonial if not imperial motivation. The scientists and explorers gain much knowledge about the antarctic as well as the islands of the South Pacific, but these advancements are tempered by, among other events, draconian justice handed out to islanders and a brutal sailor who massacres penguins for sport. The scientific expedition suggests exploitation in addition to exploration. The scientists do not

tread lightly on the new ground they explore. Instead, they bully their way through the southern hemisphere, arrogant in both deed and thought. They are avatars for the waves of capitalism and imperialism that will likely follow in their wake: "At the day's end, the chief legacy of the expedition lay in its charts. With them, fabled locales fell into fact, hurrying the world toward a society of universal trade… One hundred years later, the American invasion of Tarawa employed a map that Ben Clare had helped to draw" (61). In this footnote to the expedition, we see that the imperialistic relocation of the Cherokee Nation subtly foreshadowed the ultimate results of the U.S. Expedition. Benjamin's escape from business and the disillusioning cruelty of the Trail of Tears ironically leads to a melding of both driving forces in the impetus to discover and dominate the world—a world of "universal trade."

Benjamin Clare becomes a typical Powers character, a highly intellectual individual who struggles to maintain a sense of idealism seemingly incompatible with the demands of modernism. His relationship with his brothers' company is a study in the tensions between our ennobling pursuit of knowledge and the often degrading and exploitive uses of that new-found knowledge. The Enlightenment ideals embodied in Benjamin reflect the arrogance that accompanied the desire to understand our world. Too often the science and technology practiced by Benjamin and his colleagues are without moral guidance. Benjamin naively believes that his continual resistance to the pressures from his more worldly brothers keeps him somehow pure and absolved from such lowly affairs. It is through Benjamin that Powers shows us that such an abdication of responsibility leads in incremental steps to exploitation of all aspects that touch business: natural resources, labor, customers, and the scientific discoveries seemingly made in a pure pursuit of knowledge.

It is in Benjamin Clare that Powers embodies this impossible struggle to keep science separate from business. Upon Benjamin's return from his travels, his older brothers recall him back into the business, reluctantly indulging their brother's intellectual freedom by allowing him to set up a laboratory as an adjunct department of the company. Benjamin's lab becomes a precursor to the modern day research and development division of Clare, Inc. Samuel and Resolve, however, believe

that should money get tight, Benjamin will have to devote his energies to more practical concerns. Benjamin, on the other hand, seems fully committed to his pursuit of pure science. Powers portrays him as almost disgusted with any taint of commercial interest in his work. Yet despite Benjamin's resistance, two critical moments of Clare's success are directly attributed to him.

Very early on in Clare, Inc. history, when the Clare brothers are still trying their luck as importer/exporters, they turn to their college-educated brother to analyze the economics of trade under highly punitive tariffs. Their younger brother stumbles upon the economic principle that will lead to the Clare association with soap, the foundation of the empire. What Benjamin discovers is that the economics of the industrial era are rooted not in intrinsic worth, but in value that is a product of semiotic signification. Value, Ben surmises, will often be a product of usefulness, but in select instances, value becomes a product of association, regardless of usefulness. "That place where money parted from value" (20) is frivolity, "the only merchandise whose sales could survive a frivolous increase in price" (20). High tariffs in nineteenth-century America make importing and exporting staples unprofitable. Even those goods that are indispensable—like soap—cannot reliably be sold at a profit. Benjamin's key insight is to recognize that those goods that are not staples are precisely the goods whose price is not dependent upon worth. In other words, Benjamin sees that the Clares can sell the associations attached to a product. The materiality of the product is no longer its selling point, but rather the social constructions that can be attached to the product. On Ben's advice, Samuel and Clare import a mild English toilet soap that "cured an itch that Americans did not even know they had until the scratch announced it" (20). Pech's Cleaning Ovals offers little more than homemade soap, but its value rises because it is exotic, exclusive: "The impertinent price bore witness to some hidden amplitude" (20). High price itself conferred worth on the product. Value was performative, conferred on the soap by a monetary sign that stated "this soap is valuable." Benjamin discovers the economic coda to structuralism. With no intrinsic connection between signifier and signified, the proper signifiers can greatly increase the value of the signified. Benjamin's first significant business act is to introduce advertising, crude as it may be, to the Clare business.

Importing exotic soap proves profitable for only a short time. Continually frustrated by high tariffs and government interference, Samuel and Resolve abandon trade for production. We can see this portion of the company history as a reaction to the ungrounded associations of worth and value of their trading days. Relying on the flimsy association of aristocracy and elitism was too unpredictable for Samuel and Resolve. They move back to more solid ground, production. In joining with Ennis, the Clare brothers renounce the airy speculation of trade for the grounded reality of industry. The craftsman Ennis is conservative in the sense that he refuses any false associations of value for his products. "The products quality," Powers writes, "came from Ennis's innate perfectionism" (32). The new Clare products are, on the one hand, marked by the purity of Ennis's craft, and on the other by Samuel's firm insistence that the company not succumb to the practice of short-weighting their product. In all aspects of the business, the Clares seem committed to an equation where X=X.

Benjamin's second critical influence on Clare ironically redirects the business philosophy back to the untenable associations of their trading days. After his exploration ship runs aground near Hawaii, Benjamin Clare returns to Boston with little to show for his scientific efforts. His lone salvaged specimen is *Utilis clarea,* a specimen of plant given to him by a Feejeean King. This plant, with its pungent odor suggesting strong medicinal value, jump starts the struggling Clare Soap and Candle works. The resulting mixture, Native Balm soap, is the staple that keeps Clare together as it grows from a small family concern to a multinational corporation.

Yet Native Balm represents a major departure from the previous means of doing business for Clare. Relying on the best product for the best value no longer makes the grade in a cutthroat economy of boom and bust. Native Balm soap succeeds because of an entirely different reason—marketing. "The Red Man never worried about his skin. Why should we?" runs the Native Balm slogan. Clare conceives of the new soap in terms of deceit. There is no essential connection between Native Americans and the soap. Resolve and Ben use the symbolic brave to conjure up a simpler lifestyle of the past: "The simple parasitic relation of savvy native to Nature had been routed, force-marched into the Territories. The Red Man was no more…Yet the White

Man, in this all-promising age, now mourned the passing of the Indian's Arcadia" (117). Powers ironically connects this revelation with the same impetus that led Benjamin to leave the country on his scientific expedition. Benjamin inadvertently reinvests the traits of imperialism and domination of the Trail of Tears back into Clare advertising. The company begins to traffic in nostalgia as Resolve recognizes the profit to be gained by playing upon the mythic connotations of the Natural Man as well as the country's ambivalent guilt at exterminating a culture.

Nor is there any indication Native Balm offers any curative properties beyond normal soap. In fact, there seems to be little current desire for a soap that restores the skin. Yet Resolve recognizes the changing culture of industrial America. He formulates an approach that moves beyond selling soap's intrinsic properties: "they could solve the needs of progress by selling the very condition that the need remedied" (118). The idea that Clare can sell soap through cultural change strikes Resolve as majestic. Native Balm, summoned from a simpler time, will soothe the "unprecedented shocks to the skin" from the age of steam. Native Balm becomes the antidote to the harsh effects of progress. It satisfies the need that Clare creates, irrevocably changing the equation of X=X to X=X+…whatever connotations can be effectively added to the product.

The soap is emblematic of the distance coming between Clare and its products. The marketing of Native Balm clears a path that allows Clare to disassociate its products from their function, selling them instead for their symbolic value. The abstract symbol of the brave subsumes the reality of what the soap can do. Where once Clares prided themselves on the concreteness of their product—"Clare's Sons have always sold their candles a full sixteen ounces to the pound. We invite you to ascertain the truth of our stamp of 'Real Weight' by submitting our product to your own scales" (103)—now their signature product no longer has any real relation between signifier and signified. Clare has moved completely into the realm of language, where reality is as much constructed as it is a hard material.

Previously the primary engine of Clare's success was chemical. Each refinement or revolution by Ennis bettered their product. With the introduction of Native Balm, Clare is propelled by the alchemy of language. "Truth" no longer resides in chemistry, but in discourse. The shift is

subtle but crucial. It allows for the systemic replacement of an absolute moral center with one that is inconstant, situational and relativistic. When there is no "real weight" to the product, there is a lack at the center, waiting to be filled. Clare's new soap does what it does because of the signs surrounding it. With no connection to Native Americans nor any curative balm in the soap, the stamped silhouette of the brave is an empty signifier; its evanescent imprint on the soap fading after one use. In developing Native Balm, Clare gains its most effective skill as a company, the ability to sell the signification of a product. Clare learns how to market itself.

The step may seem a small one for the company, but Powers shows how ingrained Native Balm and the lessons learned have become, and how they have irrevocably structured the company. Clare moves from a company dealing with real weights and real products to one dealing in abstractions. The company leaders have completely discounted the materialist concept of their products. No longer are they selling the hard correspondence connection between the idea of nature and the materials they use. Instead, they profit from manipulating the cultural ideas of their products, regardless of any concrete connection. More and more the executives will devote energy to numbers and signs cut adrift from the products they represent. Marketing increasingly will occupy larger percentages of the budget. Even the company name loses its grounding. As the company grows, the Clare name becomes symbolic of quality, valuable in its own right. After the third generation, however, no descendents of Jephthah Clare are in positions of power in the company. "Clare" ≠ Clare.

Emblematic of their movement from dealer of products to manufacturer of signs is Clare's logo. Originally the logo was a realistic sketch of *Utilis clarea.* When morphed into the 1990s, however, the now abstract lines represent nothing to Laura when she stops to ponder them. Nevertheless, the logo truly signifies the company, which has lost the real relation to its products, and tragically for Laura, no true relation to its customers. Powers shows that, after the introduction of Native Balm, Clare's "real weight" is no longer guaranteed. If the company was once engaged in a respectable enterprise, they've abandoned that pursuit. They are now free to float among whatever signs equal the best for the bottom line.

By the time they reach the nineties, Clare's public relations machine argues that the world is simply a series of building blocks that the company can manipulate to whatever end they like: "We just need to choose what kind of world we want to live in, and then build that place" (153). The company argues that simply changing the terms will change the reality. In its own way, Clare adopts a constructionist view of nature, but it is a chemically constructed nature as opposed to a socially constructed nature. Their nature is as infinitely malleable as the *idea* of nature itself. Yet Clare believes nature can be restructured, not because of the social pliancy of an idea, but because they believe they have mastered the fundamental building blocks of nature—the chemical processes by which they create products. For them, nature is simply a result of technology. Like Benjamin's colonial pursuit of knowledge, the present day Clare believes nature—whatever nature they decide to create—exists only when they create it.

Of course their mastery is an illusion fueled by hubris. Clare has a fundamental misunderstanding of nature's complexity. Their circle of mastery has a very short radius compared to the sphere over which they have no control. Their particular world view cannot define nature beyond manipulatable objects. Clare, Inc. fails miserably at understanding systems, both ecological and cultural, whose complexity cannot be reduced to their components. Nature does not exist in a one-to-one relation to its parts, just as Clare customers cannot be reduced to their singular spending potential. The tragedy of Laura's cancer arises from the company seeing the world in these diminished terms. As if to underscore the disconnection/ alienation of the company, a twentieth-century botanist—an Englishman, no less—reveals that the foundation of Clare's success, the *Utilis clarea,* is "not a distinct species at all but a bit of early American scientific overzealousness" (313).

After the introduction of Native Balm, Clare's purpose is no longer to make soap. It is to manufacture money; its purpose grounded in the pursuit of a symbol. Clare's manufacturing of natural resources into products is an alchemical reaction that changes things into signs, nature into money. Again Powers reinforces the Janus-faced nature of soap and of business. This transformation is not limited to just Clare or even just to the business sector. The preeminence of

money as the key factor in all equations spills over into all facets of life. *All* gain (and all of *Gain*) is measured in terms of money.

The inclusion of all things into a monetary equation is most prominent in the Laura Bodey plotline. When Laura first learns she has cancer, she expresses the disease in terms of money, figuring that it is her responsibility "To pay the check for the meal you've eaten" (40). Laura's immediate reaction is to start searching for the other side of the equation. What elements add up to cancer? What are the causes? Powers makes the connection between gain and cost, though in Laura's guilt-ridden mind, she sees herself as having incurred the debt. Laura initially believes that her lifestyle choices, her unexamined contemporary American existence, directly led to her cancer. Through pop medical knowledge—the murky awareness of environment-linked diseases fed by reports circulating through our health-obsessed media—Powers provides Laura with enough awareness to conclude that the disease is a result of her failure. She thinks her lack of knowledge and her failure to pay attention to what was really important—her health, her family—let cancer slip through the back door. The reality, however, may be that Laura is the victim, paying the bill for someone else's party.

In interlacing the plot lines, Powers structures the novel so that we can see the direct effects of Clare's evolution on Laura Bodey's body.[36] Much of *Gain* implies that the waste products from the Clare factory caused Laura's cancer, yet Clare's effect on Laura is much more than just physical. Laura's transformation is in some way symbolic of the effect business has on people. Powers convinces us that Clare, as representative of business in general, has altered our mindset. The widespread interpenetration of life by business makes it nearly impossible to conceive of our lives outside of equations involving profit, goods, production, and advertising. Business has colonized all aspects of our lives. Our sporting interests are marked by salary disputes and stadium deals. Our arts are measured in opening day box office returns and record advances. Our universities are presided over by expert fundraisers. We find it impossible to escape the pervasiveness of the profit

[36] Laura *Bodey* is truly the physical *body* of the story. Her narrative is obsessed with the inevitable breakdown of her physical being.

equation. There may be ecological malfeasance on the part of Clare, but there are also by-products that are percolating through the culture much like the chemicals seeping into the soil and the groundwater of Lacewood. The flotsam and jetsam of advertising and public relations releases that Powers peppers throughout the story are like molecules of chlorinated hydrocarbons slowly building up in the soil. Laura Bodey's cancer is the physical manifestation of business inexorably conquering her life.

In this novel of business and its effects, the white noise of advertising optimism invades all aspects of the story. In one of the many commercial interludes of the novel, Powers depicts a man stretched out on the beach listening to a miniature radio, while visions of a sunny future are layered over the scenery:

> How would you like
>
> • to run your lawn mower… on garbage?
>
> • to power up your computer… with light?
>
> • to light your whole house… with bacteria?
>
> • to take a little joyride… on hydrogen? (25)

The commercial for The Energy and Fuels Group of Clare, Inc. neatly combines capitalist provoking of desire with the enthusiastic commitment to a technological fix for any problem. The unrelenting soundtrack of the nineties is that business will provide: business will meet our needs (needs it creates) and lead us into the future. But for Powers, the promise is often hollow. The commercial ends with the song "Getting better all the time," though the sound is tinny, overheard through the earpiece. From Powers's perspective, the cheerful shout that things are getting better sounds quite small and insignificant in light of larger problems. This one moment from the book seems to capture the heart of Powers's concern: the misunderstanding and misuse of technology in pursuit of gain are bringing our world to a point of crisis. Yet this crisis is masked and the condition encouraged by the ubiquitous propaganda for the pursuit of happiness through consumerism.

Buffering the rapid shifts in time from one story to the other, Powers offers documents, commercials, flyers and memos from Clare's history and their current marketing campaign. Powers leaves these fragments unadorned by any commentary, allowing the banalities of product representation and corporate spin control to stand naked, the self-righteous public relations statements revealed as apologist for the aggressions of Clare, and the insipid optimism of its advertising as cruel irony against the onslaught of cancer.

Powers characterizes his novel as "basically a dialogue between two people: a 42-year-old woman with cancer and a multinational corporation, who under the laws of the United States is considered an individual, with due process and all the rest" (Miller par. 5). Reinforcing this conceit is the differing prose styles of the two narratives. The Clare narrative unfolds with a stern, concrete prose style layered with facts and description as in the following passage:

> Into this turbid boil Ennis sprinkled just enough sulfuric acid to dissolve the lime salts and precipitate them out as sulfate. Up from the resulting sea of glycerine floated the prized fatty acids. Ennis skimmed off the desired layer, clarified it, and clarified it again. He poured out the result into holding pans and waited for the fatty acids to crystallize into a lovely magma.
>
> This he split again and pressed, squeezing out the liquid red olein oil from the solid stearin. He melted, purified, and poured the stearin into his molds, through which he drew his cleverly plaited wicks. Cold water set the molding. He cracked the finished candles from their molds and packed them into his wedge. (32)

The clear, unadorned prose reflects the purity and commitment of the craftsman. It is a language of production, concerned with nothing but what is needed to convey the information. This is the language of the nineteenth-century businessman, serious, solid, completely absent of any frivolity or dissembling. Contrast this with the style Powers gives to Laura's narrative.

> Ellen disappears upstairs, squirreling away the peanut sheets. Lining her private nest with them. She buries her grief in fan 'zines, music with deeply

> suggestive lyrics Laura hopes she doesn't understand, and long phone conversations.
>
> The last harvest burger brought in, Laura pours a Thirst-Aid for Tim and a loganberry-kiwi seltzer for herself. She takes the drinks into the computer room and sets them next to the speakers, using the mouse pad for a coaster. (29)

Far from the concise and clear language of nineteenth-century business, the contemporary world is mottled with the language of advertising: neologisms, shorthand, abbreviations and fragments. It is a language of consumerism, a discourse so removed from the physical realm that Frankenstein creations like "peanut sheets" are common, and exotic concoctions like "loganberry-kiwi" are produced as much for the sound of their names as the flavors of their fruit.

In Powers's hands, the simple craft of candle-making appears nostalgic, with a vocabulary that easily incorporates "precipitate," "glycerine" and "stearin." The pure beauty of this craftsmanship is heightened in comparison to the adolescent, hyper-active marketing vocabulary that characterizes Laura's sensibility. The early Clare chapters proceed within a language that believes in and values truth and hard realities. Its language is shaped by the physical barriers that the company works to overcome. It is a language of the hands and of chemistry where people manipulate things. Laura's language refutes concepts of absolute truth or physical limitations. It is a language that promises all possibilities. If apple juice or orange juice become boring, simply substitute any other exotic flavor. When peanut shells become too cumbersome, or peanut butter too messy, peanut sheets solve all peanut problems. Such is the promise of this new language that even a burger can be made without beef, the ultimate techno-linguistic creation of a product that contains none of the original ingredients, a burger in name only.

The language reflects the changing idea of nature. In the early days of Clare, the discourse is more materialist, words seemingly directly connected to nature's products. Yet as science and business progress, they reveal that this connection is an illusion. The dramatic new ways of manipulating natural resources challenges the seemingly self-evident transparency of words to

nature. And as science learns more remarkable ways to physically alter nature, advertising devises new ways to manipulate the ideas that we ascribe to nature.

The interweaving of these two strands of narrative allows Powers to dramatically contrast the two differing sensibilities. The effect is not only to heighten the differences in thinking between nineteenth-century life and late twentieth-century life, or the differences between business life and domestic life, or even gender differences in the predominantly masculine Clare corporation and the feminine attributes of Laura's life. The juxtaposition of the two prose styles constantly reminds the reader that what is valued and relied upon in the past will ultimately be replaced. The foundational language of the early Clare founders will evaporate into an airy language of product names, advertising jingles and empty promises. And as the Clare corporation grows, the language of marketing and bureaucracy slowly replaces the language of manufacturing. It is a linguistic parallel to the slow erosion of control that individuals have over the business, be they Clare employees or the victims of their waste products. As the Clare narrative reaches the contemporary period, its language of truth and reality also shifts, to one of endless economic possibilities. The language of late twentieth-century Clare, Inc. parallels the consumer hyperreality of Laura's language. In this passage, Powers describes the mid-century buying spree of a cash-rich Clare:

> The Travelot Motel chain converted to Clare toiletries after purchase. Lucy Day Kitchens brought coffee and cake mixes and powdered fruit drinks into the fold. CaliMills, picked up to round out the faltering paper products division, proved a gold mine at the onset of the disposable diaper industry. A controlling share in Grizell, a small drug company, brought the company its first new medical products since the nineteenth century. (335)

The consumer neologisms that come out of Laura's kitchen are reflected by the corporate creations of some crazed acquisitions executive piecing together a conglomerate as unnatural as peanut sheets. The bizarre food creations are the trickle-down remnants of the freak-show combination that Clare becomes. Returning to the days of poured glycerine and squeezed olein oil seems futile. The new language of Clare and its consumers reveals how completely alienated the culture is from

the physical resources and processes that once produced its products. The ultimate end is an entirely synthesized world of peanut sheets and beef-less burgers brought to you by a company that makes both food and diaper, soap and soda.

* * * * *

Gain becomes a struggle for power over the ecological manipulations that must be mastered and exploited in order for gain to register in the abstract economic world. Clare moves further and further away from ecologically sound practices as it moves into abstract manipulations of nature, falling in debt to the planet and to its customers. We come to see that Laura's cancer may in fact be answering the question posed by Jephthah Clare nearly 200 years ago: "The mystery of it all sometimes visited Jephthah at night… He, the Oregon trapper, the Chinese hong: everyone prospered…Now how could that be? Where had the profit come from? Who paid for their mutual enrichment?" (10). In the nineties, Laura is one of the people picking up the check. Clare takes its profit from the people and more so, the earth. For years, Clare has relied on time and nature to make up the difference, but the debt has outrun nature's ability to repay it.

Or rather, nature simply has shifted the cost from the soil, water and fauna to a species higher up the food chain. In the early decades of the twentieth century, Clare scientists refine and improve the synthetic creation of detergents. Through aromatic compounds and benzene rings, Clare begins to "Make the World We Imagine" (312). The benzene molecule and aromatic compounds opened up incredible possibilities for chemistry. Not only did they provide for detergents, but the benzene molecule also created amazing new insecticides, with benzene hexachloride one of the most widely used. A few decades later, however, the possibilities were drastically curtailed. Rachel Carson's *Silent Spring* informed the world of the danger of these new insecticides:

> What sets the new synthetic insecticides apart is their enormous biological potency. They have immense power not merely to poison but to enter into the most vital

> processes of the body and change them in sinister and often deadly ways. Thus, as we shall see, they destroy the very enzymes whose function is to protect the body from harm, they block the oxidation processes from which the body receives its energy, they prevent the normal functioning of various organs, and they may initiate in certain cells the slow and irreversible change that leads to malignancy. (16-17)

So begins *Silent Spring*, and Carson continues with a litany of death and environmental poison sinister in its invisibility and its scope. When Powers, a few pages past Clare's discovery of aromatic compounds, has Laura's ex-husband suggest the cause of her cancer, it is both a death knell and an accusatory shout:

> "The theory is that certain ring-shaped molecules"—he shrugs—"ones with chlorine in them, get taken up into the tissue of women. The body turns them into something called xenoestrogen…
>
> "The thing is, these ring-chlorine things are found in certain pesticides." He waits for her to respond.
>
> "And…?" she says.
>
> "Don't you see? That's what they're making down the street." (319)

These pesticides kill insects quickly, but their slow build-up in tissues of humans provide enough time and distance for plausible deniability. Over the course of time, the chemicals prove to be just as deadly to humans. For a long time, Clare never needed to factor in all the costs of their aromatic compounds. The indirect poisonings from waste products were only marginally detectable in the environment, and science failed to conclusively prove that any deaths were the direct result of Clare chemicals. But as *Gain* progresses, the connections are being made. Powers suggests that Clare may soon have to acknowledge that the costs of disposing environmental wastes are now being paid through the cancerous cells of Laura's body.

As the cancer works to shut down her body, Laura begins to question the equations that run her life. From the hospital bed on the night before her first surgery, she questions the value of her possessions, the value of a hundred dollar bill, what it means for the world to become a richer place.

She thinks of her house: "All this space: it's never been anything more than an obligation to fill it" (83). Laura finds that the objects and things she previously valued were not valued for their intrinsic worth, but for something else. Her re-evaluation of the central importance of materialism is the obverse of Clare's historical rise and the economic education of America. As Laura discovers that she has misplaced value in things, she begins to re-educate herself about true worth. Similarly, the economic depressions, crashes and slowdowns that threaten the nation as well as Clare—financial cancers of a sort, metastasizing from one small incident into wide-spread destruction—force a re-evaluation of monetary stability. To underscore the environment of greed, Powers recounts the 1870 attempt by Gould and Fisk to corner the gold market. The Grant administration counters the attempt by flooding the market with gold. In thwarting their scheme, however, the government instigates a severe economic crash, one of a series of market depressions that cripples the economy. The experience teaches the nation a critical lesson: "The public briefly saw the light: if gold was now worth so little, how much could worth itself be worth?" (183). The crash allows for some glimpse into the rampant greed propelling the American economy, but Powers tell us this insight is only temporary. The economic education is the other side of the coin of Laura's re-evaluation of her life, but Powers seems to suggest that the coin is quickly spent in a return to the consumerist cycle.

Laura finds that her material goods achieved their value amidst a complex web of connections similar to a structuralist view of language. They had little intrinsic worth, their immense value coming from the meanings and connotations attached like logos to their surfaces. Their value had no depth, only surface worth and the appearance of necessity and usefulness. These material things, metonymically represented by her uselessly blinking VCR clock, stand in stark contrast to the machines that surround her before her first surgery, "She looks up from her percale raft at the hospital clock. In squared red bars, it reads: 3:08 am. Around her mechanical bed hum meters and dials, each one cold with purpose" (51). Her undiscovered cancer already begins to alter reality for Laura. The cancer in Laura can be seen as nature's insistence on returning to material matters. For Laura, in her guilt-ridden mindset, it's a very cold reality compared to the

warm, welcoming world that surrounded her in messages of infinite possibilities and promises, a consumer's world where the prospect of death never occurs.

Laura discovers for herself what the Clare brothers uncovered years ago when they produced luxury soaps. The "place where money parted from value" (20) was extravagance, frivolity. Money is not intrinsically tied to worth, but the world, despite its encounters with economic crashes, seems to have forgotten this. In terms of defining worth, money turns out to be as slippery as a wet bar of soap. Laura's guilt at getting cancer is connected to her realization that she has grounded her life in these equations that lack a stable referent, even if that referent was only the inevitability of death. When her ex-husband Don pushes her to join a class-action suit against Clare, Laura resists, "cancer's not something I really want to profit from" (285). Though Don alters the equation, reminding Laura that Clare may be the ones indirectly profiting from her cancer, Laura cannot be convinced of her innocence. Her thoughts are an echo of Jephthah Clare's from the very beginning of the book: "She wants to say: *Whose tab?* Who ordered this meal? Who chose this life? Who invented these rules?" (285). The alert reader who recognizes the echo from 270 pages ago and almost 200 years earlier—"Where had the profit come from?"— will understand that as Powers indirectly implicates business as a cause of Laura's suffering, he endows this woman with the self-consciousness to implicate herself. Laura's cancer is not just a by-product of environmental abuse. It is also a by-product of the misunderstanding of what is valuable in a culture. Laura's pursuit of wealth, middle-class and pedestrian though it may be, is a meal that comes with a more expensive bill than imagined. If Powers positions cancer as representative of the harmful effects from business's pursuit of wealth, Laura Bodey represents the truly conflicted nature of an American culture that demands business satisfy its insatiable desire, but refuses to acknowledge the sacrifices that must be made for such an artificial way of life.

Like the decision of Clare to pursue business disconnected from the true aspects of their products, Powers shows, in the Bodey household, a lifestyle engaged in disassociative pursuit. In chasing money, and those things with the highest monetary value, the culture has placed an empty signifier at the center of existence. In addition, twentieth-century epistemology provides the logical

reasoning for its actions. Enlightenment thought—specifically instrumental rationality and scientific objectivity—allow industry to satisfy this want by an increasingly complex array of unnatural products. Capitalism and Enlightenment philosophy work hand-in-hand to bypass natural constraints. The illusion of endless possibility represented by Frankenstein creations of peanut sheets and multi-divisional conglomerates instills in the culture the desire to ignore boundaries. The discovery of aromatic compounds seemingly provides the chemical vehicle to leap over boundaries. Powers describes the new boundless society courtesy of consumer and chemical advances: "Scarcity no longer dictated how people would live or what goods they could make. Freedom was within easy reach" (324). The culture misuses technology in the pursuit of profit and exploits the earth until the scale of abuse grows so large that once minor abuses are now on the verge of becoming major catastrophes.

This moral vacuum at the center of the culture has a dehumanizing effect on people. Clare grows and expands through the culture's increasing exploitation of economics and science. Technology moves in to occupy a dominant position to the point where it alters epistemological thought. Like Laura's conceptualization of her life in economic terms, life in the age of industrialization runs like a machine. Julia Clare, Resolve's wife, understands that "the job of mankind lay in making much where there had been nothing, turning deserts into gardens" (42). A fanatic for technology, Julia lauds the development of the steamship, the arc lamp and photography. At the invention of the telegraph, she is ecstatic. In Julia's eyes, "God, with the help of man, had thrown open a hidden portal in the side of distance… Place, locale, no longer made one jot of difference" (91). The immense span of geography that had kept industry from growing beyond its immediate reach shrinks to irrelevance with the invention. The telegraph reduces space from a concrete reality to simply another abstraction. The power of distance no longer has the weight of reality. For Julia, the telegraph opens the way for America to become one large machine: "Now it could couple its energies in one overarching corporation, one integrated instrument of production" (91). Railroads compress time and space as well. Later, Taylorization will reduce the workforce to more machine than human: "The rails were down, the wires up, the prairies tamed, the far ocean

reached. The earth had become a factory. Humankind scrambled to emulate the productive reliability of its machines" (198).

Each technological progression is a manifestation of our desire to conquer nature and time, but *Gain* is a warning that such an attempt is devastating. Despite our best efforts, the earth does not and cannot be made to run like a machine. Such a reconstruction of our physical realm is a disease, one that Powers sees as not only manifest in the release of carcinogens in our late capitalist world: "This transformation, the commodification of life, is a much longer process. The point is not to reduce the hazards of industrialization to one particular industrial disease, but to say that all the consequences of our lives have somehow been ransomed to this process" (Miller par. 22). We see the physical damage that Clare has done to Lacewood. Laura's garden, where she found pleasure "kneading her fifty square feet of earth" (7), likely contains the deadly traces of Clare pesticides. The landscaped lake in front of Clare headquarters unnaturally resists freezing, even in the worst depths of winter. The destructive results of business are not limited to the simple pollution of land, water and air. These physical corruptions are only the most visible corruption of a way of living. More damaging is the commodification of life because it is the engine that propels the physical destruction.

Such a cultural structure allows for a statistically insignificant loss of life, because when that loss of life is translated into monetary terms, the loss is acceptable. "It's just a numbers game, girl," a visitor tells Laura, "You're what's called an acceptable risk, to everyone but the insurance companies" (190). The value of life, in such an equation, is much less than its worth. When the environment is damaged, the loss is acceptable for the same reasons. In the novel, Powers quotes John Jay Chapman to make his argument: "Business has destroyed the very knowledge in us of all other natural forces except business" (272). This constricted knowledge enables Clare to co-opt what should be its diametrically opposed philosophy. Environmentalists that see in industry the poisoning of our planet are muted by business's ability to convert anything into a cog in their machines of desire. The most recent of Clare CEOs, Franklin Kennibar, recognizes that business has no barriers:

> This was Kennibar's flash of saving genius: to see that anything—anything at all—could become good business.… Green too, was a need, the same as any that has faced the species. And nothing met human need better than concerted human industry. (339)

Gain reveals that the suppleness of the idea of nature is easily converted to industrial uses. The malleability of language first exploited to sell Native Balm, Clare now uses to mine our desire for a healthy planet. The "greening" of Clare is a commodification of environmentalism, allowing the company to transfer associations of purity and health—the same qualities used to sell Native Balm—to all its products. Of course, like Native Balm, there is no intrinsic connection between the product and the signifier. The "green" label only paints a nominal change.

Working hand-in-hand with the capitalist enterprise is the dependence upon instrumental rationality rooted in Enlightenment thinking. Benjamin Clare and others of his type set in place the logic that defines nature as that which can be manipulated by man. The scientific method, certainly worthwhile as a means of escaping superstition and belief in magic, so narrows the scope of acceptable knowledge that it also creates a moral vacuum at the center of the culture. Similarly, the supremacy of instrumental rationality relies on exact elements in an equation. Capitalism and instrumental rationality are rooted in the same logic, dependent on similar equations, and feed off of each other to create a world dangerously unaware of large aspects of itself. This is the world that Samuel Clare and his family return to after William Miller's rapture fails to happen: "they looked out, like returned Crusoes, upon the manufactured world" (83). Spirituality had been excised from the culture of business, replaced by a cold, narrow logic.

Lastly, we need to understand that the scale of this condition grows to a point incompatible with nature or the limits of the earth. The belief in perpetual progress inherited from the Enlightenment pushes aspects of the culture to grow beyond its means. Things get too big, and their effects cannot be controlled, nor can their waste be processed.

Kennibar, reflecting on the history and scope of Clare for a public television documentary on business, recognizes the runaway gigantism of his company. He prepares to answer the

interviewer's first question—What is business's purpose?—by writing a long list of infinitive phrases, fifty-four to be exact. Among them are: To make a profit; To make a living; To make people desire things; To grow; To progress; To expand; To rationalize nature; To improve the landscape; To vacate the premises before the sun dies out. The extensive list insinuates that the whole realm of activity is the purpose of business. The activities of business have expanded to where there is no discernable difference between business and life itself. The two planes are congruent. Even Kennibar feels a sense of doom at what life has become: "He cannot concentrate. His heart is not in this commission. Already he feels that the floodgates have opened" (350). Powers then produces three pages of problems troubling the company: takeover threats in Boston, contamination clean-ups in Oregon, advertising problems in New York, a whistle-blower in Greensboro. And the problems of confronting the multitudes of employees of Clare: a factory-line woman with diabetes, a truck driver snarled in traffic, a chemical engineer with a poor job evaluation. The list of cities and problems are overwhelming: Detroit, Los Angeles, Kansas City, Caracas, Lebanon, Karachis. Each one with its own distinctive operation and own distinctive problems. It's almost as if Kennibar is responsible for overseeing life itself. Business has subsumed life. Surely no person or even one group of people can be expected to manage such an operation. Kennibar ironically notes the unintended by-products of such expansion: "He stops and gazes out the window again, musing on the story of the Clare who once searched for a hole at the Pole. *They only looked*, it occurs to him. *We made one*" (353).

Capitalism must be in a perpetual state of growth to be successful. The economy may wax and wane, but America has yet to produce anything resembling a steady-state economy. The Clare company is no different. Clare executives rightly operate under the assumption that they must grow in order to stay alive, "For Douglas Clare, growth was an end unto itself," (218) but in the nineties, there may be nowhere to grow. As the business climate changes, the brighter Clare executives recognize that finally, as Frederick Jackson Turner surmised years ago, the frontier may be closed. In the second half of the twentieth century, a prominent young executive in line for the Clare helm quits suddenly to take a position at Harvard Business School. In stark contrast to Kennibar's belief

that "anything at all could become good business," the new professor produces a theory that "American business could work once and only once, with a blank continent in front of it to dispose of" (337). American business runs on deficit spending. When that constant influx of new land and new resources runs out, there is nowhere else to turn.

Yet Clare has always relied on expansion to keep in front of its competitors. Very early in the history of the company, they decide to risk collapse in favor of a leap in size. Ennis, the Irishman, is adamant about the need for a gigantic kettle, justifying the risk by saying "It works in miniature… It'll work bigged up to lifesize" (43). Looking at short-sighted goals, Ennis is correct. The increased volume allows Clare to undersell its competitors without sacrificing quality. Yet the economic system that rewards size, in turn demands continual growth. The rate of this growth, however, is not linear. Clare's build-up grows exponentially. By the end of the twentieth century, the process has become maniacal:

> Television made for mass demand, which led to larger factories, which led to cheaper goods, which led to more consumption, which paid for more broadcasts, which led to a lower cost per consumer message, which brought all the accoutrements of a freer, fuller life. Profits boomed, though margins shrank to nothing. The whole trick was done on volume. (328)

The economic system is caught up in a positive feedback loop, a vicious cycle that can only lead to implosion.

Nature exhibits numerous similar growth scenarios. A common example is duckweed in a pond. Suppose you have a species of duckweed that doubles in numbers every week. If you have a patch one foot square in a 100 acre pond, it will take only twenty-six weeks to cover the whole pond. This, however, is not what is most surprising about exponential growth. In twenty-five weeks, only half the pond will be covered in duckweed. Management of the pond seems to be under control. Yet in only a matter of days a healthy pond becomes choked by unrestrained

growth. Normal negative feedback responses do not kick in until way too late. Destruction is catastrophic.[37]

Powers suggest that this, in effect, is what happens to Clare. America, as it rapidly moves in from the coasts and across the prairie, goes through similar boom and bust cycles: cycles Clare survives only through quick thinking that usually involves labor exploitation or discovery of a new resource to exploit, natural or otherwise. And the economy rewards them for this exploitation, buying their improved, cheaper products, encouraging them to produce more. Yet, the late twentieth century may be the twenty-fifth week for Clare and, by association, America. The culture may have pushed itself to the point where if immediate action isn't taken, the speed at which unhealthy change will occur will be too great for us to stop.

World War I, Powers tells us, solidified the importance of the corporation in America. The country discovered that its "electrified, biplaned, broadcast, synthetic, pharmaceuticaled, plasticized, human project could no longer last a week without those vast, syndicated pools of capital" (297). More sinisterly, World War II confirms the deadly efficiency of American business. Clare seamlessly integrates into the American war effort (despite its now international scale). The Clare CEO becomes the wartime assistant secretary of commerce. Clare retools its Lacewood plant to produce mortar shells, months ahead of schedule, at 40 percent more than the military's requested output, and at half the price. With speed and ease, Clare becomes the "logical affiliate" of the Army. Its successful transition suggests the common underlying structure of both institutions—the mechanization of war is duplicated by (and abetted by) the mechanization of domestic lifestyle. Such a seamless joining prefigures Eisenhower's warning of the military-industrial complex.

After World War II, Clare grows at a furious rate. Riding the post war economic wave, they expand and expand. They acquire other companies. They become a conglomerate. The corporation becomes monstrous and, suddenly, unmanageable. Setbacks are no longer small, but are now devastating. In the late 60s, Clare products are fingered as a cause of Great Lakes eutrophication, the aging of waters through biological enrichment. Phosphates, common in the

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[37] This example comes from Ashworth 190.

household detergents that Clare produces, accelerate a natural process that normally would take a thousand years. The lakes are choking on their own growth, an environmental problem not coincidentally similar to Laura's cancerous tissues growing out of control. Clare's troubles forewarn us that Clare and the American culture have accelerated growth to an unnatural speed. The economy is exhausting resources that should be perpetually available to us, and in turn we are choking on our own growth.

The damage that Clare has inflicted may be reaching the point of irrevocability. Lacewood itself may be the canary in the coal mine, suffering from another form of unchecked growth reminiscent of cancer and eutrophication. The town suffers from geographical growth that has exceeded the ability to manage it. Laura's ex-husband Don asks, "What happened to that manageable, mid-sized town they used to live in, where everything still worked the way it was supposed to?" (62). Urban sprawl chokes Lacewood as consumer desire for more land and more car-use erodes the town's ability to efficiently manage itself.

If urban sprawl is a visible sign of consumerist desire corrupting our civic way of life, Lacewood also contains unseen corruption within its soil, water and air. Lacewood suffers from a continual buildup of carcinogens released from the Clare industrial plant over the course of its lifetime. Clare has been a presence in Lacewood for over one hundred years, but it is in the last decade that cancer rates have surged. Yet Clare insists that its pond is in order. In a public relations release, Clare protests its innocence of environmental degradation:

> Clare is once again well *within* the stringent limits imposed by both state and national regulations… The important factor to consider is not the existence of a trace substance but rather its concentration. The levels of hazardous material coming from Clare's plants are negligible and pose no significant risk to anyone living in the vicinity. (261)

Clare may be correct for the time being, but Powers suggests that they are incapable of noticing that things have gone beyond their control. That same press release notes that "Some chemical emission is an unavoidable by-product of any vigorous and viable economic activity conducted on

so large a scale." Clare's PR team neatly and unintentionally sums up Powers's thesis. We pay an "unavoidable" price for living on such a scale. Powers describes the history of America very much like a company where "no one's pulling the strings anymore… We have created this life that once did our bidding and now is calling the shots" (Miller par. 10). Clare is powerless to stop the next expansion of duckweed.

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Late in the stages of her disease, Laura travels to the Lacewood Historical Society, housed in a converted mansion. It's a visit that calls to mind Laura's first hospital stay to remove the then hoped-for benign cyst. In that first visit, she recalls trying to teach her children the reality of manufactured goods: "She asked them all the right questions. How in the world did they every build these things? Make them work? Everything from zero" (50). Back then, her attempt to dissolve their alienation from their commodities fails, "For the three of them live in a house trapped in its own made things" (50). As she nears death, Laura's final visit to the Historical Society finds her amidst a second house burdened by the collection of its own made things. This second edifice houses the immense Clare memorabilia collection. If the soil and water of Lacewood contain the malevolent history of Clare's presence in the town, the Historical Society contains the polished, marketed history of Clare. The collection occupies rooms and rooms of the old mansion. Laura speaks of it in terms once again reminiscent of cancerous growth: "Why she wonders. To fill the house with the stuff. To build a collection so impressive that it forces your kids and grandkids to extend it, with taxpayer help" (294). The collection is a powerful metaphor for unnecessary growth. Powers links the illogical pursuit of worthless memorabilia to the seemingly worthless pursuit of things to fill our lives. The Historical Society has not only been stuffed with the bric-a-brac of Clare history, but it also carries with it a history of unthinking consumerism that has dominated the twentieth century.

Delving further and further back into the Clare history, Laura reads the letters and records from the very founding of the company. She discovers the island taboos that prevented *Utilis clarea* from hurting anyone, "by binding the soul of the injurer to his victim" (295). She finds the formula for soap: a pound of fat makes two pounds of soap, one which will trade for the next pound of fat. "A simple enough thing" she remarks, "and nothing can keep it from covering the earth" (295). From this sparse equation, Clare colonized the world. The last artifact she finds is a calling card with the Biblical phrase "He that hath clean hands shall grow stronger and stronger." Here, Laura decides, is the very basis for Clare's existence. It is "the thin thing pulling life on, the value-added thread tying salve to salvation" (295). With these three historical artifacts, Powers is able to define the whole phenomenon of business running rampant over the world, our sacrifices to insure its success, and the interwoven dependence of one with the other. The simple formula for profit is unstoppable when coupled with the consumer desire to get more value from the product. Yet Powers reminds us that the soul of business is tied to the consumer. Neither profits without the other, and if they fall, they will ultimately fall together. Consumerism spreads like a cancer across the culture, feeding off itself, but in the end destroying itself as well.

If capitalism, industrialism and the vicious cycle of consumerist desire have led to a world out of control, it would seem that relying on the technologic fix is simply part of a positive feedback loop that Powers makes a point of condemning. When a Clare commercial shows a series of man-made ecological disasters and then self-servingly claims, "Right now, it's time for the best that the human race can do. Right now, it's time to think" (296), I think its safe to argue that Powers doesn't see corporations as the solution. Yet the logic that has driven Clare, the desire for the quick technologic fix, isn't completely condemned by Powers. Powers is no Luddite, as Tom LeClair notes in his review: "Science gives, takes away, gives, takes away." Powers's career-long critique of the twentieth century is not a critique of technology, but the abuse of it. *Gain* ends with Laura's son Tim—a decade or so after Laura's death—and a group of fellow post-graduates discovering a computer code that can predict the behavior of enzymes. In effect, they discover a "universal chemical assembly plant" that can make anything a damaged cell requires. A cure for cancer

potentially lies on the near horizon. Tim informs his research group of a large chunk of settlement money, a final attempt by Clare to balance the equation, but untouched since Laura's death. Powers closes the book with Tim suggesting that "it might be time for the little group of them to incorporate" (355).

Its a curious way to end the book. Clearly, this is an instance of science giving. A cure for cancer, just the tip of what may be possible with Tim's discovery, certainly stands as a remarkable technological achievement. Yet Powers has Tim realize this ability through the means of a corporation, the very system that may have been responsible for his mother's death. Powers refuses to close with any easy solutions for the problem of runaway consumerism. Tim's computer code is a data structure that is "ambidextrous," one that "looked out Janus-faced to mesh with both raw source and finished product" (355). Such is *Gain*, a Janus-faced narrative not only in its bi-part structure but also in its refusal to vilify Clare outright. The facile reduction of blame, Powers notes, "channels alienation and makes people continue to lead the lives that they've been leading" (Miller par. 16). Such a reduction is in fact a materialist understanding of nature. It is monochromatic understanding that sees an easily defined nature as good and a simplistic labeling of business as evil. As much as science gives and takes, so do markets.

In Powers's *The Gold Bug Variations*, Stuart Ressler abandons traditional science for something even more pure than discovery until all surfaces were lit: "The purpose of all science, like living, which amounts to the same thing, was not the accumulation of gnostic power, fixing of formulas for the names of God, stockpiling brutal efficiency, accomplishing the sadistic myth of progress. The purpose was to revive and cultivate a perpetual state of wonder" (*Gold Bug* 611). Such may be the case for commerce. In an interview with Jim Neilson, Powers says that "The answer to greed and oppression is not the proscription of curiosity or the suppression of comprehension" (Neilson 18). More and better science is the key, learning more about the very complex world we live in. For Powers, this credo defines his literary pursuit. He describes fiction as "the one arena where we can, at least temporarily, take apart and refuse to compete within the terms that the rest of existence insists on… Fiction, when it remembers its innate priority over other

human transactions, can deal not in price but in worth" (Neilson 23). The novels of Richard Powers, with their dual narrative lines and interlocking levels of plot and larger social issues are Janus-faced themselves, revealing that the imperative "to instruct and delight" are two faces of the same head

Six

Fear and Loathing in Los Angeles

From the writings of such theorists as Umberto Eco, Frederic Jameson and Jean Baudrillard, theorists of the contemporary condition have learned to approach Los Angeles as the epitome of the post-modernist landscape. Its expanse of freeways, its media saturation, and its cosmopolitan web of capital reproduce exponentially the environment of the twenty-first century. Los Angeles is hyperreality, a city mirrored by its own media re-creation with images metastasizing across southern California. Los Angeles shimmers on the extreme horizon of America's future. For theorists of all types, it provides a short vacation to the *reductio ad absurdum* of our American culture. It is the birthplace of Disneyland, the theme park that may be the most influential pattern for the development of the postmodern landscape. That fantasy land's meticulous control, elaborate re-creations, and collusion of consumption and entertainment are now the defining template for the metropolis to its north, and for much of the urban renaissance in America's big and medium size cities.

On the surface, it may seem odd to seek out an appreciation of nature in the midst of the second largest city in the United States, but for a complete view of the contemporary understanding of nature, one cannot discount the results of its most productive and destructive species, humans. The city as inhabitable space remains the most successful—in terms of population—living environment for humans. It is the magnetic center of human power, capital and culture, and it shows no signs of relinquishing its importance. In fact, American cities are undergoing a renaissance, recapturing population and capital from their surrounding suburbs, while continuing to draw in population and capital from the surrounding rural areas and small towns. The city's impact on the physical planet can be rivaled only by industrial agriculture. Yet the city's immediate physical impact coupled with its tremendous cultural impact reshapes our environment more than

any other factor. In terms of cultural weight, then, Los Angeles certainly ranks as the preeminent influence on the country and likely the world as a whole. In both its vast concrete manifestation and its reproduction of life in images and ideas, the city of Los Angeles may be the most extreme representation of our human/nature interrelationship. The contradictions that lay hidden in environments where nature and humans interact smoothly and fairly peacefully erupt violently in the chaotic ecology of Southern California.

The idea of the city has not played a major role in the recent influx of green literary criticism. Not surprisingly, the city is often reductively poised as the counterpart to nature and rarely addressed directly by ecocritics. Behind the rise in literary ecocriticism is an admirable logic that believes a better understanding of the conjunctions of literature and ecology can help save our environmental resources. The tendency, of course, is to focus on literature that deals directly with those last vestiges of untainted ecologies: prairies, mountains, swamps, wilderness. But Mike Davis's books about Los Angeles are very much in keeping with the philosophical spirit of those nature writers so valued by most ecocritics. *City of Quartz*, published in 1990, and *Ecology of Fear*, published in 1998, exhibit many of the qualities valued in such works as Annie Dillard's *Pilgrim at Tinker Creek* or Barry Lopez's *Arctic Dreams*. All are spatially centered and rooted in the ecology of a specific area. They are all historically informed, aware of the temporal processes that have led to the present landscape. They are lamentations as well as calls to arms, decrying the destruction of the physical place but also pinpointing the causes of destruction, often identifying names of those responsible. In short, they are books with a complex and sophisticated treatment of the environment. In the same way that Dillard and Lopez approach the Virginia countryside or the Arctic north, Davis treats Los Angeles as a natural ecology, a system operating under rules similar to any wilderness preserve, arctic refuge or rural hamlet. As Dillard wonders at the cosmos within a stream bed, so does Davis wonder at the patters of fire across the Malibu coast. As Lopez marvels at a herd of musk oxen in the frozen arctic, Davis stands amazed at the mountain lions adapting to the intruding presence of humans in their habitat.

Yet Davis differs from most nature writers and not simply in the urban locale of his subject matter. He does not merely take a wide-angle picture of the landscape, exhaustively detailing the topography, although this is part of his method. Rather, in his own words, he reveals "the occlusion of natural history by landscape ideology" (EF 155). He does not just return to the land—its pristine, pre-human existence. He sketches the ideological masking that presumes a pristine landscape is accessible. Scott Russell Sanders describes his landscape of Indiana as a palimpsest, "written over for centuries by humans and millennia by the rest of nature" (*Secrets* 89). Davis tackles a landscape that not only has been written over, it has been defaced, scarred and graffitied to the point that its true surface is almost unknowable. Yet like Sanders's palimpsest, everything that was once written still remains, and Davis painstakingly recreates the events and logic that combine to erase and rewrite this landscape.

Davis also differs from traditional nature writers in his aesthetic approach to his subject matter. As a reviewer of *Ecology of Fear* notes, Davis's work is rare in that "it brings together seemingly disparate discourses, showing the correspondences and transferences between one field and the next…Davis 'excavates,' unearthing broad plains of lost meanings."[38] The wide-ranging approach that Davis employs covers the entire landscape of L.A. as well as mimics the underlying structure of its ecology, both the natural and built environments. His book can be as non-linear as the landscape it describes, and the integration of styles, the inclusion of pictures, and a willingness to reshape the reality of his textual landscape create a Mandelbrotian text to describe the reoccurring patterns of Los Angeles.

Though both of Davis's Los Angeles books are concerned with the interrelations between culture, society and the environment, *Ecology of Fear* expressly takes as its focus the social construction of nature in Los Angeles. *City of Quartz* predates it by eight years, but *Ecology of Fear* 's subject matter precedes that work in one important aspect. By dealing primarily with the physical earth, Davis expands the temporal scope of his study deep into the prehistorical events that shaped the landscape. *Ecology of Fear*, by both necessity and design, analyzes a pre-existing

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[38] See Wray.

physical environment that in part determines the society excavated in *City of Quartz*. Though Davis does not neglect the natural environment in *City of Quartz*, nor for that matter does he slight the built environment in *Ecology of Fear*, I am going to concentrate first on Davis's analysis of L.A.'s environment in *Ecology of Fear*. In light of this explication, we can see how *Ecology of Fear* is informed by Davis's depiction of Los Angeles's man-made structures in *City of Quartz*. In this archeology of the social construction of nature, Davis produces a virtuoso piece of urban ecocriticism, integrating a naturalist's concern for the physical earth with a sociologist's attention to the culture of a postmodern landscape.

Davis's main thesis is that the governing theories underpinning the built landscape of Los Angeles are in direct contradiction to those that most accurately explain the natural ecology. And in so doing, he gives us a particularly sophisticated, profound, and radical understanding of "nature." A significant facet of the Los Angeles ideology that Davis believes will define the future of American cities is primarily an empirical conceit that nature is definable, understandable, and, to a certain extent, predictable and controllable. The ideology relies on a working belief that nature can be expected to behave in a certain fashion. Davis shows that, to the contrary, nature is non-linear, chaotic and a source of perpetual frustration to Los Angelenos who believe they've settled in an ecological Eden. The technological wonders designed to harness nature, or the stubborn insistence that systemic natural events are anomalies, only serve to intensify the routine upheaval that plagues Los Angeles. Davis shows that the way Los Angelenos cope with Southern California's unpredictable climate, its unsteady fault lines, and its random acts of nature is to reinforce further the ideology that claims nature can be controlled. The city is a landscape built on the premise that humankind can reconstruct nature to a more benign and hospitable environment because we can predict and hence manipulate our ecology. So deeply held is this belief that short-term pursuit of profit repeatedly entices developers and city officials to ignore most environmental difficulties and knowingly build Los Angeles in harm's way, confident that potential dangers can be engineered away.

In addition, Davis inverts this willful ignorance of the ecology when he explores the cultural and economic difficulties that are not directly related to natural disaster. In Davis's Los Angeles, nature is often invoked to explain social inequities, alleviating the powers-that-be of responsibility for solving them. And when unstoppable and unpredictable natural cycles interfere with the progress of L.A.'s development, these problems are redefined as social problems, generally the result of the lower classes and disenfranchised. As L.A. invests money and energy to "solve" these misdirected problems, the status quo is reinforced with the aid of nature.

What results is a landscape where "natural history and social history can sometimes be read as inverted images of each other" (EF 208). On one side, nature is criminalized, presented as a deviant aspect of the ecology. When suburbs encroach too far into the previous wilderness, mountain lion encounters are "anthropomorphized in bizarre *Silence of the Lambs* terms" (EF 201). Davis quotes one suburbanite complaining, "it's like having Jeffrey Dahmer move next door" and another denouncing the cats as "serial killers" (201). In this environment, coyotes live in "ghettos" and are equated with "urban street gangs." Nature is blamed, but the blame is contextualized in human terms. Nature is taken to account for operating outside the human social contract, too much of Locke and not enough Rousseau.

Davis's most devastating critique of this inversion is directed at those inhabitants of the Malibu hills and canyons. Each fall this fragile landscape becomes vulnerable to intense firestorms as the Santa Ana winds steadily dry out the flora and propel even a minor spark into a raging inferno. If anything is predictable in the Southern California landscape, it is the yearly return of the Santa Anas and the fire hazard they produce. However, the majority of Anglo-Californians, Davis writes, "have never accepted the natural role or inevitability of the chaparral fire cycle" (EF 132). Such an admission would create a logical inconsistency in people who continue to build and rebuild homes in the area. Instead, Davis shows how the natural fire cycle is recast in terms of criminal activity. Anglo-Californians characterize the fire not as a natural process, but as one *perpetrated* by the dregs of society committing arson. He traces a cultural history of blaming criminals and other

outcasts for the perpetual cycle of firestorm disasters. This despite statistics showing only one blaze in eight being attributable to arson.

At the beginning of the century, the "incendiary Other" as Davis calls this scapegoat, was portrayed as an Indian, a sheepherder or a tramp. These were followed by the Wobblies during the First World War, migrant workers in the thirties, and rumored Axis saboteurs in the forties. More recently, their contemporary boogie-men reflect the social problems most threatening to a wealthy monetary class: black gangs making good on threats to burn white neighborhoods, the homeless, and Muslim terrorist connections. Criminalizing the natural fire processes enables Anglo-Californians to reaffirm their belief that inhabiting the mountains is a natural condition. In a remarkable quote from a *Los Angeles Times* editorial, Davis shows the unintentional acknowledgement of this reconstruction of nature:

> Fire prevention and crime prevention in California are becoming one and the same.… Californians need to stop viewing brush fires solely as acts of God and start thinking of them as sometimes acts of criminal—even pathological—man. (132)

For the *Times*, a "true paradigm shift" was needed for Californians to reconcile their lifestyle with an uncooperative nature. They get what they want, with nature being obscured by the paranoia of an exclusive, wealthy class. Davis documents this paradigm shift throughout *Ecology of Fear*. Malibu is only one example of a landscape so reconfigured that nature is outlawed.

Such paranoia about nature persists because Los Angeles is a landscape where disaster becomes a Foucauldian production of power. Davis tells us that the scapegoating that surrounds the Malibu fires opens up political space in which the natural processes can be exploited for gains among the wealthy and powerful that are slowly dominating the Malibu landscape. In order to explicate this abstract process, Davis completely alters the typical fire drama of Malibu. In the traditional scenario, Malibu residents valiantly defend their homes while brave firemen struggle to protect the landscape from an encroaching demon. Blaming the "incendiary other" creates a need that can be solved by more money and more attention devoted to Malibu residents. The owners of

lavish homes become victims, not of their stupidity in occupying an inherently dangerous zone, but victims of a crime that the state is required to prevent and avenge.

Davis's inversion reads more like a soap opera among the flames. Instead of noble or tragic victims, the Malibu residents are depicted as a wealthy, powerful clique that exploits the predictable fire cycle to eliminate undesirable neighbors and solidify their political hold over a delicate, fragile landscape. Each time Malibu burns, it is rebuilt more expensively and more exclusively. Davis describes the mid-century turning point where a new "fire regime" operated under these perverse laws:

> By declaring Malibu a federal disaster area and offering blaze victims tax relief as well as preferential low-interest loans, the Eisenhower administration established a precedent for the public subsidization of firebelt suburbs. Each new conflagration would be punctually followed by reconstruction on a larger and even more exclusive scale as landuse regulations and sometimes even the fire code were relaxed to accommodate fire "victims." (EF 108)

A predictable by-product of such practices was the social cleansing of any lower classes attempting to live in Malibu. Disaster relief, tax breaks and the Darwinian elimination of a lower class that cannot afford to rebuild after each fire create a wealthy, powerful interest that has altered the reality of Malibu fires. Though sometimes portrayed as anomalous acts of a cruel nature or the result of vagrants or gang members, the fires now have become political acts, not only by increasing and condensing wealth and power in Malibu, but also by hiding behind nature's veil of neutrality. It's a power strategy Davis calls "recycling natural disaster as class struggle" (EF 51). The staggering increase in property values in Malibu further alters wildfire ecology by determining the techniques used to manage the fires. Controlled burns, a fire prevention technique designed to burn accumulated fuel in small amounts and under close supervision, are deemed too dangerous or just too unsightly and eliminated. Also considered too dangerous are the use of backfires burned to control a wildfire before it spreads. Lastly, those brave firefighters are also redefined under Davis's revision. Still brave, they are now dupes of a corrupt fire bureaucracy. They are engaged in guerilla

street-fighting, battling the fire on a house-by-house basis, increasing the risk of being trapped by erratic and fast-moving fires.[39]

While fire safety reforms languish in the inner city, Malibu rebuilds on the taxpayers' backs. Davis counterposes the two disparate responses to reveal that the debate over Malibu never acknowledges the contradiction:

> As in the aftermath of each previous fire tragedy, homeowners have invariably been seduced by the idea of a technological fix to the problem of wildfire ecology. The latest fetish is the CL-415 "Super Scooper": a gigantic amphibious aircraft capable of skimming the surface of the ocean and loading up to 14,000 gallons of water per fire drop.… Once again, politicians and the media have allowed the essential landuse issue—the rampant, uncontrolled proliferation of firebelt suburbs—to be camouflaged in a neutral discourse about natural hazards and public safety. (EF146)

The relationship between humans and nature in Malibu reflects a failure of the discourse to escape the powerful interests that propel suburban development into the midst of volatile landscape. In such a "neutral" discourse about fire safety, the basic interrelation of human and nature is obscured by an ideology committed to property speculation and the reinforcement of a class division concretely manifested in the inaccessible reaches of Malibu castles.

As Davis describes this discourse about nature, we come to see it as a failure of language. He suggests that a perpetuating cause of natural disasters in southern California has been an inability to accurately describe the ecology; an inability not of the people, but of the language itself. Davis traces this inability back to early settlers arriving from the temperate climates of the East and the Midwest. Eighteenth- and nineteenth-century immigrants to America easily translated their language about the European climate to the similar climate in New England, the Atlantic coast and the Midwest. Moving further west, Davis notes, they encountered something literally *indescribable*

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[39] Such is the case throughout the western United States as each year inhabitants and government struggle to find a way to deal with inevitable forest fires. Most recently, the area around Los Alamos was devastated when a controlled burn ran out of control, and Montana experienced widespread fires largely in part because of fuel accumulation—the product of years of fire suppression.

with their current language tools: "In the most fundamental sense, language and cultural inheritance failed the newcomers" (EF 11). Their new landscape had more in common with the volatile coasts of Italy or Greece than the glens and hollows of England: "English terminology, specific to a humid climate, proved incapable of accurately capturing the dialectic of water and drought that shapes Mediterranean environments" (EF 11). Davis describes a vocabulary heritage that derived from temperate and forested lands where "frequent rainfall of low and moderate intensity is the principle geomorphic agency, and the landscape seems generally in equilibrium with the vector of forces acting upon it" (EF 15). This type of landscape is uniform and therefore predictable. The language that describes it, Davis notes, relies on "norms" and "averages."

Southern California, however, is a protean landscape, the complete opposite of the steady-state climate of England. Davis calls it "Walden Pond on LSD" (EF 16), where the average is "merely an abstraction" (EF 16), and climate descriptions are social constructions that bear little resemblance to actual climate conditions. Davis describes years where the average yearly rainfall is recorded in a single week and droughts where it takes two or three years to hit the norm. Los Angeles is "a revolutionary, not a reformist landscape" (EF 16), a realm of rapid transitions and exponential fluctuations. Overlaying a temperate English linguistic map on Los Angeles's climate creates a gap between expectations and reality, a gap in which the discourse of natural disaster is played.[40] Within this linguistic construct, natural disaster is, in fact, foreordained because of the very inability of the climate to fall within norms. In such a linguistic map, the climate inevitably behaves perversely and aberrantly. Davis's documentation of this contradiction is not limited to rainfall and drought, but also arises when wildlife trespasses in suburbia, or when tornadoes batter Los Angeles, or even when earthquakes strike. In *Ecology of Fear*, Davis shows that this linguistic block determines the actions Los Angelenos take when confronted by "abnormal" natural events. These relatively common events are greeted with astonishment by Los Angelenos, as if nature has suddenly and capriciously turned against them. This in spite of repeated illustrations to the

[40] Davis notes that immigrant Anglos often were forced to preserve the more fitting Spanish terms such as arroyo and canyon, though they still failed to grasp their larger environmental context (EF 11).

contrary. Davis suggests "It just doesn't happen here" should be the new motto for the Golden State (EF 155). The slogan is appropriate for a mindset that "simultaneously imposes false expectations on the environment and then explains the inevitable disappointments as proof of a malign and hostile nature" (EF 9). Instead of a profitable adaptation, Los Angelenos opt for a stubborn willfulness, seeking to control and manipulate their environment to conform to their preconceived notions.

Davis's goal, in part, is to offer a new language for describing the Los Angeles ecology. To that end, he turns to the science of chaos, using its vocabulary of indeterminacy to describe the post-Newtonian ecology of Los Angeles: "The Southern California landscape epitomizes the principle of *nonlinearity* where small changes in driving variables or inputs—magnified by feedback—can produce disproportionate, or even discontinuous, outcomes" (EF 19, Davis's emphasis). He describes a landscape of "surprising and powerfully coupled causal chains" where drought creates fuel for fires, which remove groundcover, which increases flooding, which causes dramatic erosion, which creates large volumes of sediment that realign river channels and cut off tidal flows to coastal marshes (EF 18-19). Davis emphasizes that this is not random disorder, "but a hugely complicated system of feedback loops that channels powerful pulses of climatic or tectonic energy (disasters) into environmental work" (EF 19). Yet this environmental work is impossible to chart in the straight lines of cause and effect or in the language of a steady predictable climate.

Davis calls for a new language that not only acknowledges chaotic events, but one that accurately describes the chaos within the natural process instead of outside a contrived normalcy. In Davis's Los Angeles, the science of predicting earthquakes is futile because they are "unique historical events, with variable, not constant, parameters that cannot be predicted by simple extrapolation from recent fault history" (EF 30). The tornadoes that frequently dot the terrain are "epistemological puzzles" whose complexity "overpowers simply typologies and linear causalities" (EF 179). Davis cites the nonlinear relationship between the age structure of fuel accumulation and the intensity of wildfire, noting that probabilities for an intense, fast-running fire increase dramatically and exponentially as the fuel age exceeds twenty years (EF 101). And Davis employs

nonlinear behavior models to describe animal ethology, referring to the growing recognition that "even small environmental fluctuations, if they occur at certain 'thresholds,' can sometimes produce 'behavioral catastrophes' in animal populations" (EF 248). He cites research showing abrupt shifts in predatory behavior rather than incremental adjustments, where, for example, a predator that had been feeding solely on a single prey species will suddenly shift to opportunistic behavior, attacking a range of species in its habitat. The combined effort of all these examples portrays an ecology that resists easy categorization or understanding, and certainly one whose unpredictability would preclude attempts at manipulation. In more traditional interpretations of Southern California ecology, these examples lay outside of knowledge, ultimately unknowable and as such, tremendously frightening and disastrous. Because of Los Angelenos refusal to accurately describe such events, categorizing them merely as aberrant events, the damage these "random" events produce was as inconceivable as their occurrence.

This description of Los Angeles' Mediterranean landscape is not particularly groundbreaking. Davis, himself, notes that the Old Testament offers a similar catastrophic description of a similar ecology. But what makes Davis's portrait of Los Angeles brilliant is the marriage of his description with the language and science of late-century chaos theory. Davis makes use of these theories to add weight to his linguistic conclusions about chaotic environments. More remarkable is Davis's ability to reveal how this chaotic landscape translates into the sociological problems that plague Los Angeles. Davis intertwines the topographical complexity with the cultural complexity to map the convoluted feedback loops that make up the total ecology of Los Angeles. Davis's Los Angeles is filled with the tell-tale signs of an ecology operating within the realm of chaos: positive feedback loops, emergent phenomena and analogic recursions, both as a result of human tinkering and despite humans mucking about.

His recounting of the Malibu fires and the subsequent re-entrenchment of a powerful elite committed to developing firebelt suburbs stands as one example of a positive feedback loop. Another example is the economic aftermath of the 1994 Northridge earthquake. California's key position in electoral politics resulted in federal largesse that dwarfed spending from South Florida's

Hurricane Andrew in 1992. Davis depicts a political windfall where the Clinton Administration pumps billions of dollars into Los Angeles' economy, not only aiding those truly devastated by the earthquake, but also directing charity and largesse to politically important areas relatively unscathed by the Northridge quake. Davis describes a subtle "seismic Keynesianism" where "'disaster aid,' loosely construed, was a de facto public works program that financed expensive upgrades as well as simple repairs" (EF 48). A predictable by-product of this aid is a California landslide win for President Clinton in the 1996 election. The soaring costs of federal relief, however, alters the political economy of disaster. When later faced with the colossal FEMA monetary demands, Congressional Republicans "kidnapped the $6.6 billion disaster relief bill and held it hostage until the Democrats agreed to $16.3 billion in cuts to already budgeted domestic spending" (EF 50). As a result, rebuilding Los Angeles after the quake was eventually financed by cutbacks in low-income housing, environmental protection programs and rural health grants, a positive feedback loop concentrating political power.

As well as analyzing positive feedback loops, *Ecology of Fear* is a fractal critique of ecological mastery. In a traditional topography, the city of Los Angeles is mapped clearly, its borders distinct. This, however, is a cartographic illusion. Davis shows that the solid black lines that delineate the map of Los Angeles dissipate upon closer inspection. The boundaries that contain Los Angeles fluctuate and repeat themselves but never in a predictable manner. The discontinuity and nonlinearity of Los Angeles's ecology displace the solid cause and effect model trumpeted by Los Angeles civic boosters, superengineers and mega-developers who proclaim their ability to rebuild the Garden of Eden. Self-similarity and variation replace the illusion of nature as a linear equation. The geographer Edward Soja, a strong influence on Davis, suggests that the space of Los Angeles is "Mandelbrotian, constructed in zig-zagging nests of fractals" (Soja 224). Davis agrees, and argues that the key to understanding Los Angeles's ecology lies on this unmappable border. A telling example can be found in the landuse and planning maps where straight-edge borders between "developed" and "undeveloped" areas disguise the infinite interpenetration between the wild and the civilized. The discourse that would presume to cover this fractal landscape with solid

shapes, depicting both nature and social as completely mapped, Davis sees as a discourse of ecological mastery, a strategy of power that disguises the class struggle under the mask of natural disaster.

Davis's approach to his natural history is not only influenced by postmodern science, but also employs a number of strategies familiar to readers of postmodern fiction. His text is defamiliarizing, at times disorienting, foregrounds language almost as much as content, and even approaches something resembling John Barth's exhaustion of language. He uses a variety of styles, a pastiche of journalism, criticism, historical study, and perhaps even fiction. An example from the first chapter of *Ecology of Fear*, helps to illuminate the rhetoric extravagance that mimics the anarchistic plurality of Los Angeles's nature:

> But I am not summoning Armageddon. Despite the wishful thinking of evangelicals impatient for the Rapture or deep ecologists who believe that Gaia would be happiest with a thin sprinkling of hunter-gatherers, megacities like Los Angeles will never simply collapse and disappear. Rather, they will stagger on, with higher body counts and greater distress, through a chain of more frequent and destructive encounters with disasters of all sorts; while vital parts of the region's high-tech and tourist economies eventually emigrate to safer ground, together with hundreds of thousands of its more affluent residents. (EF 55)

By using unexpected stylistic registers, most noticeably an inflated, excessive style, Davis draws attention to the linguistic construction of his Los Angeles. Davis claims he is not "summoning Armageddon," but the language of his books says otherwise. In the selection, Los Angeles slinks toward a wasteland as Davis's extended sentence repeatedly heaps further destruction on the city, with a final clause slipping wearily away to safety. The long-winded paragraph mimics the seemingly endless series of disasters Davis depicts in *Ecology of Fear*. This selection also hints at the almost manic citations of widespread knowledge that mark Davis's scholarship. Sounding at times like an urbanist Dennis Miller, Davis's encyclopedic knowledge reinforces his arguments that the problems of Los Angeles are vast and encompassing, penetrating into all aspects of life.

Reading *Ecology of Fear* or *City of Quartz* is like reading the source material for Thomas Pynchon's *The Crying of Lot 49*. Davis's Los Angeles almost seems to be fictional, where fantasies become real, metaphors become reality and our seemingly grounded reality bifurcates into numerous universes, all equal probable and all equally real.

Brian McHale, in his book *Postmodernist Fiction*, writes that "postmodernist fiction *does* hold up the mirror to reality; but that reality…is plural" (McHale 39, his emphasis). For McHale, mimetic fiction no longer can be achieved through literary realism. Such a technique presumes writing as an epistemological problem of finding the words that accurately represent the true nature of the world. In postmodernist fiction the question of mimesis must account for a plurality of worlds. The problem, according to McHale, has shifted to the ontological, and the postmodern novelist must determine how to account for multiple worlds. The polyphonic novel of postmodernism "acknowledges and embraces a plurality of discourses and the ideologies and worldviews associated with them" (McHale 166). McHale notes that to speak of worldviews and conflicts between discourses is to speak in epistemological terms, a multiple-voice argument for defining reality. However, in the postmodern novel, these differing worldviews are literalized. The metaphor becomes reality: "[P]rojecting worlds which are the realizations of discursive worldviews, is to convert an epistemological motif into an ontological one" (McHale 166).

Mike Davis takes a postmodernist license to create multiple worlds, translating the methods of postmodern fiction to his non-fictional account of Los Angeles. His reality is multiple and pluralistic, requiring postmodern aesthetics to reflect the numerous worlds projected through the culture of Los Angeles. The discursive practices of Los Angelenos create multiple paradoxical realities, yet they occupy these worlds seemingly without contradiction. Davis shows us a Los Angeles where tornadoes do not exist despite multiple sightings and extensive damage, earthquakes are political events solidifying the status quo despite the physical upheaval, wildfires are products of abnormal, criminal behavior despite their regular, predictable appearance, and the discourse of sunny, care-free Southern California is shadowed by the noir history and practices of a corrupt and class-polarized society.

McHale describes postmodernist fiction as mimetic, but at the level of form more so than the level of content. For Davis to truly capture the postmodern landscape of Los Angeles, a landscape that at its most basic level represents a failure of language, mere naive literary realism cannot hope to capture the ontological uncertainty. In fact, such a traditional approach to description would contradict the very arguments that Davis makes about Los Angeles. Considering Davis in comparison to more traditional nature writers like Barry Lopez or Annie Dillard magnifies the shift from a traditional, materialist understanding of nature to a postmodern, constructionist understanding of nature's plurality. As a postmodern nature writer, Davis dismiss the materialist view of nature espoused by such thinkers as Dave Foreman and Gary Snyder.[41] At the heart of this dissertation is the argument that a better understanding of a postmodern nature requires innovative and sophisticated strategies of description. The traditional, realistic techniques of mainstream nature writers simply do not capture what McHale calls "the anarchistic ontological landscape of advanced industrial cultures" (38). Powers, Franzen and Pynchon dramatically capture this landscape in their fiction. Davis, as nominally a writer of non-fiction, uses similar strategies to do the same without encroaching into the realm of fiction. As a "nature writer," which I believe Davis is, he is better at describing nature than traditional nature writers because he recognizes the linguistic construction of his own text as well as the linguistic construction of nature. The failure of language as the defining characteristic of Los Angeles's landscape is paralleled by the failure of traditional narrative and description to document such a landscape. Davis, aware that his textual re-creation of Los Angeles is another projection of a new world, foregrounds language so that we as readers must pay attention to the language that constructs the nature that Davis describes.

Davis's world of drought and floods, chaotic twisters, and non-linear mountain lions escapes the prisonhouse of language. The failure of language that characterizes the landscape can be captured only through a rhetoric with no pretensions toward completion. Davis's Los Angeles is a fluid ontological puzzle constantly remapped and even reconstructed by the literalization of its multiple discourses. It requires a poetics of multiplicity to document it. In *Ecology of Fear* and

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[41] See Introduction.

City of Quartz, Davis creates a heterotopia where, in Michel Foucault's words, "things are 'laid,' 'placed,' 'arranged' in sites so very different from one another that it is impossible to find a place of residence for them, to define a *common locus* beneath them all" (Foucault xvii-xviii). Davis's Los Angeles is a space that undermines language itself through its juxtapositions. The heterotopia destroys syntax because it seemingly dissolves the underlying logic that "causes words and things (next to and opposite to one another) to 'hold together'" (Foucault xviii). Davis's postmodern nature calls into question the logic through which we categorize that which is nature. A landscape distinguished by such linguistic contradictions perforce calls into question the nominal categorizations undermined by these contradictions. Davis is aware of this and deliberately constructs his Los Angeles as a postmodern heterotopia where ontological boundaries collapse.

Davis creates a heterotopic space where fantasies become real, metaphors become literal, fictional worlds intrude into historical reality, and bureaucratic definitions create worlds unoccupied by logic. He invents what McHale calls a "zone," a space where he combines the pluralistic worlds of possibilities into a space associated with Los Angeles, but an impossible space that can only exist in the written text itself (McHale 45). His Los Angeles is a postmodern space more characteristic of ontologic uncertainty than even the fictional zones of Steve Erickson, a postmodern novelist creating zones labeled Los Angeles in his books. Davis's Los Angeles is more displaced, disassociative and undermining than even Erickson's fictional creations in *Arc d'X* or *Rubicon Beach*.

Near the end of *Ecology of Fear*, Davis writes a chapter entirely focusing on the literary destruction of Los Angeles. In this chapter, he exhaustively catalogs the numerous works where Los Angeles occupies the central focus of disaster fiction. In analyzing these works that create even more possible worlds, Davis further deepens and complicates the ontologic uncertainty of his Los Angeles. Consequently, this chapter, perhaps only masking as literary history, draws our attention to the entire fictionality of Los Angeles.

Brian McHale discusses the technique of *mise-en-abyme*, a strategy where an object's parts are copies of the object itself. McHale gives three criteria for a true *mise-en-abyme*:

> First, it is nested or embedded representation, occupying a narrative level inferior to that of the primary, diegetic narrative world; secondly, this nested representation *resembles* …something at the level of the primary, diegetic world; and thirdly, this "something" that it resembles must constitute some salient and continuous aspect of the primary world, salient and continuous enough that we are willing to say the nested representation *reproduces* or *duplicates* the primary representation as a whole. (124)

Davis's survey of the literary destruction of Los Angeles readily exhibits these criteria. The discussion of texts exists on a level beneath the overall discussion of Los Angeles itself. Secondly, the discussion of the various methods by which Los Angeles is destroyed resembles the overall methods discussed by Davis concerning the "real" degradation of Los Angeles. Finally, these descriptions of the literary destruction of Los Angeles nearly duplicate not only the manner in which Los Angeles is destroyed, but they also are nested reproductions of *Ecology of Fear*, providing miniature encapsulations of Davis's methods. Two examples should demonstrate this technique. In the first, Davis discusses the "ecocatastrophe novel" of the 1960s. Such novels featured such monstrosities as superfertilized grass that overtakes the city and a giant fungus that begins in Los Angeles and nearly engulfs the continent. "Ecogigantism" is Davis's term for the allegorical device, and it more than aptly mirrors the out-of-control ecology rampaging throughout the rest of *Ecology of Fear*. Secondly, Davis discovers a strain of postcatastrophe Los Angeles fiction, written in the 1980s, that he describes in this way:

> [T]hese fictions favor hyperbolic landscapes and detailed mappings of new ecologies to old locations. To borrow a term from science, new wave Los Angeles fiction is fundamentally *ergodic*: it substitutes space for time, phantasmagoric topographies for linear narrative. (EF 347)

What has Davis's book been, but a hyperbolic remapping of the old Los Angeles with a new landscape. The linear narrative of Los Angeles has been replaced by a spatial recoordination that explains far more than the traditional historical account of the city. Discussing J. G. Ballard, one of

these postcatastrophe novelists, Davis quotes a critic to describe the unique approach to disaster in these fictions: "Whatever the exact nature of catastrophe, it has disrupted the continuity of history and left a world of arbitrary fragments from which the survivors must piece together their own realities" (EF 347). *Ecology of Fear* is just that, a collection of arbitrary fragments of Los Angeles, pieced together into a heterotopic zone that in its almost surrealistic anarchy accurately reflects the postmodern nature of Los Angeles.

In this chapter, Davis, like Pynchon, Powers and Franzen, provides instructions on how we should read his work. This *mise-en-abyme* short circuits the traditional logic of narrative hierarchy. While we seemingly are safely ensconced in a chapter on literary history, we cannot but help compare these texts to the very textual Los Angeles Davis has documented in the five chapters previous. The *mise-en-abyme* erodes our confidence in separating the levels of reality that Davis is documenting, in effect, robbing the "real" Los Angeles of its solidity. Embedding these reproductions of Los Angeles's destruction foregrounds the ontological uncertainty. This is especially evident when Davis discusses a prototypical postmodernist author like Steve Erickson: "Erickson is Ballard supercharged and fractalized. His landscapes and characters, nestled within one another like Russian dolls, churn in constant metamorphosis. As in a Bosch painting, there is a troubling excess of meaning" (EF 350). Here we have an almost mirror image of *Ecology of Fear*'s methods. Davis's language is supercharged, and we've seen examples of his overheated rhetoric. The structures of Los Angeles and of *Ecology of Fear* are fractalized, a recursive structure that mirrors itself at numerous levels of scale, from language to content to structure. We are left with an excess of meaning, a description of Los Angeles that varies according to scale, a complexity that exists outside Euclidean geometry. "The Literary Destruction of Los Angeles" accomplishes just that. The endless analysis of literary texts destroys the sense of a one true Los Angeles reality. Davis's chapter reveals the power of language to deconstruct the constructions of power in the landscape. Los Angeles is both destroyed by a failure of language, and then the idea of Los Angeles as a stable, self-evident, definable reality is destroyed by the literary texts Davis explores. The whole project suggests that all is a fiction, not just the texts in this chapter.

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Davis's works, along with those of numerous other geographic scholars, have pushed Los Angeles to the forefront of urban studies, increasingly nominating the California city as the template for future North American cities. Although many critics take Davis to task for proclaiming Los Angeles's exceptionalism, they miss Davis's point.[42] Los Angeles is exceptional not in quality but in quantity. The Los Angeles ideology differs from the general American approach to our natural environment only in its expansion to exorbitant levels. If the geographic scholar Jan Nijman sees Miami as having similar characteristics, it only reinforces Davis's claim that the future of North American cities can be found in L.A.[43]

Los Angeles, as one of the major North American cities, was once looked upon by geographers and urban studies scholars as an exception to the standard model of urban growth. Its decentralized sprawl and unusual climate combined with masking boosterism and a fantasy-selling industry to make Los Angeles appear as the dramatic freak of American cities. Here was a city that bore little to no resemblance to the accepted models of urban structures and should be written off as an urban mutant. Far better to concentrate on the clear patterns proposed by the Chicago School, the urban planning school of thought based on that midwestern city.

In the twenty-first century, however, Los Angeles is looking more the norm than the exception. Edward Soja argues that Los Angeles's conflicted discourse on its environment and its many other "simultaneous contraries and interposed opposites" defy conventional categorical logic. Yet Soja insists that accounting for these contradictions is necessary to capture the city's historical and geographic signification (Soja 225). Other scholars, like Michael Dear and Allen Scott, are noting that Los Angeles may become the model for the new post-modern city. Dear argues that urbanism has gone postmodern and that Los Angeles is the leading example of the new form.

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[42] See Miller.
[43] *ibid.*

Davis's work is clearly in this line. *City of Quartz* painted Los Angeles in post-modern terms, and is largely responsible for the popular understanding of Los Angeles as the beacon of post-modern urbanism. While previous schemes defining urban growth and culture failed to explain the late twentieth-century city, *City of Quartz* proposed a new map of Los Angeles's economy, infrastructure, politics and ethnic makeup radically distinct from its urban forbearers. Similarly, *Ecology of Fear* proposes that our understanding of urban ecology has reached a dead end. Davis redefines the nature of Los Angeles as radically removed from its historical ecological depictions.

At the end of *Ecology of Fear*, Davis produces a variation on the map of paranoia he drew in *City of Quartz*. This final chapter, "Beyond *Blade Runner*," projects a future Los Angeles that thematically links *Ecology of Fear* to *City of Quartz.* In very critical ways, *Ecology of Fear* mirrors *City of Quartz* in its hermeneutics. In that earlier book, Davis presents an environmental, if not explicitly ecological, expose of Los Angeles. Similar to *Ecology of Fear*'s critique of ecological mastery, *City of Quartz* presents a critique of sociological mastery. Both are rooted in reformation of the spatial understanding of Los Angeles. In *Ecology of Fear*, that spatial understanding is reformatted in light of the theories of chaos and non-linearity, creating the fractal borderlines of nature and culture. In *City of Quartz*, that spatial critique arises out of the unstated but pervasive presence of a Foucauldian logic that reveals the disciplinary space of Los Angeles. *City of Quartz* argues that the physical manifestation of late capitalism is a "fragmented, paranoid spatiality" (CQ 238).

The subject of Davis's work in *City of Quartz* is a long way from the wilderness of Snyder and Lopez. But I still insist that the same fundamental structural concerns of categorizing nature apply here as well. I've shown in previous chapters and in my discussion of Davis's *Ecology of Fear* how nature is constructed through various worldviews, and how power and politics define the categories through which we establish what is nature. In *Ecology of Fear* Davis has revealed those categories and their resulting "natural" disasters in Southern California. In looking at his previous book, *City of Quartz*, I would like to show how the ontological confusion of Los Angeles's nature is underpined by the spatial logic of Los Angeles's social culture. Understanding how Los Angeles

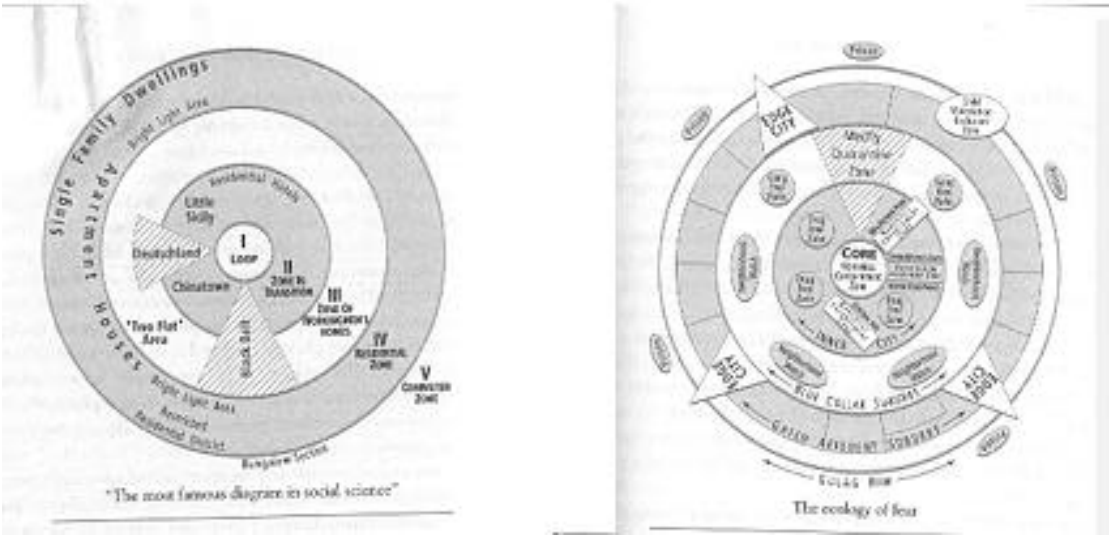
redefines its urban environment along lines of power can enable us to see how the whole of the natural environment articulates this similar spatial power. *City of Quartz* further shows the increasing disorientation from the ways we create space. As the city is controlled so shall the country. As Los Angeles falls under complete disciplinary control in the pursuit of security, so shall nature fall under increasingly disciplinary structures that seek ontological security. As metropolitan areas continue their relentless expansion, categories of civilization and nature will increasingly be strained. How we define the spaces of our cities will determine how we define what constitutes nature. The same nominal structures that are imprisoning Los Angeles under "totalitarian semiotics of ramparts and battlements, reflective glass and elevated pathways" are merely the physical embodiments of repressive social structures that are mirrored in the constant remapping of nature when it collides with civilization. In *City of Quartz* Davis documents the city under siege of fear. In *Ecology of Fear*, nature succumbs to that fear.

For Davis, the cultural logic of late capitalism is best defined by the repressive atmosphere that perpetuates a division of classes. On *City of Quartz*'s cover, Robert Morrow's gleaming photo of the new Metropolitan Detention Center in downtown Los Angeles establishes two of the central themes of Davis's critique. The Center's sleek, postmodern construction, with tiered atriums, steel trellises on bridge balconies, and dramatic lighting is an aesthetic mask that conceals the very act of imprisonment from the viewer. The prison interior described by Davis in the book houses a "sophisticated program of psychological manipulation and control: barless windows, a pastel color plan, prison staff in preppy blazers, well-tended patio shrubbery, a hotel-type reception area, nine areas with nautilus workout equipment, and so on" (CQ 257). It is, as one inmate tells Davis, "the mindfuck of being locked up in a Holiday Inn" (CQ 257). By placing Morrow's photo on the cover, Davis explicitly connects contemporary architecture and urban planning to the designs of crowd control, a constant theme of *City of Quartz*. Davis's portrait of this postmodern metropolis shows that the future of urban environments will be oriented around monuments of disciplinary control whose aesthetic trappings will distract from the workings of power underneath.

City of Quartz is packed full of examples of the barbed-wire defense of luxury lifestyles: the privatization of the public realm evidenced by armed response signs, security cameras, private sector police services and the proliferation of gated communities all serve to close down the spatial realm. Simultaneously, the increasing penetration of information and data base structures erodes any sense of anonymity and privacy in the postmodern society. The carceral aesthetic finds its poster boy in Frank Gehry, Davis's "Dirty Harry" architect. Davis describes one of his buildings, the Goldwyn Library in Hollywood, "relentlessly interpellat[ing] a demonic Other (arsonist, graffitist, invader) whom it reflects back on surrounding streets and street people. It coldly saturates its immediate environment…with its own arrogant paranoia" (CQ 240). Davis sees Gehry's walled compounds and fortified exteriors speaking "volumes about how public architecture in America is literally being turned inside out, in the service of 'security' and profit" (CQ 240). Eight years later *Ecology of Fear* shows the redefinition of space in terms of imprisonment and security, embodied in Gehry's L.A. architecture, segregating all of Southern California into walled and protected districts.

In the final chapter of *Ecology of Fear* Davis returns to the carceral landscape of downtown Los Angeles and expands its scope to account for the entire urban environment of Los Angeles. In this revision of "Fortress L.A.," Davis details how the events of the 1990s—recession, decline in factory jobs, deep cuts in welfare and unemployment, a backlash against immigrant workers, failure of police reform, and an exodus of middle-class families—"have only reinforced spatial apartheid in greater Los Angeles" (EF 362). His launching point for this exercise is Ernest W. Burgess's famous diagram from the 1920s depicting the concentric urban zones that appear in a modern American city. Burgess, a sociologist at the University of Chicago, generalized 1920s Chicago as the archetype of American cities, and Davis similarly elevates 1990s Los Angeles as the twenty-first century archetype of the American city. For Davis, Burgess's diagram "represents the spatial hierarchy into which the struggle for the survival of the urban fittest supposedly sorts social classes and their respective housing types" (EF 363). Davis's remapping preserves such Burgess determinants as income, land value, class and race, but adds fear as the decisive factor. Davis's

extrapolated map of the future shows a city eroding physically and socially as it approaches the twenty-first century.



(EF 364-65)

The most obvious disparity between the two maps is the level of complexity in Davis's version. While the concentric circles still are the defining pattern—reminding us that power, be it industrial or postmodern, still concentrates in the center—the multiple polygons that infest Davis's urban zones reveal the increased compartmentalization that he sees in contemporary America. Burgess's smooth zones, despite such prominent exceptions as "Deutschland" and "Black Belt," suggest a common social fabric that held areas together. Davis's zones are fractured by what he calls "social control districts…a yet higher stage in the evolution of the 'disciplinary order'" (EF 383). The traditional divisions of inner city, blue collar suburbs and affluent suburbs are further bisected by Homeless Containment Zone, Prostitution Abatement Zone, Narcotics Enforcement Zone and Drug Free Zone. These social control districts isolate and fragment the society by "merg[ing] the sanctions of the criminal or civil code with landuse planning" imposing severe spatial discipline (EF 383). These social control zones use zoning laws to prohibit certain "crime magnet" businesses from opening, demarcate where certain individuals can legally travel, and attempt to contain undesirable citizens such as the homeless (or the Mediterranean fruit fly) in strictly defined areas. As Davis points out, "the social control district strategy penalizes individuals,

even in the absence of a criminal act, merely for group membership" (EF 386). It is, in effect, a criminalization of status.

Even the most affluent ring of the ecology, the far-flung suburbs, are fragmented by gated communities and the internecine struggle between various Edge Cities over high tech industry, commerce, and wealthy white residents. Davis describes these economic giants as vampires, "sucking resources from older or poor suburbs" (EF 405). Such conflict in even the most prosperous of areas indicates that the carceral ecology of "Fortress L.A." now encompasses a tremendous reach. The dominant ideology of containment and imprisonment of central Los Angeles pervades even the farthest of Los Angeles's hinterlands.

Finally, the city is ringed by the Gulag Rim of prisons, the *reductio ad absurdum* of the ecology of fear. Davis remarks that between 1984 and 1992, the California legislature's cynical competition to be the toughest anti-crime lawmaker resulted in an incoherent criminal justice system, stocking the prisons with nonviolent drug offenders and the mentally ill. But the system worked wonderfully as a "carceral Keynesianism":

> While California's colleges and universities were shedding 8,000 jobs, the Department of Corrections hired 26,000 new employees to guard 112,000 new inmates. As a result, California is now the proud owner of the third largest penal system in the world (after China and the United States as a whole). (EF 416)

The justice system becomes a commercial enterprise, with law enforcement providing criminals as customers for a rapidly expanding enterprise. Taken as a whole, Davis's map of the future is a stunning indictment of "the power that bad dreams now wield over the public landscape" (EF 387).

Davis's exploration of the imprisonment of Los Angeles, be it literal, metaphoric or a post-modern melding of both, tells us much about the unique style of investigation that underpins his work. Jeffery Louis Decker, in an *American Quarterly* review of *City of Quartz*, writes that "at the often unspoken level of methodology, the book makes extensive use of poststructuralist notions of the social construction and circulation of power" (Decker 149). Decker describes Davis's work as postmodern historiography; instead of a search for origins through linear temporality, Davis's

history of Los Angeles introduces discontinuity and spatialization. It is a premise that has much in common with Edward Soja's call to spatialize all historical narrative. In the combined "Preface and Postscript" to his influential book *Postmodern Geographies*, Soja argues for a new spatial hermeneutic because "it may be space more than time that hides consequences from us, the 'making of geography' more than the 'making of history' that provides the most revealing tactical and theoretical world" (Soja 1). Like Soja, Davis attempts to:

> deconstruct and recompose the rigidly historical narrative, to break out from the temporal prisonhouse of language and similarly carceral historicism of conventional critical theory to make room for the insights of an interpretive human geography… to create more critically revealing ways of looking at the combination of time and space, history and geography, period and region, sequence and simultaneity. (Soja 1-2).

For an unrepentant Marxist like Davis, however, the poststructuralist dispersion of power does not accurately describe the postmodern logic that celebrates the collusion of capital and market forces with every aspect of modern life, including that of nature. Rather than a dispersion of power, Davis sees a concentration. As Decker notes, "Davis, *contra* Foucault, insists that power in postmodernity is essentially a centralized mechanism of State and class interests which works to repress, to exploit, to exclude, and to silence dominated groups" (150). For Davis, nature is as much a silent group as the African-Americans, Latinos and homeless of Los Angeles. To translate the postmodern disciplinary logic of urban Los Angeles to the fractal geography of the region, Davis must take his Marxism into the non-linear realm. The chaos theory used in *Ecology of Fear* provides Davis with a system that both escapes the temporal prison but can still account for the fact that, despite the obscured power relations and dispersal to the margins, the centers of power still hold. For Davis, the "strange attractors" of Los Angeles's ecology are the concealed political structures that are revealed through the geography of natural disaster.

Davis's work itself mirrors the chaotic and fractal world he describes in *Ecology of Fear*. One reviewer labels it a "historically new kind of analysis, marked by interdisciplinarity, holism, and

geographic specificity."[44] *Ecology of Fear* is non-linear, refusing the straight, logical road as the path to understanding. It is discontinuous, skipping from one historical epoch to another without regard to temporal logic. Its space is fractal, the borderlines blurred between not only subject matter like nature and urban, but also stylistically, with history, reportage, and literary interpretation all practiced in pursuit of his ideas. Perhaps most important, Davis's book, like the natural world, is connected by analogy, correspondences and recursive patterns that defy normal logic. His information, his language and his sensibilities are repeatedly translated across borders, redefining themselves amidst new contexts. The "strange attractors" of the Malibu fires reappear when the Northridge earthquake strikes, as both demonstrate patterns of occurrence that are similar yet entirely unpredictable. The institutional racism apparent in inadequate fire protection of Downtown and Westlake is a pattern that eerily manifests itself in the countless examples of Los Angeles's destruction in literary texts. One pattern: the county tax assessor reappraises farmland as residential real estate, creating a self-fulfilling prophecy of suburban sprawl. The pattern's inversion: The National Weather Service and emergency personnel repeatedly refuse to give credence to reports of tornadoes because of an ingrained belief that there is a "lack of historical tornadoes in the area." Davis's Los Angeles operates on the surface as a scattered series of events but obeys an underlying logic only explained by non-linear ideas.

City of Quartz appropriately bracketed (perhaps imprisoned) its chapters with a prologue visiting the ruins of the socialist city Llano del Rio, Los Angeles's "what might have been" and closed with post-industrial casualty city Fontana, Davis's "Junkyard of Dreams." The non-linear *Ecology of Fear* allows for an entrance at any point. The loosely configured chapters are held together not by their linear sequence, but by the self-similarity apparent in each chapter. Books by design are inherently linear, but *Ecology of Fear* does not feel constrained by its limits.

Tom LeClair has said of the novelist Richard Powers that he practices a type of "Crackpot Realism" (a term taken from one of Powers' novels[45]). LeClair describes the technique as "a fusion

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[44] See Wray.
[45] Powers, Richard. *Prisoner's Dilemma.* New York: Collier Books, 1988.

of traditional representational methods with contemporary paradigms that will seem like crackpot ideas to readers clinging to the common-sense empiricism of traditional realism" (24). Davis's work may best be described as Crackpot Historicism, where the common-sense teleology of progress and the temporal explanation of history are displaced by contemporary paradigms that reject such traditional readings of culture. *City of Quartz* was lauded by William Gibson as "more cyberpunk than any work of fiction could every be"[46] and David Harvey claimed the book "turned the whole field of contemporary urban studies inside out" (par. 1) Davis's melding of traditional historical research, non-linear science, poststructuralist theory and revanchist Marxism coupled with an often overheated prophetic rhetoric produces an historical text that does break the bars of common-sense historical empiricism.

Unfortunately, Davis may be a crackpot in another none-too-flattering definition. *Ecology of Fear* has spawned a backlash from both scholars and Los Angeles residents who have taken Davis to task for his sometime shaky scholarship and egregious exaggerations. Most prominent of these is the pseudonymously named Brady Westwater, a Malibu Realtor who has taken it upon himself to fact-check Davis's work and broadcast his surprising results. Westwater has been primarily concerned with Davis's representation of the Bunker Hill section of Downtown Los Angeles. In *Ecology of Fear* Bunker Hill is brought forth as the epitome of the privatization of public space, physical segregation and spatial discipline. Davis calls the aptly named Bunker Hill a "riot-tested success of corporate Downtown's defenses" (EF 366). Westwater meticulously dissects Davis's mistakes in describing the history of Bunker Hill's development and reveals that the so-called spatial apartheid is a gross exaggeration, with a web of pedestrian access, no steel doors as Davis claims, and a rainbow of ethnic diversity milling about the small public spaces that dot the area. All of which belie Davis's Fortress L.A. depiction. Westwater also calls Davis to task for his abuse of statistics and using multiple definitions of Los Angeles (Los Angeles proper, Los Angeles metropolitan area, Southern California, the South Coast) to suit his needs. Westwater especially likes to needle Davis about his so-called "native son" status as a Los Angeleno. He points out that

[46] William Gibson, cover blurb.

not only was Davis born in Fontana, a rust belt small town in San Bernardino County (acknowledged by Davis), but Davis has lived a relatively short time in Los Angeles, spending much of the 70s and 80s in Europe.

Westwater's gadfly critiques raise some questions about Davis's technique, but they only go so far as a critique of his theses. They suggest that Davis is prone to exaggeration and does take liberties with some facts in order to better prove his point, yet his overall thesis remains intact. Perhaps more damning is Davis's own admission that he fabricated a meeting with the environmentalist Lewis MacAdams in order to juice up a story about the Los Angeles river. "Though we'd never actually talked," MacAdams writes, "the words he put in my mouth made me sound like I knew a lot more about the Los Angeles River than I actually did. I told him to go ahead with the piece just the way it was" (par. 11). The anecdote suggests that Davis may manipulate unessential facts to highlight the essential argument, but that even those who are victims of his manipulations see that the important truths remain. As Veronique de Turenne notes in the webzine *Salon*, "Davis's deeper analysis is not susceptible to a simple factual debunking" (par. 24). Davis's depiction of Los Angeles is so encompassing, that even a series of misrepresentations fails to falsify his overall conclusions.

The more trenchant criticism comes in David Harvey's review of *Ecology of Fear*. Harvey, as mentioned above, lauds *City of Quartz* as revolutionary, but finds problems with *Ecology of Fear* , seeing Davis's lack of alternative vision as symptomatic of a deeper problem, a sense of historical inevitability:

> Davis has, it seems, imprisoned the future of Los Angles in his own detailed imaginings of disaster. And that future is rancid, not socialist. He loses sight of the simple fact that if cities are imagined and made, they can equally well be re-imagined and re-made. (par. 15)

Davis does paint a vision of the future that one reviewer labeled "so dismal that it's ultimately paralyzing"(Waldie par. 6). So enamored of his Fortress L.A. conception of Southern California, Davis seems to have perpetuated the imprisonment with his texts. Davis has said he is perplexed by

critics who conclude that he hates Los Angeles. "I love Los Angeles," he says in the *Salon* interview, "How can you not see that?" He does, however, acknowledge that his role has been "to rain on the parade" (Turenne par. 43).

Such negative response to Davis's work, while valid, is a familiar response to works that focus entirely on where society fails us. Certainly David Harvey's call for an alternative vision is necessary for any progressive action in Los Angeles, but killing the messenger of bad news is no progressive solution either. We need critics who can identify what is wrong, critics who can delineate the social structures that keep us *seemingly* paralyzed. They provide the road maps for reform. Davis recognizes that environments, both natural and urban, are socially constructed and that Los Angeles's environments are a "uniquely explosive mixture of natural hazards and social contradictions" that cannot be adequately explained by traditional models. Davis's crackpot history may not confirm to all the accepted models of scholarship, but it does present a revolutionary way of appreciating the ways in which the physical world both determines and is determined by the social.

Seven

Conclusion

The Green Nuclear Power Plant

The debates from the introduction that began this dissertation revolve around issues of pragmatism and efficacy. Underpining each position, and this dissertation, is the very real fact that the physical landscape of America is under threat of drastic, irreversible change for the worse. Both sides, social constructionists and materialists, accuse each other of eroding a strong, unified opposition to those that would physically degrade our environments. At the heart of this debate is an attack on and defense of postmodern theory. The social constructionists are accused of lacking standards of truth, of being lost in a gelatinous relativism that offers no resistance to ecological destruction. The materialists are accused of naivete, rigidly committed to an uninformed understanding of reality.

This debate is remarkably polarizing, becoming more acrimonious with the additional layer of anti-intellectualism often seen in American politics. Yet there does exist middle ground between these two. One can believe in a social construction of nature and still see truths, truths that may even be categorized as universal. However, those truths are only accessed through culture and language, mediating levels that complicate any sense of unproblematic reality.

Our scientific understanding of the physical planet has made remarkable progress in the twentieth century. With the invention of the computer and its ability to process immense amounts of data, we have dramatically advanced our understanding of the vast and complex systems that make up our planet. Our technologic and scientific developments have indeed given us a more accurate picture. With this accuracy comes a responsibility to alter our patterns of civilization to the degree that they no longer create irreversible changes in our ecological systems. While we may differ over degree, there is world-wide concern over the threats to the health of our environments. Yet the advanced scientific knowledge of our planet must be accompanied by the same advances in

understanding of our culture. This understanding can only be accomplished with the aid of postmodern theory. American culture is best explained by realizing that ideas, values, categories and definitions are often anchorless. Whatever grounding they may have in scientific experimentation, reason, ethics, religion or other numerous narratives, our "truths" are often co-opted by other narratives to unforeseen ends. The corporate use of "green" marketing, for example, reveals that the better understandings of our ecosystems made through science—our bastion of verifiable truth—can be manipulated and reconfigured to do damage to those ecosystems in the name of saving them. In spite of its origin in scientific experimentation, the discourse of ecology can be married to any term needing a "greenwashing." As another example, witness the nuclear power industry declaring itself a clean and environmentally friendly source of energy compared to coal-burning power plants.

The materialists' response to these multiple realities is to bang their heads against the brick wall of postmodernism, failing to see the ontological fluctuations of what we label nature. However, stamping one's foot and repeatedly insisting that such postmodernism is an inaccurate description of reality have little practical effect. Nuclear power may be a severe threat to our environment, but new plants will likely be built through lobbying efforts declaring them the green alternative.

I agree that postmodernism does not apply to ecological criticism on all counts. The very idea of a literary ecocriticism presumes a nature that must, in the end, have some stability. Without such a grounding, ecocriticism would be little more than the study of tropes or themes of nature in literature, and as such, not worthy of consideration as a new critical approach to texts. In order for ecocriticism to have any power, it needs a truth that exists beyond the textual realities it studies. Both environmentalism and ecocriticism necessarily rely on truths determined by science, and they insist upon a reality where the concrete results of ecological damage shut down the free play of cultural constructions. Nature can indeed be used as a "critical" concept, as Laurence Coupe argues in *The Green Studies Reader.* It can challenge the logic of industrialism that privileges profit and progress over all else. And it can challenge our culture that subordinates all of nature to human constructed categories of significance. In doing so, ecocritics must work under the notion that

nature is a reality that does exist beyond our cultural constructions of it. Nevertheless, we overstep our bounds when we presume that we can articulate this reality with anything but a historical, situated relativism. Discourse, even the discourse of nature, arises from a specific, historical point. Hence, we need the theories of postmodernism to articulate the infinite ways in which this idea of nature, the epitome of concrete reality, is in fact socially constructed. Language can only represent a true nature indirectly, creating a social construction that, while connected to a physical reality, exhibits such a freedom of movement that the idea of nature, for all purposes, is anchorless. We need a postmodern understanding of ontological uncertainty to explain nature's indeterminableness, or else we operate under an illusion that nature is self-evident and secure.

Walt Disney World is a perfect example. On one level, we can critically evaluate Animal Kingdom's environmental impact upon central Florida and the health of its animals, two materially verifiable aspects of Animal Kingdom's place in the ecosystem. Such a critique (one not accomplished or even attempted here) has validity and importance. But this critique severely limits the ecocritical project necessary to fully explain Animal Kingdom. Understanding the ecological pressures exerted by moving four million cubic feet of dirt to create a theme park may give some indication of the immediate impact on the environment, but it comes nowhere close to explaining the impact Animal Kingdom will have on our cultural understanding of nature.

Similarly, Los Angeles's ecology requires more than a simple explanation of its climate and the pressures exerted by rapidly expanding suburban sprawl. Davis's incisive ecocritical account of Los Angeles successfully describes the city's ecology only by addressing its postmodern condition of competing realities. Of the four authors treated here, Davis is the most explicit in looking to both science and postmodern aesthetics to paint a more accurate picture of nature. His understanding of the sciences of chaos and fractal geometry reinforces the instability evident in the postmodern culture of southern California. In Walt Disney World's Animal Kingdom and Mike Davis's Los Angeles, I've shown the real-world ontological uncertainties that rival the fictions of Pynchon, Franzen and Powers.

In the intervening chapters, I've shown the dramatic representation of nature as a historically contingent and mutable idea. Thomas Pynchon and Jonathan Franzen are concerned with the eighteenth-century roots of environmental destruction. In their works we see that the idea of nature bends, twists and mutates through the workings of social forces like politics, patriarchy and capitalism. Pynchon's anachronistic language reinforces the theme of a socially constructed reality while Franzen's multiple rhetorical registers parallel the various ontological concerns that have changed nature over the course of America's four hundred year history of European settlement.

Richard Powers's multiple narratives in *Gain* reflect the competing worldviews prevalent in all these texts. *Mason & Dixon* shows us the conflict between a world of miracles and a world of reason as the Enlightenment colonizes America. *Strong Motion* documents the history of America as progressive naturalization of a particular construction of nature, a social structure that links nature and the feminine under one logic of domination supported by the Enlightenment. So complete is the naturalization of this worldview that Franzen's protagonists eventually retreat into personal redemption, at a loss for any direct ecological criticism. *Gain*, mapping very similar territory as *Strong Motion*, offers an alternative, a worldview that may escape the overwhelming success present in Franzen's post-industrial reality. Powers's dual narratives foreground the competing worldviews at the end of the millennium in ways similar ways to Pynchon's dawning of America. Ironically, salvation in *Gain* may evolve from the pursuit of science and reason, the same embodiments that threaten the new world of *Mason & Dixon*..

These eco-novelists are aware that reality becomes a matter of differing and competing worldviews. Underlying their concern with language and its ability to represent reality is an awareness that there is a nature that exists beyond language. Unlike most of their contemporaries, however, they refuse the illusion of defining a one, true nature. Instead, they interrogate the very means of producing that illusion of a self-evident, tangible nature. Their's is a true ecocriticism, one that seeks to understand and protect our environment through understanding the very discourses in which we debate nature's multiple facets. The idea that there is a magnificently complex, interrelated biological system that is the foundation of our culture can be used as an effective Archimedean

point for critiquing that culture. We find it easy to label this point "nature." But the idea of nature is far more than this biological system. It is the job of green studies to thoroughly investigate how "nature" is a product of culture, and it is the goal of ecocriticism to explore the linguistic creation of nature as a textual artifact.

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