

(UN)NATURAL BODIES, ENDANGERED SPECIES, AND EMBODIED
OTHERS IN MARGARET ATWOOD'S *ORYX AND CRAKE*

by

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ABSTRACT

The developing knowledge of life sciences is at the crux of Margaret Atwood's *Oryx and Crake* as she examines human promise gone awry in a near-future dystopia. This thesis examines aspects of posthumanism, ecocriticism, and feminism in the novel's scientific, cultural, and environmental projections. Through the trope of extinction, Atwood's text foregrounds the effects of human exceptionalism and instrumentalism in relation to the natural world, and engenders an analysis of human identity through its biological and cultural aspects. Extinction thus serves as a metaphor for both human development and human excesses, redefining the idea of human within the context of vulnerable species. *Oryx and Crake* reveals humanity's organic connections with non-human others through interspecies gene-splicing and the ensuing hybridity. In this perspective, Atwood's text provides a dialogue on humankind's alienation from the natural world and synchronic connections to the animal other, and poses timely questions for twenty-first century consumerism, globalism, and humanist approaches to nature. The loss of balance provoked by the apocalyptic situation in *Oryx and Crake* challenges commonplace attitudes toward beneficial progress. This imbalance signals the need for a new narrative: A consilient reimagining of humanity's role on earth as an integrated organism rather than an intellectual singularity.

I dedicate this effort in memory of my mother, Elsie Jontes Galbreath, whose greatest gift to me was a lifelong love of the written word. This thesis presentation is also dedicated to my nieces, Kathleen Vandervoort and Patricia Swen, for their unfaltering support and encouragement. Without their intervention, I would not have ventured into these challenging, enervating, and very fulfilling waters.

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INTRODUCTION: THE EXTINCTION NARRATIVE

At the beginning of the twenty-first century, humankind expands its knowledge potential, peering deep into the universe and far back in time to view events near the birth of the universe, and deep into matter and biology to unlock the keys of life. The developing knowledge of life sciences provides the foundation for Margaret Atwood's novel *Oryx and Crake* as she examines human promise gone awry in a near-future dystopia. Processes of embodiment and feedback systems illuminate humanity's organic connections with nonhuman others; this relatedness is the key to the interspecies gene-splicing taking place in the novel. In this world, human being is redefined in the context of other being, and the posthuman arises through genetic intervention, inheriting an earth in which the original humans are virtually extinct.

The liberal humanist subject's capacity for both mindful and blind rapaciousness is at the core of *Oryx and Crake*, propelling a near-future scenario in which *Homo sapiens* is the endangered species. But inside the narrative of proposed human extinction rests an acknowledgment of the current mass extinction that may be attributable to human activity. In the interstices between encroaching mass biosphere extinctions (resulting from global warming and unchecked exploitation) and humanity's extinction (rendered via a bio-engineered doomsday virus), Atwood challenges our understanding of the relationship between what we self-name "human" and nonhuman others. The same factors enabling cross-species gene transfer firmly embed humans within the biology of all earth organisms, making us a creature as knowable by our likenesses as by our differences to other life forms, and, similarly, as vulnerable to environmental factors.

According to N. Katherine Hayles, four criteria inform our understanding of the posthuman: the primacy of information over materiality, the relegation of consciousness to second-tier

significance, the view of body as “original prosthesis,” and the effortless joining of man and machine. This perspective of the posthuman leads to “the union of the human with the intelligent machine” as a “common theme” in posthuman philosophy and fiction (2-3). The idea of the posthuman is intertwined with critiques of the “liberal humanist subject,” and overlaps post-colonial and post-modern theories in deconstructing a universal, unified humanist ideal (4). While, as Hayles notes, many contemporary philosophers and fiction writers locate the posthuman within the union of human and computer, the primary function of information processing can also be examined through genetic intervention and re-embodiment. This version of the posthuman is the direction Atwood follows in *Oryx and Crake*, proposing a re-figured humanity, adapted for survival through multiple biological interfaces. Atwood’s presentation of the posthuman through genetically-modified humans and other creatures challenges the bedrock concept of “human” and opens a window for reevaluating non-human agency and sentience.

At the same time she reveals the biological correlations between humans and nonhumans, Atwood highlights the psychological separation between humanity and the natural world, apparent in the constructs of human habitat. *Oryx and Crake* portrays a world altered by global warming and devastated by the “JUVE, Jetspeed Ultra Virus Extraordinary” (Atwood, *Oryx and Crake* 341). The world prior to the virus is already in crisis: rapidly rising oceans have inundated coastal cities and brought desertification to once lush landscapes (63). The resulting environmental and social conditions drive the new elite, the lauded mathematical intellectuals, into the “Compounds,” secure company-associated communities that are separated from the “pleeblands” (27, 289) by twelve-foot high walls, barbed wire, and paramilitary security guards. This segregation bisects society into the haves—those born with the “genius gene”—and the have-

nots—the “neurotypicals” (194); it also further separates the urban populations of both locations from the natural world. The characters of Jimmy, the narrator, and his best friend Crake exemplify the new normal, where contact with wild nature is nonexistent, and even domestic pets are limited, at least in the sphere of the Compounds, to genetically altered animals.

By developing these environments and the characters inhabiting them, Atwood poses extinction as a metaphor for both aspiring self-knowledge and the countermanding self-destruction, and redefines the idea of human in the context of vulnerable species—one among many. She draws on current scientific research and theory to explicate potential future environmental scenarios, and the technocracy’s disastrous consequences profiled in *Oryx and Crake* challenge commonplace attitudes toward “beneficial” progress. In addition to vanished human and nonhuman life, *Oryx and Crake* raises the specter of other forms of extinction, adding cultural constructs, human relationships, biophilia, language, and ethical behavior to the endangered list. The recurrent background theme of extinction links humanist approaches to the natural world with potential outcomes, exploring roads we are currently traveling.

The protagonist, Jimmy/Snowman, and his best friend, Crake, are complementary figures, each representing a different facet of the humanist model.¹ J. Brooks Bouson cites them “as paired opposites,” noting that *Oryx and Crake* highlights “the division between the humanities and the sciences” (140). The realm of humanity’s creative potential through artistic endeavor is Jimmy/Snowman’s domain; this is opposed to Crake’s embodiment of empirical rationalist thought. Both iterations of humanism owe their birth to the self-absorption and self-congratulation

¹ “Jimmy” is the narrator’s name prior to the extinction event which destroys humanity; “Snowman” (as in Abominable Snowman) is the appellation Jimmy assumes after the disaster (Atwood, *Oryx and Crake* 346-47).

of western culture. While *Oryx and Crake* can be seen as deconstructive of the empirical model, it can also be read as questioning the efficacy of Jimmy/Snowman's brand of humanism. Atwood herself admits to the text presenting a cautionary tale along the lines of Charles Dickens' *A Christmas Carol* (qtd. in Halliwell 260), but—intentionally or not—it also points to the culpability of those who unquestioningly follow scientific and technological advances.

In his passive acquiescence, Jimmy/Snowman represents an indictment of western culture which, sated on material possessions and hedonistic urges, accepts global warming, genetic mutations, and extinction as inevitable progress. In addition to exemplifying the humanist tradition, Jimmy/Snowman personifies the estrangement between modern western humanity and nature. Even though he claims empathy, he is ill-suited for the post-apocalyptic world of resurgent nature, which includes manufactured as well as naturally evolved organisms. Exploring the ethics of contemporary genetic engineering through the altered creatures, Atwood gives humanoid Crakers and nonhumans such as pigoons and rakunks prominence in the text. Food animals, companion species, and genetically modified humans enter the narrative, furthering the ethical examination of human technological advances, and posing timely questions for twenty-first century consumerism, globalism, and commercialism.

While the complementary male characters of Jimmy/Snowman and Crake help define the struggle between the related and contrasting humanist and empirical traditions in the novel, the female characters of Jimmy's mother, Sharon, and his lover, Oryx, illuminate the struggle between humans and nature in terms of progress and colonization. Within these two figures, we can discern several layers of categorization inherent in western thought. Sharon, born, educated,

and normalized into a liberal western society, encounters troubling and obfuscating structures in the empirical heritage of the Compounds. Oryx, in contrast, is an enigmatic figure grounded only in a digital universe and Snowman's imagination, and defined by her sexuality. Reminiscent of her feminist observations in *The Handmaid's Tale*, Atwood places the women of *Oryx and Crake* in positions that raise issues of social, political, and ethical responsibilities for all genders. Sharon illuminates a second-wave and ecofeminist perspective, questioning and then actively challenging the corporate, patriarchal power structure of the Compounds and their malefic attitude toward the natural world. Oryx represents a third-world female experience; hers is a story of survival in the margins of a system that views indigenes as just another commodity for consumption.

Since the publication of *Oryx and Crake* in 2003, various critics have provided insight and analysis from multiple perspectives. Danette DiMarco notes that the figure of Crake "emerges as the quintessential *homo faber*," illustrating the instrumentalism Atwood critiques in the text (171). DiMarco argues that Atwood raises the possibility of counteracting this instrumentalism through positive social change as enacted by Jimmy/Snowman (172). Jayne Glover comments on Crake's instrumentalism through an ecocritical perspective, analyzing his "hyperseparation from the Other, both from nature and from people in general" (55, 59). Bouson examines the biotech, posthuman angles of the novel, exploring the satiric commentary Atwood aims at current transgenic research, noting how the figures of Crake and Snowman become jokester and "human joke" in Atwood's bleak humor (140, 151). Looking to the mythic aspects of the novel, Grayson Cooke observes the technical role of "language and writing" as a link to the "beginning and end of 'life' and the 'human' as they are commonly understood" (106), and Chung-Hao Ku interprets

the varying aspects of monstrosity in Atwood's text, from the pathetic figure of Snowman, to the inhuman Crakers, to human science through the figure of Crake: all speak of "the soft boundary between human and monster" (109).

While I do not necessarily disagree with these critics, I argue that *Oryx and Crake* is also a dialogue contrasting humanity's simultaneous alienation from the natural world and homologous connections to the animal other. *Oryx and Crake* merits a consilient evaluation, recognition that humans are both biological and cultural beings.² This reading ties Atwood's novel to fictive, theoretical, and scientific texts through the mechanism of the extinction narrative. My analysis explores *Oryx and Crake* through the lens of the various forms of extinction, using posthumanist, ecocritical, and feminist theory to illuminate the threads that define both estrangement and affinity. In the following pages I will call on posthumanist perspectives from N. Katherine Hayles, Donna Haraway, Jean François Lyotard, Jacques Derrida, and Bill Readings, among others. These theorists allow room in the definition of the posthuman to include an organic interface and recognition of the animal other, a concept that takes flight in Atwood's cast of human and nonhuman characters. This viewpoint of posthumanism also segues into areas of ecocritical and ecofeminist thought, and here the further works of Haraway, as well as texts by Caroline Merchant, Patrick Murphy, Richard Louv, and E. O. Wilson provide supporting insights.

The interrelationships of the various theories as applied to *Oryx and Crake* help clarify Atwood's text; for instance, genetic modifications of plants, animals, and especially humans blur the

² Glen Love explains the interdisciplinary use of science in evaluating literature as a core principle of ecocriticism, citing scientific "methods of investigation as the best means we have for understanding our world, and for thinking our way toward solutions to the problems of pollution, population, and despoliation" (561). E. O. Wilson argues that "There has never been a better time for collaboration between scientists and philosophers, especially where they meet in the borderlands between biology, the social sciences, and the humanities" (*Consilience* 11).

defining lines between species and call for a reconfiguration of the meaning of “human.” This is a primary conversation in posthumanism, but the ethics of genetic manipulation place Atwood’s discussion in the realm of ecocritical thought as well. I argue that *Oryx and Crake* challenges the information-only existence of the posthuman outside nature, as the extinction of humanism Atwood describes parallels the self-contaminating death of informatics. In this rendering, the posthuman cannot fully emerge while humanism still filters language, culture, and social organizations, and during the dissolution of humanism the cyborgian tools for creating the digitized posthuman are sacrificed as well. All that are left are the vestiges of original humans and the organic inheritors of the human trace—the bestial pigeons and humanoid Crakers.

CHAPTER ONE: ENDANGERED SPECIES

An Armageddon is approaching at the beginning of the third millennium. But it is not the cosmic war and fiery collapse of mankind foretold in sacred scripture. It is the wreckage of the planet by an exuberantly plentiful and ingenious humanity. (xxiii)

E. O. Wilson,
The Future of Life

The balance of nature is not a *status quo*; it is fluid, ever shifting, in a constant state of adjustment. Man, too, is part of this balance. Sometimes the balance is in his favor; sometimes—and all too often through his own activities—it is shifted to his disadvantage. (246)

Rachel Carson,
Silent Spring

Antecedents: A History of Earthly Destruction

In the rhythm of natural processes, the concept of extinction, when it penetrates, bears the disquietude of unending loss. Extinction, after all, is final; after termination, it is beyond human control. It is a rather recent idea in history, arriving a little over two hundred years ago, and it still provokes resistance with many lay people when placed in human terms.³ Dinosaurs are easily understood as gone from the earth in a permanent way, disappearing long before humans could interfere or question their existence. Dodos and the giant moa slide into our consciousness as forever gone, and we understand human complicity in their disappearance. The “vast armies of the passenger pigeons” are similarly understood as extinct through human agency, as John Burroughs recounts in his journal:

The last great flight of them that I ever beheld was on the 10th of April, 1875, when, for the greater part of the day, one could not at any movement look skyward above the Hudson River Valley without seeing several flocks, great and small, of the migrating birds . . . The pigeons never came back. (213)

³ According to research by D.A. Poling and E.M. Evans, the concept of human extinction as an inevitability is still not readily accepted by lay-adults, even when they acknowledge the possibility of extinction. Poling and Evans surmise the idea of inevitability “may be psychologically overwhelming” (380).

Burroughs further notes that he, himself, may have participated by perhaps “killing the last pigeon” (213). Though some mourn these human-caused extinctions, all too often the perception is distanced by the lens of human exceptionalism: the nonhuman, in the context of extinction, is an unfortunate but unavoidable loss due to the inevitability of human progress.

Evolutionary biologists tell us that of all the different kinds of life that have existed on earth, an estimated 99% have gone extinct.⁴ Some have disappeared through catastrophic events, such as the asteroid which is believed to have contributed to the disappearance of the dinosaurs, but most have simply succumbed to natural processes over time. The panoply of life we see today is just a slice off the end of the temporal column, a thin flake bounded by human awareness. There is little doubt that for most creatures, the natural destiny is extinction. Nonetheless, most extinctions occur gradually, over time, and not in the rapid tumble initiated since the appearance of humans. We may be the next catastrophic event.⁵ But even with overwhelming evidence of the fragility and ephemeral quality of species longevity, the idea of eventual human extinction is inconceivable. Perhaps that is why it is such an effective literary tool, one that has been put forth by numerous fiction writers. Eliminating humans introduces a defamiliarization, and a world without people is an alien landscape: an unfilled promise. After all, according to most religions and some philosophies, the earth was created specifically for people. By introducing the idea of human absence, extinction narratives subvert humanism, religion, and science: man the thinker, man the chosen one, man the maker is no more.

⁴ See Ayala (8572), Garrison (618), and Jablonski (589).

⁵ Michael Boulter states that human “use of fossil fuels and . . . disrespect for the environment are combining to cause unprecedented falls in numbers of individuals of many species” (35), and Wilson asserts that “species of plants and animals are disappearing a hundred or more times faster than before the coming of humanity” (xxiii).

In “*The Handmaid’s Tale* and *Oryx and Crake* in Context,” Atwood defines her novels as speculative rather than science fiction (513). Nonetheless, *Oryx and Crake* fits inside a long tradition of science fiction narratives that entertain Earth’s destruction as a means to an end. *Oryx and Crake*’s antecedents include Nevil Shute’s *On The Beach*, Pat Frank’s *Alas, Babylon*, Walter M. Miller Jr.’s *A Canticle for Liebowitz*, the film *Planet of the Apes*, Lester del Rey’s “The Faithful,” John Wyndham’s *The Day of the Triffids*, Greg Bear’s *Blood Music*, and the films *Twelve Monkeys* and *Deep Impact*. These narratives imagine different scenarios, such as a post nuclear-holocaust world, various forms of biological plagues and bioengineered menaces, and civilization-destroying natural disasters, but all imagine an earth bereft of a successful, plentiful human species.

Some science fiction imagines simple survival after an extinction event (*Alas Babylon*, *Deep Impact*), while others (“The Faithful,” *Planet of the Apes*, *Blood Music*) envision a radically different reconstruction of reality. Atwood’s narrative combines both scenarios: simple survival for Jimmy/Snowman and at least four other humans, and a new form of humanoid life in the posthuman Crakers. While some of the natural disasters invoked in extinction narratives cannot be attributed to mankind (such as asteroids), many of the other triggers are clearly due to humans. In some cases it is humanism’s drive for ever-increasing knowledge, while in others it is the western ideal of progress in the form of expansion and colonialism, or humankind’s long tradition of warring territoriality. In *Oryx and Crake*, ambition cloaked in the guise of human progress justifies war and weaponry, environmental desecration, and misguided medical research. Some stories, such as del Rey’s “The Faithful,” revert to humanist outcomes or seem to

justify humanist paradigms, but *Oryx and Crake* dissects humanism under a posthuman microscope, exploring the limits of invention, awareness, and justice.

Atwood combines two extinction-level events in *Oryx and Crake*—global warming and a lethal virus—to achieve the demise of *Homo sapiens*. While she admits to absorbing some science fiction while growing up, such as H.G. Wells, Ray Bradbury, and John Wyndham (Atwood, “*The Handmaid’s Tale* and” 514), she also credits more traditional literary sources as inspiration, listing Aldous Huxley’s *Brave New World*, George Orwell’s *1984*, and Evgenii Zemiatin’s *We* as examples of a “kind of utopian thinking” with roots in the Bible’s Book of Revelations: “first catastrophe, then blissful wonderfulness” (qtd. in Halliwell 257-58). Whether prompted by angst over humanity’s sins of greed, avarice, and gluttony, Cold War fears of technology run amok, or apprehension concerning environmental disaster, a humanity-scoured globe provides a clean substrate for a new beginning.

This idyllic premise offers another chance at Eden’s garden, an opportunity to undo whatever evil humanity has produced. Stephanie Turner views “The apocalyptic mode of expression” as essentially “utopian,” an opportunity for “imagining of what happens after” (58), but Atwood’s rendering of the future of life is an uneasy projection: it represents the dissolution of human culture as we understand it. Her post-apocalypse pictures not the death of a group of individuals, but of humanity as a species. Even if a few humans survive, because of depleted surface metals they could not rise above a stone age level; thus, “it’s game over forever” for civilization as we understand it (Atwood, *Oryx and Crake* 223). In this regard, the novel acts as a warning for the present. Jayne Glover posits that science fiction literature, in its “use of thought experiments,” is an

effective means of entering the eco-critical discourse and provoking awareness of “the potential consequences of our current ecological crisis” (51). Furthermore, as Coral Ann Howells notes in her discussion of *Oryx and Crake*, “the primary function of a dystopia” may be “to send out danger signals to its readers” (161). Atwood herself said in an interview with Martin Halliwell, “if nothing changes and we keep doing what we’re doing, we are heading for the perfect storm,” a confluence of factors which will take the ensuing events far beyond our control (260).

Humanity’s Turn

Dystopias are natural frames of estrangement, scenarios that detach us from our sense of the normal. But *Oryx and Crake*’s dystopic future also indicts contemporary alienation, the rift human culture has instituted between itself and the natural world. Poet Gary Snyder describes this separation as a “priapic drive for material accumulation” enacted by “men . . . working out their ultimate destinies (paradise? perdition?) with planet earth as the stage for the drama—trees and animals as mere props, nature a vast supply depot” (103). Dysfunctional examples of the division abound in *Oryx and Crake*: from the nature-less pleeblands to the synthetic creations of the Compounds, untampered nature is held apart as Other and as raw material. Only after the JUVE epidemic is Jimmy/Snowman confronted with unadulterated nature.

Snowman is the lone human survivor of the virus (as far as he knows); he is the “Lonesome George” of the human species, the lonely remainder of his kind.⁶ His memories are the only tools the reader has of reconstructing the species, and with those Snowman fills in the gaps of the pre-JUVE world. Through Snowman’s recollections we see the walled enclave Compounds and

⁶ Lonesome George, the Galápagos tortoise, is “the lone survivor of the abingdoni subspecies from Pinta Island” (Caccone et al. 13223).

overcrowded urban pleeblands, both artificial environments that isolate humans from the natural world. We also see the political and social changes that humanity experiences as it faces global warming: frequent and severe droughts and resultant food scarcities, increasingly virulent diseases, self-serving oligarchies, segmentation and segregation of humans by intellect, and bioengineered animals for increased food production and medical organ harvesting. DiMarco describes the bipartite social segregation as a “systemic acceptance of separation and enclosure from communities and people not engaged in similar work”; this segregation amplifies economic, intellectual, and political divisions of power (177). The division of western society into a “false dichotomy” of beneficial Compound life and dysfunctional pleebland existence, according to Glover, “highlights the darker side of utopia and the ambiguous nature of dystopia” (54). By emphasizing the Compounds’ authoritarian regime and the pleeblands’ borderless nature, each human location is shown to be more, and less, than it seems.

The extensive information Snowman provides on pre-plague humanity contrasts with the limited tableau he presents of the nonhuman world. We can deduce the reason for his lack of knowledge or connection with nature once we examine the environment that formed his understanding, the Compounds. The walled city-states of the corporate Compounds have replaced the national government, doing away with the illusion of a free elective democracy. Those who control the biosciences and generate the profits are the royalty of this new society, and their isolation in the Compounds is justified because the world outside has “Too much hardware, too much software, too many hostile bioforms, too many weapons of every kind, and too much fanaticism and bad faith” (Atwood, *Oryx and Crake* 28). Security from infectious vectors spread by competing corporations is the rationale behind the enclosures; this security promises a sterile environment

that precludes the natural world as well as suspect humans (19, 32, 53, 197). The cynical spectacle of a government and legal system with a primary focus of profits is manifested in the types of crime the official enforcement arm—the CorpsSeCorps—is vested in controlling: saboteurs, environmental and social justice activists, and protesters. Ethics are subject to productivity in the world of the Compounds, and genetic manipulation or any other research is only judged through the lens of market worth. Those who question or reject this paradigm are considered traitors “to the general good,” and dealt with by execution, as in the case of Crake’s father and Jimmy’s mother (212, 258).

Inside the Compounds, both nature and culture are re-sculpted into simulacra, faux constructions like the “fake Georgian and fake Tudor and fake French provincial” houses, with complementary replica furniture (Atwood, *Oryx and Crake* 227). Since real food is scarce, soy-based substitutes dressed to appear as many different dishes are considered normal fare. Indicating his awareness of the fabrication, Crake intones, “You never know . . . What is *reality*?” (83). The Compounds themselves have names that trouble reality, such as “OrganInc Farms,” “NooSkins,” “HelthWyzer,” and “RejoovenEsense,” names that hint at their purpose under a persuasive gloss (22, 53, 225). But the question of authenticity looms largest with genetically modified biological organisms, since the only nature Jimmy and Crake experience first-hand is the manipulated nature inside the Compounds.

It may be possible to understand the building blocks of life, as do the Compound’s scientists, without achieving the affinity with nature that is part of our evolutionary history. Some theorists insist that exposure to wild, untamed nature is necessary for our very health, producing an

“innate tendency to focus upon life and lifelike forms, and in some instances to affiliate with them emotionally,” a reaction known as “biophilia” (Wilson, *The Future* 134). In *Oryx and Crake*, biophilia is rare, and children understand by a very young age that nature is something to be tricked and consumed. “When he was old enough” Jimmy learns about his father’s job bio-engineering pigs into organ banks in the process by which pigs became pigeons. The financial implications of the project—“A great deal of investment money had gone into OrganInc Farms”—are stressed (Atwood, *Oryx and Crake* 22-23). Thus, biology and profit are united, and nature is quantified as a utilitarian commodity.

Children who are nature deprived, Richard Louv asserts, suffer from a condition he describes as “*nature deficit disorder*” (34). “Nature,” he indicates, “offers something that the street or gated community or computer game cannot”; it “exposes the young directly and immediately to the very elements from which humans evolved” (97). Jimmy’s enclosed, computer-entertained experience is normal in the pre-JUVE world; he epitomizes a western way of life unengaged with nature. His distancing is part of the enculturation process he experiences as a child, a process not only severing him from directly experiencing uncontrolled nature, but also numbing him to any real connection with the humans in his life. Patrick Murphy recognizes this kind of disassociation as “a belief in the radical independence of human beings from all else, including each other,” and a view that facilitates denial in “all ongoing human interrelationship with the rest of nature” as well as the human place in evolutionary processes (144).

The artificiality of Jimmy’s experience is clear in his earliest memory of “a huge bonfire” of burning cows, sheep, and pigs, animals that have been infected with a man-made virus (Atwood,

Oryx and Crake 15). He feels empathy for the animals “because they were being burned and surely that would hurt them” (18). He is later introduced to some live pigeons, which are “slightly frightening . . . They glanced up at him as if they saw him, really saw him, and might have plans for him later” (26). But regardless of the impression of agency the pigeons leave, these interactions are veiled with the commodified, objectified status of the nonhuman. Jimmy’s childhood contains no recollections of Boy Scout camping trips, journeys to national parks, or even unguided play in the woods. The “golf course and lily ponds had been their hunting grounds” on Jimmy’s grade-school field trips (148), limiting the children’s exposure to a controlled version of nature. The idea of controlling nature is at heart a humanist ideal: “The image of nature that became important in the early modern period,” according to Carolyn Merchant, “was that of a disorderly and chaotic realm to be subdued and controlled” (127). In the *Compounds*, nature is simply the raw material from which humans fashion a consumer culture.

The direction of western culture understood as progress has been a trajectory away from natural connections, and human economies are built on using, not knowing nature. Jimmy receives most of his knowledge of wild animals from “old DVDs” he watched as a child, “those animal-behaviour programs featuring copulation and growling and innards, and mothers licking their young”; he cannot comprehend why “he found them so reassuring” (Atwood, *Oryx and Crake* 10). He recalls that he never cared for the birds he saw on the field trips, and “he never swam in the sea as a child”; his constrained exposure endows him with neither mastery nor a biophilic relationship with unhampered nature. For Jimmy, nature is punishing, dangerous, and frightening—“who knows what may infest the lagoon?” (6). By the time Jimmy is a teenager, biophiliacs are pushed to the edges of society, and either manifest in overt protest, as in the

group known as “God’s Gardeners” (257), or in covert internet entities such as “MaddAddam” (216-17). Nature deficit disorder, reproduced on a society-wide scale, has emerged as a culture in which all nature is commodified, valued only as seed stock in corporate ventures. Extinction thus can be seen as a form of alienation as well as the traditional idea of non-being. Organisms go extinct (when not simply hunted into extinction) through environmental degradation or loss of habitat. The artificial environments humans create are no protection from extinction; in fact, they are a primary factor in the demise of a humanity estranged not just from the external world, but from itself as well.

Home, Alone

Sharon, Jimmy’s mother, recognizes the artificiality and the “theme park” atmosphere of this privileged lifestyle, where a safe existence precludes notions of privacy and liberty and includes strip searches by hostile guards (27, 53). A significant figure in Snowman’s memories, she stands as another source of loss. Sharon emerges as an endangered species through both her inability to function as a maternal figure, and as the voice of ethics against the Compound mentality. Disconnected from her child, she is too preoccupied and angry with what she knows of the Compounds’ actions to notice Jimmy’s need, and although her “mother-figure functions as the ethical conscience of the text” (Fiona 279), Sharon does not project unconditional motherly consistence into her role. A microbiologist formerly employed by the Compound, she leaves her job to “stay home with” Jimmy about the time he starts first grade (Atwood, *Oryx and Crake* 30). At times, Jimmy remembers, “She was like a real mother,” but “those moods of hers didn’t last long” (30). More often, her response is “the flat voice, the blank eyes, the tired staring out of the window” (32). This most un-maternal of actors chooses to give up the agency, power, and

prestige of her Compound job to stay home with a school-bound child, a move that renders her suspect in both her child's and the Compound's eyes.

Jimmy's most prevalent recollections of his parents involve bitter fights; knowing what comes after, it seems Jimmy's role in life is to witness not just tragedy, but the keys to tragedy as well. Sharon intimates the questionable nature of the biological research going on in the Compounds when she accuses Jimmy's father of engaging in "immoral . . . sacrilegious" actions (57). That Crake will later take similar knowledge to construct a doomsday virus is adequate proof to the verity of her claim, but at the time Jimmy's father challenges her intelligence and judgment, asserting human intellectual primacy over any spiritual concerns: "It's just proteins . . . there's nothing sacred about cells and tissue." Sharon remembers wanting to make "life better for people—not just people with money," a vision not in keeping with the Compound philosophy (57). DiMarco explains that Sharon's "stance . . . marginalizes her and ultimately marks her as a subversive" (189), a deadly categorization in the context of the corporate state.

As Jimmy recalls, several years later his mother abandons the family, but a clear understanding of why she leaves is not apparent until much later, when Crake reveals how his father died. The pharmaceutical companies that own the Compounds are in the business of dealing death as well as life: they manufacture illnesses to assure steady market demand. As Crake relates to Jimmy, "They put the hostile bioforms into their vitamin pills—their HelthWyzer over-the-counter premium brand" with a "really elegant delivery system" (Atwood, *Oryx and Crake* 211). "Elegant" signifies clever scientific manipulation in the "patronizing jargon the math nerds used" (142); in this connection, the Compound geniuses are fooling the rest of the population into

illness and disease.⁷ Crake's father, who discovers what is happening, is pushed off an overpass because he is about to blow the whistle, and it is likely that Jimmy's mother runs away because she knows similar information and understands the related danger (213).

Sharon's disappearance establishes the void of extinction, but for Jimmy the process is a drawn-out progression of estrangement. He loses his mother over many years, and even after she leaves the loss continues, as the CorpsSeCorps questions him regularly attempting to find her. He sees her only twice again, both times on film, once during "the blockade of the Happicuppa head-office compound in Maryland" (Atwood, *Oryx and Crake* 181), and once in front of a firing squad. The use of film to resurrect Jimmy's dead mother mirrors the nature videos he experienced as a boy: both provide false evidence of something no longer existing in reality. They are shadow images produced through human manipulation, vulgar effigies which attempt but fail to mask the finality of extinction. In the execution video, Sharon says "Remember Killer" before she is gunned down (258), a reminder that she had taken Jimmy's pet rakunk with her when she left the family, for the purpose of "liberating her" (61). This revives another loss, that of an entity "quite important to him" (Atwood, qtd. in Halliwell 254). As a child, Jimmy is not allowed a puppy or kitten as a pet because of the tight security against diseases which might affect the bioengineered animals; instead, his father brings home a rakunk, a gene-spliced mix of raccoon and skunk (Atwood, *Oryx and Crake* 32, 51). Jimmy names her "Killer," and she is the one constant in his life: "She always forgave him" (60). After Sharon has run away, Jimmy is not sure whether he is mourning "His mother, or an altered skunk" more—an indication of the weak

⁷ As the term is used in the scientific community, "elegance" is "the parsimonious and evocative description of pattern to make sense out of a confusion of detail" (Wilson, *Consilience* 219).

connection between him and his mother, and the extinction of affection which had already eroded their relationship (61).

The Death of Words

When Jimmy graduates high school and goes to college, he enters another nature antagonistic environment, the pleeblands. These urban centers are not walled, but “so boundless, so porous, so penetrable, so wide open. So subject to chance” (Atwood, *Oryx and Crake* 196). Since the elite social class has flown to the Compounds, those who are left in the pleeblands are the neurotypicals, unvalued since they are not mathematical geniuses (194). Jimmy leaves one very prestigious cage for another form of containment, a few steps down on the social register. Neither site offers the connections with nature that would overcome nature deficit disorder. Jimmy’s college is the Martha Graham Institute, a former “Arts-and-Humanities” college that now advertises “Our Students Graduate with Employable Skills” (186-88). Cultural pursuits are the endangered species at Martha Graham, as right-brain students struggle to establish value in a left-brain world. Art, “all that’s left over” of a culture when everything else is gone (167), has been devalued as not commercially viable. The disappearance of the cultural arts is attributed in part to the digital revolution, as production capabilities have been brought within reach of the layman. “Anyone with a computer could splice together whatever they wanted,” Jimmy explains, “or digitally alter old material, or create new animations.” The mystique of creativity is “no longer central to anything” (187). Music, dance, visual arts, and literature are reduced to peripheral talents, fading as rapidly as the disappearing biota.

Jimmy, weak in math and science, is thus considered a “dull-normal”; a word person, he represents the remains of the humanist subject (Atwood, *Oryx and Crake* 50, 25). In his pre-JUVE life, Jimmy has an affectation for archaisms—words no longer used, nor of any value to anyone. This loss of language is another form of extinction, of utterances passing through a culture, then discarded unwanted. For Jimmy, these old words contain “a precision and suggestiveness that no longer had a meaningful application in today’s world.” He acquires “strangely tender feeling[s]” regarding words he pulls from ancient books in the Martha Graham library, such as “*wheelwright, lodestone, saturnine*” and “*adamant*”; it is “as if they were children abandoned in the woods and it was his duty to rescue them” (195). But Jimmy’s attraction to words begins much earlier than Martha Graham, and he is borrowing words like “vile” from his parent’s fights while still a child (60). As an adolescent watching online sites, he is entranced by “At Home With Anna K.” because of her recitations of Shakespeare: “Think what he might not have known if it hadn’t been for her. Think of the words. *Sere*, for instance. *Incardine*” (85).

One of Jimmy’s girlfriends, Amanda Payne, extends the metaphor of dying words with her artwork, a form she calls “Vulturizing” (245). It involves “a truckload of large dead animal parts” arranged in the shape of four letter words in a vacant field, which she photographs from a helicopter once they are covered in vultures (244). She selects the words “with care,” and “So far she’d done PAIN . . . WHOM, and then GUTS.” Whereas Jimmy is concerned with salvaging complex, historical words, Amanda is content with murdering simple words; her work brings “them to life . . . and then it kill[s] them” (245).

The Crakers also play a part in the loss of language, as the old words have no context for them. Even with Snowman as teacher and the Crakers as avid students, some ideas cannot be transversed. When he tries to explain the meaning of a simple word to them, such as “toast,” it only raises more questions: the Crakers have no concept of manufactured food, agriculture, or technology (48). Human civilization does not exist in their frame of reference, so there is no commonality upon which to base understanding. They “would hear him,” as Howells observes, “but with brains from which passion and imagination have been erased, they would not understand him” (172). Jimmy recognizes that even if he writes a diary, “he’ll have no future reader,” not only because of the Crakers’ inability to read, but also because of their lack of connection to his reality: “Any reader he can possibly imagine is in the past” (41).

The antiquated utterances he keeps repeating to himself frame the dissolution of humanistic integrity and disappearing ideals, and as such play a role in the extinction of culture. The words are communication artifacts, leftovers from a dead civilization and remnants of the human species. Even Snowman finds himself losing the meaning of some words, such as “*Mesozoic*,” a word which “He can see” and “hear,” but which “he can’t reach . . . He can’t attach anything to it” (39). Without a reader and without a listener, the language of humanity is reduced to bare essentials. As Cooke points out, “Atwood suffuses her book with the sense of a lament for language, for words, and for the creative endeavours conducted with words” (120). In his solitary last-man state, Jimmy tries to hold onto the words, but they keep evaporating, disappearing like the lost culture they denote.

Extinction, the Game

Atwood presents the human role in extinction through two proxies: “Blood and Roses” and “EXTINCTATHON” (Atwood, *Oryx and Crake* 78, 80). The games are part of a suite of internet venues Atwood uses to illustrate the alienating and dehumanizing potential of online entertainment. Through this online universe, Jimmy’s ideas of reality take form. With no supervision and Crake’s hacking ability, the boys have a virtual tour through an online environment filled with child porn, live executions, assisted suicide, and animal snuff sites. They gain the understanding that life is cheap, seemingly worth only its entertainment value to a jaded western audience. The sites have names like “Felicia’s Frog Squash,” “hedsoff.com,” “brainfrizz.com,” and “nitee-nite.com” (82-83). The games include “computer chess or Three-Dimensionals,” “Kwiktime Osama,” and “Barbarian Stomp” (77). But the boys’ favorite games are the online multi-player games Blood and Roses and Extinctathon (78, 80).

Blood and Roses and Extinctathon, in which Jimmy and Crake become immersed, rely on a player’s knowledge of human and natural history, respectively. The parallelism of Blood and Roses and Extinctathon can be seen mirroring the partition of the humanities and science; similarly, the boys’ relationship infers the dichotomy of the two branches of knowledge.⁸ Neither Jimmy nor Crake understand the other’s predilection; Jimmy’s job of “wordserf” is one he is sure “Crake would despise,” while Crake’s research “might not be something Jimmy could understand any more” (253). Crake’s disdain for the kind of knowledge in which Jimmy

⁸ Wilson recognizes the contemporary forms of “the great branches of learning . . . natural sciences, social sciences, and the humanities” as arising from “the unified Enlightenment vision generated during the seventeenth and eighteenth centuries.” He views increasing separation and specialization since that time as an impediment to consilience, “the unification of knowledge” (*Consilience* 37, 40).

excels—crafting words to shape meaning—is matched by Jimmy’s hopelessness in the face of ever matching up to the “math-and-chem-and-applied-bio yardstick” important in the Compounds (50).

Blood and Roses matches contestants in a recitation of cultural accomplishments versus human destruction, and winners gain points by accumulating “human achievements”: “*The Divine Comedy*. Greek statuary. Aqueducts. *Paradise Lost*.” All the gains are overcome, though, by “The Vikings. The Crusades. Ghengis Khan” or “Attila the Hun” (79). No points are earned unless a suitable number of people die and the player can remember the quantity of corpses because the game demands “atrocities on a large scale” (78-79). Jimmy observes the “Blood player usually won” because “it was easier to remember the Blood stuff,” but he keeps to himself the fact he suffers “severe nightmares” after playing (80). Jimmy is adept at Blood and Roses, scoring some wins against Crake, but he is also sensitive to the implications that whole human cultures are vulnerable to the same threats his beloved archaic words face: they are temporary phenomena, brief flares against repetitive darkness.

“*EXTINCTATHON, Monitored by MaddAddam*,” rewards players for knowledge of plant or animal extinctions “within the past fifty years,” and those who achieve a score of three thousand earn the title Grandmaster (80, 214). While Blood and Roses illuminates the futility of human creativity under the overwhelming human propensity for self-destruction, Extinctathon makes visible the sheer quantity of human-advanced extinctions: the computer printout is “a couple hundred pages of fine print and filled with obscure bugs, weeds, and frogs nobody had ever heard of,” and memorable to no one except the Grandmasters, who have “brains like search

engines” (81). Atwood’s projection mirrors the claims of contemporary biologists, who estimate declines in biotic diversity by a scale of fifty percent by century’s end if current trends continue.⁹

Under the auspices of extinction, Atwood establishes a dialogue on the Adamic prerogative of naming: the gateway to the Extinctathon website proclaims “*Adam named the living animals, MaddAddam names the dead ones*” (80). Scientific knowledge rests on understanding nature through identification and categorization, management processes initiated and codified through classical and Enlightenment thinkers. The basic Aristotelian principles of classification are developed by Carolus Linneaus in the eighteenth century into the nomenclature system that appears in the “Latin names” of Extinctathon’s “Phylum Class Order Family Genus Species” (80-81). By sequestering the naming principle, MaddAddam is usurping institutional power from the Compound scientists, a power that extends to “customizing” the animals in secret, subversive activities. MaddAddam’s modifications rebut Compound gene-splicing for profit, alternatively producing creatures such as “microbe[s] that [eat] the tar in asphalt” which are used in disruptive acts of protest (216).

Extinctathon players must adopt a designation from the ranks of extinct animals, names from creatures that, like Jimmy’s archaic words, are no longer valued nor mourned in the world of the Compounds. Animal names confer both anonymity and power as players create their new online personas. It is from Extinctathon that Crake gains the appellation he will retain for the rest of his life, after the “Red-necked Crake,” an extinct Australian bird (81). His original name, Glenn, is no competition for the identity of Crake, and Snowman “has trouble thinking of Crake as Glenn,

⁹ “It is safe to say,” according to Wilson, “that at least a fifth of the species of plants and animals [will] be gone or committed to early extinction by 2030, and half by the end of the century” (*The Future of Life* 102).

so thoroughly . . . has the later persona blotted out his earlier one” (70). Not so for the name Crake selects for Jimmy, “Thickney,” taken from “a defunct Australian double-jointed bird that used to hang around in cemeteries” (81). While, as J. Brooks Bouson notes, Thickney becomes appropriate after the world turns into the post-JUVE “graveyard” (144), Jimmy prefers to select his own name:

‘My name is Snowman,’ said Jimmy, who had thought this over. He no longer wanted to be Jimmy, or even Jim, and especially not Thickney: his incarnation as Thickney hadn’t worked out well. He needed to forget the past—the distant past, the immediate past, the past in any form. He needed to exist only in the present, without guilt, without expectation . . . Perhaps a different name would do that for him. (Atwood, *Oryx and Crake* 348-49)

As the Abominable Snowman, Jimmy appropriates the label of a mythological creature, breaking the naming rules Crake establishes of demonstrable “physical equivalent[s]” (7). The Abominable Snowman—Jimmy’s minor act of rebellion against the memory of Crake—contains a measure of safety: it can never become extinct, because it never was real to begin with.

Crake is very skilled at playing Extinctathon, accumulating enough points for Grandmaster status. Like the early naturalists who sought to preserve knowledge of species by collecting their dead furred, scaled, and feathered bodies, Crake collects the names of extinct species at the same time he plots to save nature by eliminating humanity. Jimmy finds much later that Crake never ceased involvement with the game, and in fact garnered his own cadre of MaddAddam bioengineers to help develop both the Crakers and the JUVE virus; the creation of both could simply be seen as Crake’s winning move in the final round of Extinctathon. Through the games and Jimmy and Crake’s involvement, Atwood joins cultural extinction to biotic extinction, and,

through Crake's Grandmaster status, to human species extinction; all fall along a continuum of human involvement.

Jimmy's exposure to the world is informed by his online education, and despite the quantities of data available to him, he remains a parochial, nature-free existence. Not really comprehending (unlike Crake) the scale of destruction happening outside human terms, Jimmy's experience with extinction is bound to the personal. He does not reflect on the demise of organisms not intimately related to his circle of existence: they are abstractions, tokens in a game. For Jimmy/Snowman, extinction is revealed in a pile of burning cows; it is manifested through the slow, tortuous fading of the maternal presence; it is bright, sharp loss when Killer disappears; it is dematerializing human culture and language; and it is the deaths of Crake and Oryx—the two humans he mourns out of all the multitude, and the two who, as mythic elements, come to symbolize a vanished species.

Thus, the extinction narrative revealed through Jimmy/Snowman's experience brings us to the precipice of humanism's dissolution. In the next chapter I will look closer at the disappearance of the humanist subject and the arrival of his replacement, the posthuman "Children of Crake" (9). Inheritors of a much different world, the Crakers embody a derivative humanity, an alien subjectivity possible only in a world cleansed of humanism.

CHAPTER TWO: THE POSTHUMAN MICROSCOPE

The Extinction of Humanism

By definition, humanism places humans at the center of meaning. As a cautionary tale, *Oryx and Crake* deconstructs this meaning by demonstrating the consequences of a monocular concept of existence; this tunnel vision willfully ignores the natural interconnections of all life. Snowman's memories preserve humanity's path to extinction, but they also record the devolution of technology's promise. Technology, humanism's darling, provides material proof that reason separates us from the beasts. In manifesting scientific knowledge, technology serves the noble purpose of improving living conditions by preventing hunger, enhancing medical care, and connecting communities, but technology also has a dark side, enabling human consumption to pursue an ever-increasing destructive arc.

While Jimmy provides the historical and cultural facet to the humanist subject, Crake provides the other side: secular, self-sufficient, empirical, and logical. Crake scoffs at humanist cultural vestiges, not understanding the humanist influences on the scientific methodology practiced in the university labs and on the individuated lives he and his "con-specifics" lead (Atwood, *Oryx and Crake* 209). Even in his desire to create a genetically improved human, Crake bows to the idea that humanity must continue. We have already encountered Jimmy's faltering paradigm in the shrinking influence of cultural endeavors and aesthetic language, recessions that reflect the vaunted importance of science and reason. But Crake's world is devolving as well, as science and technology serve only capitalistic interests with a blind eye to the organic system failure happening on a planet-wide scale.

Whereas Jimmy exhibits only peripheral attention to the decaying humanist artifice prior to the apocalypse, Crake shares active awareness with MaddAddam, the Extinctathon group, that continually-improving biotechnology cannot salvage a mutilated biosphere. As he tells Jimmy, humans are running out of time: “Demand for resources has exceeded supply for decades in marginal geopolitical areas, hence the famines and droughts; but very soon, demand is going to exceed supply *for everyone*” (295). Inequities abound, with the privileged few—the “graft-ridden prince[s]” living as royalty in the Compounds —consuming more than their fair share of energy and goods with small regard for the deteriorating environment (245), while the poor masses of third-world countries place burdens on shrinking resources through ever-growing populations. Impoverished farmers in countries impacted by global warming sell their children in order to survive (116), and even in America those outside the Compounds struggle for survival, with “squatters” living in “sheds and huts put together from scavenged materials—sheets of tin, slabs of plywood” (183).

New biotechnologies are driven by commercial applications, with minimal concern over deleterious side effects to either human or animal populations. Atwood’s text is littered with cases of unintended consequences and the chain-reaction of errors compounding errors. One example, the “gen-mod coffee wars,” presents a foreseeable outcome for an improved coffee bean that replaces human labor with mechanized farming. What is beneficial for the developed world—“a cheaper cup of coffee”—dislocates laborers and small growers alike, and triggers insurrection (178-80). Another illustration is the gene-spliced bobkitten, which when multiplied becomes a much larger, more dangerous problem than the “big green rabbits” it is supposed to control (163-64). Solutions like the “Happicuppa bean, developed by a HelthWyzer subsidiary”

(178), and the disease-carrying HelthWyzer vitamin pills (211) are symptoms of science captivated by the bottom line and perverted by profit.

Extinction for the analytical aspect of humanism is not as blatant as the cultural extirpation, but it is happening nonetheless. Despite technological advances and increased understanding of the chemical building blocks of life, science has not produced an integrated, harmonious means of planetary survival, and the ideal of the human subject able to muscle through any situation with mental agility and willpower has delivered humanity to a cul-de-sac: global warming is the reality swamping New York City (former site of much cultural enterprise and one-time financial center of the world) while searing the food producing regions of the world. The empirical vision still works toward controlling nature and concentrating material well-being for a few elites, but the illusory nature of that control is surfacing. The struggle of maintaining the chimera of an open cornucopia of good health, bountiful food, and creature comfort is increasingly difficult, and reveals itself in artifice and prosthesis: “soy-sausage dogs and coconut-style layer cake” (72), “SoyOBoyburgers” (74), “ChickieNobs Bucket O’Nubbins” (242), and the pharmaceutical organ-bank pigeons.

Human progress thus follows a logical, cynical trend channeling all scientific and technological developments into capitalist profit centers. The knowledge and craft that separate us from other animals does not make us more humane, and the numeric success of the human species does not necessarily reveal wisdom. Instead, what scientific knowledge and technology signify in this context is the blindness of an anthropocentric, empirical worldview that offers no hope of awakening. Neither artistic idealism nor scientific regimen can undo the climatic damage caused

by several centuries of industrial production, and the deadly fate of humanity in *Oryx and Crake* illustrates that human survival ultimately depends on adaptation to, rather than colonization of, the biosphere.

Mechanical Constructs and Composite Organisms

The posthuman emerges from the rifts that also give birth to post-structuralism, post-modernism, post-colonialism, and gender studies: the works of Charles Darwin, Karl Marx, and Sigmund Freud.¹⁰ These worldviews all challenge the centrality of the human subject, calling into question divine preference, social assumptions, and unadulterated cognizance. In particular, these shifts in understanding highlight the positioning of the white male subject of European stock, the foundation of the humanist subject. Once these presumptions have been aired the possibility of reconstruction is opened, bringing with it the posthuman. But the posthuman also carries traces of humanism in its DNA: the language theorizing and describing this new construction is built with the architecture of humanist thought. The armature guiding construction of the posthuman is itself recursive of humanist processes and values.¹¹ While Hayles questions “will the transformation into the posthuman annihilate the subject?” (281), she also recognizes that “many attributes of the liberal humanist subject, especially the attribute of agency, continue to be valued in the face of the posthuman” (279).

Even as the informatics view of posthumanism visualizes disembodiment—downloading the mind into a computer—as the ultimate evolution, we must remember it is still contextualized as a

¹⁰ Badmington 4-7; Haraway, “A Cyborg Manifesto” 71.

¹¹ In discussing the relationship between posthumanism and deconstruction, Neil Badmington argues “humanism never manages to constitute itself; it forever rewrites itself as posthumanism” (9).

human mind. As Eugene Thacker recognizes, this form of posthumanism “consciously models itself as a type of humanism,” retaining “certain unique qualities of the human—self-awareness, consciousness and reflection, self-direction and development, the capacity for scientific and technological progress, and the valuation of rational thought” (75). The difficulty of escaping the humanist trajectory precludes finality in constructing the posthuman: posthumanism must always question its own genesis, purpose, and reality.

The Cartesian concept of the mind/body split aligns with the posthuman viewpoint of “the body as the original prosthesis,” simply a tool to be controlled by the mind (Hayles 3). From this vantage point, information is prioritized, and the human brain is perceived to operate like a computer, “independent of any material realization or embedding in a social context or anything having to do with emotion or development” (de Waal and Thompson 46).

Nonetheless, the human brain is not isolated from the body, and in fact relies extensively on physical sensory receivers (skin, eyes, ears, and nose) to provide informational feedback in dealing with the external environment. The mind—that which we recognize as resulting from the processes of the brain—is, according to E.O. Wilson, “the coded representation of sensory impressions and the memory and imagination of sensory impressions” (*Consilience* 109).

Furthermore, research reveals that chemical triggers enable this coded perception, and that hormones and enzymes play critical roles in how our bodies and brains process sensory input.

The brain is dependant on the body for acquiring nutrients which make possible synaptic processes; elements such as calcium, potassium, copper, and iodine enable the chemical

transactions producing thought (Gómez-Pinilla 569-71). In this respect, humans are tethered to the physical, organic sphere and an animal ancestry.¹²

People are not born human, but become human as part of learning, enculturation, and mimicry, and exist as humans relative to other humans in social units. As Evan Thompson relates, “cognitive science has had to rediscover things like empathy and enculturation . . . it’s not going to be possible to understand human mental life without connecting it to sociality and emotion and embodiment” (de Waal and Thompson 46). Our emotional, language, and cognitive faculties have to recapitulate evolution in each new generation.¹³ Technophiles imparting primacy to the information-processing part of human intelligence argue that sensory inputs can be replaced with mechanical constructs, but this scenario assumes an ability to replicate natural structures while maintaining fidelity to existing biological capabilities. The result may be a pixelated, digitally enhanced reality; we have no way of knowing whether the sensory input from these kinds of engineered solutions will engender the same organic learning responses humans currently enjoy. “For information to exist,” Hayles affirms, “it must *always* be instantiated in a medium” (13), and in humans these modes of information and data transfer reside within a physical body. She goes on to confirm that “Embodiment can be destroyed, but it cannot be replicated,” denying the informatics ideal of disembodied human intelligence. If you remove the physical instantiation—the human body—then the mind has nothing to retrieve, process, and share. We exist, mind and

¹² Fernando Gómez-Pinilla cites research substantiating “the ability of food-derived signals to influence energy metabolism and synaptic plasticity and, thus, mediate the effects of food on cognitive functions” in his argument linking diet to human evolution (569).

¹³ Wilson argues emotion is integral to rational thought, noting that “without the stimulus and guidance of emotion, rational thought slows and disintegrates. The rational mind does not float above the irrational; it cannot free itself to engage in pure reason” (*Consilience* 113).

body, in the corporeal realm, and the finality of extinction, whether it involves “the planet” or “an individual life-form,” is beyond the reach of human control (49).

To Jimmy, the pre-JUVE world elicits a mind-body split, but it is the body, not the brain, that has control. For Jimmy (and many others, from his memories of online representations of grotesqueries, bodily vanities, and pleasure of the flesh) the body, that which humanism considered a “corrupt vessel or else a puppet” (Atwood, *Oryx and Crake* 85), dominates all actions. Addicted to alcohol, cigarettes, drugs, and sex, Jimmy is in thrall to his body regardless of the arguments his mind erects; his experience is a microcosm of prevailing human frailties. Crake is condescending of such bodily domination, expressing his disdain both verbally, referring to dating as “Pair-bonding” and “unproductive random scanning” (207), and through his extinction-provoking (hemorrhagic virus) and life-form generating (Crakers) actions. Yet even Crake finds himself subject to bodily drives and human emotions in his relationship with Oryx; even those with the genius gene are not immune to the body’s hormone dance. Jimmy observes “Crake had never been a toucher, he’d been physically remote, but now he likes to have a hand on Oryx: on her shoulder, her arm, her small waist, her perfect butt” (313). He is finally (humanly) susceptible to the bodily imperatives manifested as “love” (309).

Accepting the inescapability and necessity of embodiment unites humans as organisms with the pre- and nonhuman, for the processes of the body on a cellular level have linkages with all Earth’s other biota. Travel back far enough in time, and humans and others emerge from the same single-celled organism. Embodiment and feedback systems are an indication that humans share the foundations of their information gathering systems with other earthly organisms.

Genetic studies have peeled back some of the mysteries associated with biological functions, and at the same time revealed a genetic background for humanity that shares commonality with all other organisms.¹⁴ Gaining a deeper understanding of the biology behind human origins also assists comprehension of human relatedness to other organisms. What makes us human is also, in some cases, what makes the chimpanzee a chimp, makes the dog a dog, or what makes the flatworm a flatworm. The relatedness in underlying genetic information is the key to the trans-specific modifications taking place in *Oryx and Crake*'s Compounds.

Science fiction literature has long challenged the notion of the primacy of human physicality. Various themes implicate either the human mind or body (or both) as limiting in nature, embellishing evolved abilities with mental or physical improvements. Ideas such as telepathy, teleportation, and telekinesis illustrate the limitations of existing human brain power, while cyborg or genetic augmentation demonstrates the deficiencies in a natural, non-altered physical condition. And these are just the human allegories: aliens, robots, and genetically modified companion species are other examples the genre uses to point out the finite capacity of human existence. In Clifford D. Simak's novel *City*, for example, humans abandon the earth, migrating to Jupiter to experience a superior existence as Jovian lopers: "he had found something greater than Man had ever known. A swifter, surer body. A sense of exhilaration, a deeper sense of life. A sharper mind." An alien body and alien mentality is naturally superior to the human, intimating that "the brains of Earth things" are inherently "slow and foggy" (84).

¹⁴ Lynn Margulis attests to the undergirding relationships of all life, noting that "long-chain molecules such as DNA, ribonucleic acid (RNA), and protein permit us to study all life with a single standard of measure" (56).

Greg Bear's *Blood Music* offers another transcendent form of transformative embodiment, with human cognition absorbed into an inhuman microscopic universe. Corporeal existence is replaced with an all-mind consciousness; the body is no longer necessary, along with the earth and all material existence: "Thought rises above the chemistry, the interchanges within his cluster and the processes within his cells. Thought is the combination, the language of all interaction" (189). As in these other examples, humans are deemed lacking in *Oryx and Crake*; Crake's perception that humans are physically maladapted to the changing environment, plus his misanthropic judgment of human emotional and psychological behavior underlie the development of his "children" (Atwood, *Oryx and Crake* 96). Possessing perfect, aesthetically pleasing bodies, and devoid of the human characteristics he thought nonessential, the Crakers are Crake's gene-spliced response to humanity's shortcomings (302).

Crakers: Genomic Posthuman Bodies

In contrast to the primacy of mind and data celebrated by informatics, Haraway points out that "bodies are maps of power and identity" ("A Cyborg" 83); the posthuman can embrace corporeality and celebrate the communications buried in chemical, bodily code. This is the vision of the posthuman manifested in the Crakers. While not cybernetic organisms, the Crakers still represent a product of both digital and organic information revolutions. They would not be possible without the human genome project: the knowledge for restructuring their genetic makeup is enabled by computational tools and the structures they reveal, and their creation is the cumulative result of the knowledge gained "Once the proteome had been fully analyzed" (Atwood, *Oryx and Crake* 302). Computers provide information processing speed and are necessary for reaching this level of understanding and calculating the masses of data contained within the genetic code.

Without the assistance of digital technology, genetic engineering at the level of Crake's team of Grandmasters would be impossible, and the scientists would not be able to modify, grow, and educate the Crakers within one lifetime. While technocrats describe "Superhumanity," "progress," and "immortality" as posthuman attributes (Vinge 19), Crake's children follow a different posthuman path. As Ku points out, the Crakers' hybridity confers "dominance over humans by dint of their greater survivability" (115). They are programmed with "rapid-growth factors" and a lifespan of thirty years, eliminating old age and infirmity, and by editing out the "foreknowledge . . . and the fear" of death, Crake devises his own version of immortality (303).¹⁵ They have also been engineered to preclude material progress—an emphatically non-technocratic feature.

Although the Crakers retain an outward appearance of humanity, they are not totally human in body or mind. Like the organisms in *Blood Music*, the Crakers are biologically altered rather than technologically augmented. Bouson describes the Crakers as part of an "extended MaddAddam joke" Atwood uses to signal the farce as well as the danger of "a bioengineered posthuman future" (149), but the altered hominids are not humorous in themselves: any humor resides in the warped reflection of humanity we see in them. Their strangeness arises from the animality they have inherited from gene-splice technology, differences vested in the serious business of survival. Crake takes most of his "invention" from adaptations already present in nature, understandings he gained from exposure to Extinctathon. "*Think of an adaptation, any adaptation,*" he tells Jimmy, "*and some animal somewhere will have thought of it first*" (Atwood, *Oryx and Crake* 164). Crake is led into awareness through the information accessed online during the "definitive" period of his and

¹⁵ At one year of age, a Craker "looks like a five-year-old," and by four he or she will "be an adolescent." Crake's rationale is that "too much time is wasted in child-rearing . . . and being a child" (Atwood, *Oryx and Crake* 158).

Jimmy's adolescence (300); while Jimmy is falling in love with Shakespeare, Crake is learning about biodiversity loss with the Grandmasters, and assimilating the diversity which will later manifest in the Crakers.

Adaptation itself is a feedback system, with improved survivability traits transferring to the next generation. Feedback from one generation to the next provides information traveling diachronically as well as from one information structure to another. Crake simply applies and speeds up evolutionary fixes to enable more robust survival traits for the new climate the old humanity has engendered, and to rid the species of effects he views as unnecessary or dangerous. These include two attributes that define Jimmy's life, but which Crake views as superfluous: a sense of humor and sexual love (Atwood, *Oryx and Crake* 305-306). Physical changes include modified digestive tracts which allow them to eat leaves, grass and caecotrophs (158-59), an adaptation precluding hunger and thus eliminating the need for agriculture (Atwood, *Oryx and Crake Revealed*).¹⁶ With thickened skin resistant to ultraviolet damage, they do not need textiles (Atwood, *Oryx and Crake* 6), and they have an "extra layer of skin on the bottoms of their feet," voiding the need for shoes (Atwood, *Oryx and Crake Revealed*). Since they are passive creatures, the males use scent-marking with their genetically-modified urine to define their territory and keep predators out (Atwood, *Oryx and Crake* 154-55). The Crakers' sex drives are modified to eliminate continual estrus, with cyclical reproduction taking place every third year. The mating rituals are tightly structured; Crake's rationale is to prevent pair bonding, doing away with jealousy, rivalry, and sexual aggression (164-65). They do not "register skin color," eradicating in-group/out-group

¹⁶ Caecotrophs, a modification Crake bases on "hares and rabbits," consists of "semi-digested herbage, discharged through the anus and reswallowed two or three times a week" (Atwood, *Oryx and Crake* 158-59).

conflicts. By editing “nothing less than the ancient primate brain,” Crake aims to reconfigure human culture. In changing the Crakers’ genetic makeup, “hierarchy,” “territoriality,” “racism,” and sexual possessiveness are all theoretically rendered obsolete (305).

Genetically constituted of many creatures united within the human form, the Crakers thus offer metaphoric unity: the symbiotic relationship available to humans in the schema of life on earth is expressed in miniature within each Craker body. Humanity does not take up the challenge of recognizing its interdependence with earth’s other biota, so Crake’s humanoid constructs must represent the synthesis. Human singularity, the complement to humanist individualism, is a primary fact in most human philosophy and religion.¹⁷ But as Lynn Margulis reminds us, the human “sense of species superiority”—the denial that we are not already part of the “Symbiotic interaction [which] is the stuff of life on a crowded planet”—is a “delusion of grandeur” (98). The bodies of the Crakers are merely fictional representatives of an always-already physical reality: humans are already symbiotes dependent on multiple other specifics. The merging of life, the transversing of species boundaries is part of our cellular history; Crake and his fellow scientists only exaggerate and accelerate the process.

The God Complex and “Paradise”

Crake’s posthuman genetic experiment is carried out under the “Paradise” dome in the RejoovenEsence Compound: “It had its own park around it, a dense climate-controlling plantation of mixed tropical splices above which it rose like a blind eyeball” (Atwood, *Oryx and Crake* 297). Blindness can insinuate the inability of the CorpSeCorp and the Compound

¹⁷ Haraway describes this singularity as “abstract individuation, an ultimate self untied at last from all dependency, a man in space” (“A Cyborg” 71).

authorities in discerning what is really going on, as it can explain Jimmy's state of mind. Crake's encapsulated paradise is the new Eden, and his experimental humans are replacements for the worn-out race of Adam and Eve. Crake's posthumans are not cyborgs; they do not mechanically self-replicate, nor are they "uncoupled from organic reproduction" (Haraway, "A Cyborg" 70). His goal is not engineering cyborgs; his ultimate aim is preservation of the biosphere by erasing human civilization. As he explains to Jimmy, it only requires "the elimination of one generation" to stop progress forever: "all the available surface metals have already been mined . . . Without which, no iron age, no bronze age, no age of steel." In the struggle for survival, knowledge would be lost and technology that is "too complex now" would disappear, never to be replaced (Atwood, *Oryx and Crake* 223). Only natural forms adapted to the environment would be able to thrive. Crake, the mad scientist, is playing God, making the judgment of whether the rest of humanity should live.

Crake's disgust with humanity is mirrored in the actions of MaddAddam, God's Gardeners, and Amanda Payne's two artist roommates, who explain to Jimmy the significance of the agricultural revolution: "once agriculture was invented . . . the human experiment was doomed, first to gigantism due to a maxed-out food supply, and then to extinction, once all the available nutrients had been hoovered up" (242-43).¹⁸ As Crake notes, "*Homo sapiens*" is not self-regulating like other organisms; it is "one of the few species that doesn't limit reproduction in the face of dwindling resources" (120).

¹⁸ Atwood notes that humans have "run through 90% of the ocean fish stocks in the past fifty years" (qtd. in Halliwell 260).

Eliminating much of what humanist principles exalt as the human condition, Crake's "children" exemplify physical survival, not creative intellect. The Crakers have language, but Crake attempts to engineer the elements a humanist would recognize: intelligence, creativity, invention, and exploration—the "curious monkey brain"—out of the genome (Atwood, *Oryx and Crake* 222). The main information transfer that takes place for a Craker is on a cellular level, communicating the animal/human gene sequences from one generation to the next. Like Haraway's cyborgs, the Crakers are "a kind of disassembled and reassembled, post-modern collective and personal self" ("A Cyborg" 79).

Nevertheless, while the first-generation Crakers may be a product of digital informatics, their children are purely biological posthumans, and they show evidence of the survival of at least one trait by exhibiting curiosity in the post-JUVE world: the children pelt Snowman with questions about artifacts and his appearance (Atwood, *Oryx and Crake* 7-8). Further signs that Crake has not been totally successful in erasing the vestiges of humanity are apparent in a "develop[ing] reverence" toward the mythic figures of Oryx and Crake: "They must perform some kind of prayer or invocation . . . they're conversing with the invisible" (157). They are also falling into a loose hierarchy, with some individuals assuming spokesperson roles. It is too early to tell if Crake's fears of reformation are grounded, with tyrants and war naturally following "leaders and the led" (155). Atwood seems to hint that some parts of the human psyche are embedded too deeply in the genome to be easily rent: "*We're hard-wired for dreams . . . we're hard-wired for singing. Singing and dreams were entwined*" (352).

Crake's attempts to distance his posthuman creations from human culture are made from a position anchored in that very culture. The technologies that enable Compound research have their roots in empirical scientific traditions, and as such celebrate the intellect and rationality of *Homo sapiens*. The genetic manipulation taking place in the Compounds is justifiable on the grounds of improving human health and producing commodifiable goods, but the rationale does not extend to foretelling unintended consequences or predictable negatives. The control of nature—the paradigm residing at the center of human progress—is enacted on an expectation of immediate advantage. Short-term planning only takes into consideration available resources, and as long as those resources (such as ocean stocks) can be harvested, human nature is not motivated to change. The crumbling infrastructure of natural systems accompanying global warming only signals a need for new sources of food, not an amendment of current activities. This aspect of humanism highlights the utilitarian value attached to nature: the world, as such, exists solely for human consumption.

Glover identifies the tendency toward the “objectification of nature” in *Oryx and Crake* as pursuing an instrumentalist paradigm (52). Western philosophy's embrace of this perspective has been described by Carolyn Merchant as the “mechanistic” view, a way of thinking about nature that escalated with the birth of the Scientific Revolution. Prior to that period, humans had enjoyed an “organic” understanding of the earth's processes, but “new images of mastery and domination” in the seventeenth century “functioned as cultural sanctions for the denudation of nature” (2). Although nature has been viewed as a wilderness throughout western history (as evident in biblical accounts), the technological advances of Enlightenment Europe and America provided new ways of subduing the natural wild. Not only has the Judeo-Christian God

“authorized human dominion over the earth” (Merchant 131), but human genius has increasingly made possible radical domination, such as aggressive mining practices, market-based farming technologies, and marsh and swampland reclamation (36-37, 51, 61). By manipulating natural organisms and toying with genetic realities, the scientists and technicians of *Oryx and Crake* are just following a pattern historically recognized as the human-centered, instrumental approach.

In addition to the surface purposes of increasing food sources, the pharmaceutical companies that run the largest Compounds are responsible for creating “New and different” diseases designed to keep money flowing “From patients to doctors, from clients to cure-peddlers” (Atwood, *Oryx and Crake* 210-11). The new economy depends on disease, as a disease-free population would not be profitable. As Crake explains, ““The best diseases, from a business point of view . . . would be those that cause lingering illnesses. Ideally—that is, for maximum profit—the patient should either get well or die just before all his or her money runs out. It’s a fine calculation”” (211). The mind—the coin of the realm in the Compounds—proves to be as corrupt as the flesh. As the scientists pursue immoral science in search of profit, the seeds for human extinction are already in place, managed for power and control the way other doomsday weapons (such as nuclear missiles) have always been managed. Crake’s elegant solution completes the extinction of humanism, along with humanity, but it is a solution grounded as much in blind reaction as prior efforts to control nature. His evolving outlook can be determined from the changing refrigerator magnets in his apartment, from “The proper study of Mankind is Everything” (207), to “Where God is, Man is not” (301). His either-or approach opens the gate for a new kind of human, while negating any chance for concert between the old humanity and nature.

Between the empirical domain of the Compounds and the posthuman world of the Crakers lies the landscape of *Oryx and Crake*'s women actors. I will next explore the contrasting shadows of the humanist subject in the survival experience of Oryx, as well as the standpoint of struggle embodied by Sharon. Sharon and Oryx are separated by culture, education, race, and experience, but their individual existences are impacted by the same humanistic constructs that exert nomenclative control over nature, and their fates are intimately tied to corporate power, environmental ethics and third-world politics.

CHAPTER THREE: RESISTING WOMEN

Gendered Vision

In *Oryx and Crake*, both animals and humans are subject to extinction, categorization, and genetic reconstruction. Atwood's attention to words and naming conventions accentuates the role language plays in constructing the reality of her near-future dystopia; from the title characters (named after extinct animals) to the protagonist's pet (the gentle hybrid named "Killer"), nomenclative structures facilitate an understanding of the role masculine narratives play in science and technology, and by extension, the natural world. For example, Extinctathon proclaims "*Adam named the living animals, MaddAddam names the dead ones,*" a reference to Adamic naming linked to Classical and Enlightenment trends of categorizing living and dead humans as well as animals (Atwood, *Oryx and Crake* 80). Atwood's use of language works to demystify science as a cultural construct.

In response to Martin Halliwell's comment in an interview on the scarcity of female characters in *Oryx and Crake*; Atwood asserts that there are "female people," but they are filtered through the lens of Jimmy/Snowman's perceptions. Sharon, Oryx, and his multiple girlfriends all add to the feminine contingent of the narrative, and all are colored by Jimmy's reality. The resultant two-dimensional portraiture illustrates Atwood's comment that not many men are "fully conversant with the inner lives of women who are the objects of their affections" (qtd. in Halliwell 255).

Gendered constructions are part of a worldview founded on cultural edifices so finely layered and stitched into our awareness that they fade into a natural, true, seamless understanding; the words we use to express these "truths" are complicit both in constructing and maintaining the worldview. On one level, Atwood's presentation acknowledges the culturally constructed relationships

between men and women, but it also provokes consideration that constructed reality extends beyond associations with the opposite sex, and that language supports this reality. Only the massive humanity-destroying extinction event in *Oryx and Crake* throws the entire fabrication into relief, painfully prodding Snowman's assumptions as he re-views significant events from his life.

At the narrative's opening, Snowman's attire consists of a tattered bed-sheet, a baseball cap, and a shattered pair of sunglasses; the single lens of his broken glasses warns us that his vision and memory are fragmented and tainted by imperfect understanding, while his sheet speaks of sleeping consciousness (Atwood, *Oryx and Crake* 4). At the same time, half-sight can also allude to emergent vision as Snowman begins to recognize the signs that were always present but hidden from his pre-extinction viewpoint. With his flawed yet awakening sight, Snowman is the sieve through which Atwood pours the narrative body of *Oryx and Crake*; as the word person, Snowman echoes the language that shapes events. Sharon and Oryx appear, reappear, and disappear within Snowman's account, in the process revealing the humanist-empiricist roots implicit in gendered assumptions.

Feminist readings of *Oryx and Crake* produce multiple perspectives. DiMarco observes that Crake, metaphoric father to both the Crakers and the JUVE epidemic, assumes the role of "*homo faber*" (171). His utilization of Oryx to first educate the Crakers, then spread the virus makes her his tool for this instrumentalist vision, "akin to nature as the material or body that must be manipulated in order for *homo faber*'s production to occur" (184). DiMarco notes that, in this same instrumentalist paradigm of the Compounds, Sharon "self-selects herself out of doing research," making her "of no 'use'" to the amoral activities taking place there (189). Fiona Tolan

recognizes Sharon's ethical qualms over the genetic manipulation taking place in the Compounds as indicative of "feminist standpoint epistemology": the questions and challenges Sharon raises illuminate the "history of natural science that has always held peculiar dangers for women" (278-79). Oryx, meanwhile, manifests multiple roles, "incessantly self-inventing" in the context of her sex work, as the Crakers' teacher, as a business woman, and as a goddess. Oryx's multiplicity of identities "seems to point to a postfeminist agency," while her reincorporation by Snowman as the Crakers' nature goddess is symptomatic of "ecofeminism and spiritual feminism" (Tolan 290-91). In this section I will explore the contrasting shadows of feminism and humanism from the standpoint of women in science, embodied by Sharon, and the survival experience, engendered by Oryx. Through this analysis I will show how the language and technology of western institutions shapes the fate of each.

What's In A Name

Many labels shape Sharon's identity: wife, Jimmy's mother, microbiologist, former OrganInc employee, runaway, radical protestor, and martyr. As wife and mother, she does not live up to traditional social expectations, and her career is stymied by her emerging questions concerning Compound ethics. The text reveals Sharon's agency as illusion masquerading as empowerment: she is free to be anything she wants, as long as she wants to be wife, mother, and loyal employee. In her failure as a mother, she represents resistance to the essential nature of woman as a maternal figure, and she is proof that mothering is not an innate capacity of the human female. Distracted by inner moral turmoil and external situations, she is incapable of performing even basic primary duties for her family, duties represented culturally as women's work. In Snowman's memories, she is "a clear image, full color," implying accurate sight (49), but the

image is often of a remote woman in a magenta robe, holding onto a cigarette (31). This is a picture projected by a needy child's emotions, and not a vision of the complete human being, Sharon. Young Jimmy usually has to fend for himself in making his own lunch, but the times his mother has "a real lunch waiting for him," he is frightened by her feigned maternal act: "carefully dressed, her lipstick smile an echo of the jelly smile on the sandwich . . . her eyes bluer than blue" (31-32). In attempting to adopt the expected behavior of a mother, she reveals the growing strain of an unnatural (for her) position, and her failure expands to absent-minded neglect topped off with "her increasingly weird smile" (50).

Sharon resists the essentialism of motherhood, and she also refuses the seductive and rewarding masculinized science construct. Unlike Jimmy/Snowman's fractured sight, Sharon's eyes elicit clarity, seeing through the naturalized paradigm. Paternalism runs deep in the Compounds; with private educational and medical institutions, shopping malls, and piped-in entertainment via the internet, the Compounds foster a dependency in the employees that few acknowledge or resist. The emphasis on external danger is further psychological encouragement to remain isolated, and if all of those incentives fail, then the exit/entry process is invasive and cumbersome enough to dissuade travel. Rather than freedom and opportunity, the Compounds offer a gated existence monitored and sustained by an omnipresent employer. Glover points to the "prison" of Compound life for Sharon, a prison she must escape once "she voices her horror at the instrumentalism practised within compound walls" (54). Sharon recognizes the danger inherent in paternalistic provision, and the false security represented by Compound protection; she is the voice for the ideologically pure science objectives which Compound employees relinquish for the trappings of material prosperity. Through Sharon's vision we understand the fabrication of

Compound existence (27, 227). Through her resistance, we recognize the life and death power associated with Compound science and technology.

Language is revealed as a necessary tool in establishing hierarchy in the pre-apocalypse communities of *Oryx and Crake*. Within the Compounds, scientific knowledge is the regimenting factor, an outcome of which can be seen in the prestige of the different schools. Proficiency in math and science, such as Crake's skill-set, ensures an education at a premium school like Watson-Crick, while non-proficiency means a degree from a valueless school like Martha Graham.¹⁹ Key to these transitions is the language of science, terminology coded in the Latinate nomenclature of biology and the mathematical ciphers of chemistry. This language has deep roots in western culture, roots that prove to be neither benign nor neutral in terms of gender, class, and race. The techno-science driving commerce and culture in *Oryx and Crake* owes its genesis to the methodology and authenticity established during the Enlightenment. Biblical claims provide the Adamic right to bestow names, but the formalized process of identifying and categorizing the natural world is the philosophical legacy of classical Greece, honed and refined during the Scientific Revolution. Naming and categorizing work together to shape the empirical worldview, defining not just the object observed, but the process of observing and the role of the observer.

¹⁹ While *Oryx and Crake*'s Watson-Crick Institute represents masculine scientific priority, the narrative of the actual search for the structure of DNA reveals a system privileging male prerogatives. According to Lynne Osman Elkin, the effort which garnered James Watson and Francis Crick the Nobel Prize in genetics relied significantly upon the unrewarded contributions of the chemist Rosalind Franklin. It was Franklin's unpublished x-ray photograph #51 which inspired Watson's revelation as to the helical structure of the molecule, although she is not cited as a source in Watson, Crick, and Wilkins' Nobel lectures.

Women, Science, and Nature

Valence for the scientific method is predicated upon the assumption of objectivity, with credibility sustained by non-questioning acceptance. Science thus construed exists outside social constructs; its goal is simply the search for pure knowledge for the betterment of humanity. But this purity is suspect in the very unquestioning acceptance it mandates, and in the proposition of the external, non-discriminating viewer. As Emma Whelan observes, “The scientific method and scientific rationality are called into question as positing an untenable view from nowhere; knowledge, the knowing subject, and scientific and technological practices and products are themselves products of their social, material, and discursive contexts” (544). When we question the empiricist paradigm, we immediately perceive gendered dualisms infecting scientific processes, including nature/feminine and nature/culture couplings; we also detect a gendered active/passive construct. Traditional perceptions separate the masculine and feminine spheres into external (active) and domestic (passive) areas. Because women are excluded in its Classical and Enlightenment incarnations, science and the accompanying technology are naturalized as masculine domains. “Science,” Londa Schiebinger argues, “is not value neutral but emerges from complex cultural matrices”; like other institutions, science is a product of the people involved, physical location, and era of production (74). And as science and technology are reflective of society and culture, they are also “constitutive of cultural and social conditions” that can be appreciated as “reality-producing and –reproducing practices” (Moser 6). The science in *Oryx and Crake* may take place in the mid-twenty-first century and reflect and generate the social and economic expectations of that imagined time period, but it also contains traces of earlier historical practices in its structure and language.

To illustrate the non-innocent historical masculinization of scientific research, Donna Haraway cites the Enlightenment-era example of Robert Boyle, “the father of chemistry” and “the experimental way of life.” Common acceptance of unbiased scientific reporting depends on an assumption of “public and collective” trial and proof, but the heritage of this kind of witnessing (as seen in Boyle’s air-pump demonstrations) has been limited by both gender and class (“Modest” 224-25). Even now, “Colored, sexed, and laboring persons” encounter barriers in striving for the “transparency” that allows “modest” witnessing. Because of perceived bias, they are “the object of vision” rather than the viewer, and thus denied participatory agency (232-33). The controlled atmosphere of the experimental setting, the rhetorical format of the “unadorned, factual, compelling” reports, and the repetitive experimentation of scientific methodology all work together to form the credibility which becomes transparent factuality, and, over time, naturalized “non-dependent, disinterested truth-telling” (226, 232). In *Oryx and Crake*, the enduring belief in scientific neutrality ensures a gullible customer base for corrupt corporations, and veils damaging practices (such as disease-generating vitamins) from the view of external consumers and many of the Compound scientists (*Oryx and Crake* 211). Science is thus revealed as subject to corruption when shielded from multiple perspectives.

In addition to the form and methodology of scientific practice, science’s lexical component also carries traces from earlier discourses. In her analysis of Linnaean nomenclature, Schiebinger demonstrates how a scientific paradigm arising from a gendered, socially-anchored framework can have a lasting influence on how we perceive the natural world. The labeling conventions Linnaeus attached to mammals, for instance, supported his era’s middle-class expectations of women’s social roles, and codified a “term, meaning literally ‘of the breast,’” to include humans

within a category of backboned animals which also contains “apes, monkeys, cows, whales, camels, and all other animals with hair, three ear bones, and a four-chambered heart.” Linnaeus’ system, which still prevails, has as much to do with the concerns of an eighteenth-century society worried over “wet-nursing and maternal breast-feeding, population growth, and the contested role of women in both science and society” as with the orderly cataloging of organic life (Schiebinger 4-5).²⁰

Linnaeus’ terminology and its underlying gendered representations are still in use in *Oryx and Crake*, naturalized to the point of invisibility. Extinctathon utilizes Linnaean nomenclature, and Crake masters it in his early teens; it becomes so integral to his vocabulary that when he and Jimmy espy Sharon in video footage of an environmental protest, Crake identifies her as “Phylum Chordata, Class Vertebrata, Order Mammalia, Family Primates, Genus *Homo*, species *sapiens sapiens*, subspecies your mother” (Atwood, *Oryx and Crake* 182). Crake’s use of the language is rote, and neither he nor Jimmy signal an awareness of the gender significance their parlance conveys. Atwood’s presentation of this dialogue reaffirms our expectation that science contains its own language—separate, specific, and neutral. But the same naming convention used to categorize the feminine by a nurturative physical characteristic—mammary glands—identifies the masculine *Homo* by intellect, *sapiens sapiens*, subtly reifying the feminine/nature, masculine/intellect dichotomies.

²⁰ Cell biologist Lynn Margulis cites the “inconsistencies, contradictions, and confusions” of the nomenclative system, and asserts the need for “one teachable scheme, an evolutionary system of classification, that reflects cell morphology, metabolism genetics, and developmental biology” as opposed to the existing inherited system (61-62).

The force of naturalization extends beyond appellations for biological entities, and saturates the language, tools, and methods of science. Examining modern science, Evelyn Fox Keller asserts a “new reading of the relations between science and nature,” one that starts “to unravel the insidious power of discourse to generate its own forms of truth” (52). Her field of expertise is molecular biology, the same terrain Atwood engages in her fictional universe. Keller examines naming from the perspective of the language used in redefining biological processes of life. Her concerns include the “Relocation of the essence” and “Redefinition of” the meaning of life, as well as the “Recasting of the goals of biological science.” Observing from a feminist perspective, Keller questions the reductionism narrowing the significance of life to simply “genetic material,” and defining life as “code” to be mastered (54-55).

These concerns echo themes in *Oryx and Crake*, in Sharon’s accusations of “interfering with the building blocks of life,” an intervention in which she challenges the morality of Compound science. Jimmy’s father’s response reaffirms the real-world scientific perspective of life as simply something to be manipulated for human use (Atwood, *Oryx and Crake* 57). He does not acknowledge the webs of life of which these discrete elements are a part, nor does he recognize the unpredictable, cumulative effects human interference can produce. His response substantiates the reductionist lens employed by the Compound scientists in *Oryx and Crake*, which conceives no harm in dissecting and appropriating the life’s underlying components; humans have broken the code, and in doing so gained rightful mastery over nature. Morality can be shunted from the picture and taken out of the lab, since the processes of life have been rendered into constituent chemicals and molecules, renamed, and so repurposed.

While naming conventions reveal the connections between science and the masculine principle, nature and women are linked, as Carolyn Merchant observes, with “wild uncontrollable nature” historically connected with the feminine/organic principle (127). Nature, defined in terms of cultural projections, is linked to the female as a nurturing mother, a resource to be penetrated, a body to be sown and reaped, or a secret to be unlocked.²¹ The tradition connecting women and nature has a long history in western thought; from the masculine/mechanical perspective, nature is explained as a force to be brought to heel, so that her wealth can be put to use. Natural disorder is what science and technology intend to tame, through observation, experimentation, categorization, manipulation, and physical constraint, and woman’s affinity to nature means that she, too, must be controlled and tamed. As Donna Haraway hints, nature is a “dangerous female threatening manly knowers” (“Modest” 235). Nature and culture form a duality in which nature contributes to the advancement of Western civilization by suffering degradation, a situation regarded as progress in the mechanistic model (Merchant 143), and in a “familiar patriarchal reduction,” the feminine is naturalized as closer to nature because of her procreative anatomy (Sturgeon 35). Women (such as Sharon) striving for an active role in the scientific disciplines must work against this essentialism; they must prove themselves the antithesis of naturalized actors, and in doing so must adopt and work within a paternalistic paradigm.²²

²¹ Merchant describes the pre-mechanistic “metaphor of the earth as a nurturing mother” which “served as a cultural restraint . . . One does not readily slay a mother, dig into her entrails for gold or mutilate her body” (2-3). During the Renaissance, a still-nurturing earth could be “tamed and subdued . . . to provide both material and spiritual food” (8). Page duBois relates the Classical Greeks used earth metaphors describing a woman’s body as a field to be plowed or as a furrow “to receive the seeds of her husband and to nurture his crop” (39, 72), and Maria Mies and Vandana Shiva assert the Enlightenment idea of progress was predicated on “dominance over nature, including human, female nature” (336).

²² Noël Sturgeon defines “gender essentialism” as “arguments that unproblematically connect ‘women’ with ‘nature,’ assuming a universal essential feminine identity constructed out of biological femaleness that exists cross-culturally and across racial and class structures” (115).

The historic complexity of feminine participation in the scientific community is evident in *Oryx and Crake*: the women who are involved with Compound science are either implicated and amoral, as in the case of Crake's nameless mother, Jimmy's step-mother Ramona, and the "woodpecker yodel" researcher at Watson-Crick (Atwood, *Oryx and Crake* 212, 175, 203); or ethically tortured to the point of removing themselves from collusion, as in Sharon's case (61). The women who knowingly collaborate in *Oryx and Crake*'s questionable genetic interventions have assimilated into the mechanistic worldview, knowing that to succeed in a man's world they cannot question the existing edifices. They "have 'opted in,'" as Cooke observes, by "internalize[ing] the goals, truth, and ethics of the company as their own." Cooke links this conformity to "corporate 'yes' culture" (111), but it can also be construed as representative of anyone with less power securing access by remaining quiet. Those who do question—Sharon, Bernice (Jimmy's first college roommate), and the members of the radical environmental group God's Gardeners—are perceived as irrational, anti-social, and dangerous: Sharon is Jimmy's "real, strange, insufficient, miserable" and "deviant mother" (Atwood, *Oryx and Crake* 67, 182); Bernice is "*reality-challenged in a major way*" (189); and God's Gardeners are "some bunch of wackos" (213). Labeling dissidents justifies establishment responses: those who go against the grain are a danger to civil society. Sharon's fate—execution by firing squad—is a warning against subversion, but also a warning against challenging the semi-sacral notion of scientific progress.

The Digital Feminine

Technology, not science, serves as the key element defining Oryx. Her very presence in the narrative is attributed to her online subjugation as a child sex-slave; without witnessing her "performance," Jimmy would not have become infatuated, and Crake would not have located

and procured her. The placement of Oryx to illustrate the entwined issues of internet child pornography and sexual slavery is heightened by her exotic appeal. She is a cipher both refuting and supporting the idea of empowerment through sexuality, yet she is distanced from Jimmy's world geographically and culturally as well as by the recording eye of the movie camera. Tolan aligns Jimmy's fascination with Oryx with Edward W. Said's "pleasurably distanced voyeurism" of the Orient that the European observer enjoys, commenting that the "sense of otherness is maintained by the unspecified eastern location and the young Asian girls being abused" (288). Jimmy's initial appreciation of Oryx stems from her cinematic appearance and the reality she suddenly imposes on the "three layers of contradictory make-believe, one on top of the other"; her ability to look "right into the eyes of the viewer" momentarily reveals the theatrical spell implicit in such viewing (Atwood, *Oryx and Crake* 90-91). According to Said, western representations of Orientalism gain power from theatricality: "the Orient is the stage on which the whole East is confined" (Said 63). This "closed field" of the stage provides an understanding of the Orient for westerners by westerners; the mystery associated with the landscape and people is a construct mysterious only to its architects. The medium of the internet, combined with the editing capacity of film, provide the perfect stage for reinscribing pre-determined illusions. Jimmy's resistance to Oryx's later explanations can thus be construed as a reaction attributable to his preordained notion of her history—he is looking for confirmation of the reality he imagined, not an explanation of Oryx's true experiences.

Computer and film technology act as cultural filters in *Oryx and Crake* to distribute packaged reality. The screens of computer and television, digital interfaces that can be manipulated, edited, and presented as veracity, shape Jimmy's and Crake's concepts of both the natural world and

human culture. Atwood writes that the information Jimmy and Crake acquire is controlled through technology: “What they can grasp of the rest of the world comes to them through television and the Internet, and is thus suspect, because edited” (*The Handmaid’s* 517). Besides gaming, the internet provides a venue for sexuality for the young Jimmy and Crake, but the view it projects is linked to physical degradation and violence; sex is consumed at the same time and in the same manner as online executions, torture, and animal cruelty.

The casual commodification of sex and violence is pervasive in Jimmy’s experience, and the same film technology used to teach about the “copulation and growling and innards” of the natural world is used to objectify the human body as merely a vessel for physical release. The “animal behavior” educational videos from Jimmy’s childhood give way to graphic depictions of sexuality, perversity, and violence delivered seamlessly and effortlessly through the computer terminal (Atwood, *Oryx and Crake* 10, 82-83). Jimmy’s exposure to explicit online content impresses him with the similarities—“If you switched back and forth” between the violence and pornography, “it all came to look like the same event”—and leaves him “feeling as if . . . he’d had no control at all over what had happened to him” (86-87). The vicarious specular nature of the boys’ viewing objectifies all of the entities visible through the monitor, and while Jimmy has visceral reactions to some of the grotesqueries, he is unable or unwilling to cease participation. The technological interface of the computer has become, in effect, his mode of socialization, and his ensuing perception of other genders, cultures, or creatures is tainted by this formative period in his life.

In an essay on the subject of porn, Atwood affirms that “a large part of the market for all kinds of porn, soft and hard, is drawn from the 16-to-21-year-old population of young men,” and they experience it as “an educational tool and a powerful propaganda device” (“Pornography” 426). Her contention is that porn is not simple entertainment, but a force that actively shapes young lives. Bouson writes that Atwood “conveys her uneasiness” with pornography by portraying “the degradation of culture in a society where violence and pornography have become cheap, and readily available, forms of entertainment” (143). Atwood herself notes that describing porn as merely entertainment is problematic and misses the central question of “What’s the harm?” (“Pornography” 425). In *Oryx and Crake*, we see the harm as the teenage Jimmy’s perspective on relationships reflects his desensitization; in remembering an early girlfriend, he reveals “He didn’t like [LyndaLee] much, but he needed to keep up with her, make sure he was still on her list,” and contemplates “get[ting] Crake into the queue” to solidify their emerging friendship (*Oryx and Crake* 73). A girl is a “something” to be used and shared, not a “someone” with whom to have a relationship.

Jimmy first sees Oryx while he and Crake are watching a child porn site called “HottTotts” (88). Oryx looks “right into Jimmy’s eyes, into the secret person inside of him,” provoking his first intimation that the actors might be more than “digital clones,” and that the casual pornography he and Crake consumed might be “wrong” and not just “entertainment, or beyond his control” (90-91). Oryx provides a contradictory character in terms of feminist agendas. While Sharon’s struggle is clear-cut resistance to a traditional patriarchal enemy, the institution of the Compounds, Oryx’s struggles are contested with non-figured opponents: poverty, environmental degradation, and commodified sexuality. She has fictitious names, many stories, and many faces:

third-world peasant, child sex slave, prostitute, teacher, lover, and goddess. Oryx is multiple versions of the feminine, originating from myriad experiences; her relationship with Jimmy only emphasizes her synthesized identity, which encompasses rural/urban, organic/mechanized, and metaphysical/scientific domains. Her negotiation of these dichotomies defies a westernized version of feminism, challenging concepts of culture, race, gender, and essence. By bringing Oryx into the location of white, westernized, scientific culture, Atwood positions her as a contradictory vision of sexual potency and western exploitation.

Oryx's back-story—or at least the history that Jimmy constructs for her—is one of survival. As a small child, she is sold into sexual slavery and used by a series of pimps, pornographic movie producers, and wealthy western customers. Her sexuality is the force that captivates Jimmy, but this sexuality is part of her façade, a pose she adopts to stay alive, fulfill an obligation, extend gratitude, or empathetically extend balm for a tortured soul. Even as she assures Jimmy that her relationship with him is “for fun,” her veracity is in doubt because she also displays a willingness to say whatever he wants to hear, “to pretend” or “make something up” (Atwood, *Oryx and Crake* 313, 92). Although Oryx's sexuality gives her an aura of agency in “the body-identified and sex-addicted postfeminist world of the future” (Bouson 147), it is problematic. A postfeminist appraisal of sexuality and even pornography includes

. . . the notion that femininity is a bodily property; the shift from objectification to subjectification; the emphasis upon self-surveillance, monitoring and discipline; a focus upon individualism, choice and empowerment; the dominance of a makeover paradigm; a resurgence in ideas of natural sexual difference; a marked sexualization of culture; and an emphasis upon consumerism and the commodification of difference. (Gill 14)

Using her sexuality to manipulate men, Oryx admits she “feel[s] strong to know that the men thought she was helpless but she was not” (Atwood, *Oryx and Crake* 133), but while she learns to maximize her survival chances through the use of sex, it does not necessarily impart agency or power. As Tolan observes, Oryx’s sexuality is not freely hers to give, but is instead constrained by “capitalist power structures” (290). While Oryx can be acknowledged as “one of Atwood’s most ambiguous characters,” reflecting “something of the multiplicity of feminist responses” within the area of sexuality and agency (286), she only appears to fit a postfeminist agenda.

Although she escapes her sex-trade past and dons a business suit and briefcase, Oryx still reminds us of “the ‘two-thirds world’ girls and women who are being brutalized by the capitalist global economy in sweatshops, the maid trade, and the sex trade” (Mack-Canty 164). The same westernized global economy responsible for the altered climate and mass extinctions generates the demand for digitized and actual sex workers, fueling the process which gives Oryx’s body a monetary value in the first place. But while a second-wave feminist perspective might be tempted to view her body as simply an expression “of oppression, exploitation, misrecognition, and disrespect” (Herr 80), Oryx’s complex message asserts that sex work is her door into western culture. Passively accepting her always-changing circumstances, she reminds Jimmy that the men who bought, traded, and owned her ultimately made it possible for her to be with him.

Oryx’s story reveals the consequences of western apathy, ennui, and hedonism. While those with access to material resources use science and technology to focus on vanity and the physical appearance of eternal youth, people existing at the subsistence level are bereft of science or technology that would help them deal with the effects of global warming; they are particularly

vulnerable to the aftermath of climate change. Colleen Mack-Canty reveals third-world susceptibility as an issue concerning the third-wave movement of postcolonial feminists and ecofeminists, noting “women and their children, in particular, are severely affected by insufficient food, the rising cost of living, declining services, and eroding economic and environmental conditions” (165). The situation to which Oryx’s family is subject is a chain reaction of unforeseen consequences: flooding in some parts of the globe and droughts resulting in crop failures in others.

Atwood’s projections emphasize the unequal distribution of suffering between first and third-world experiences: in America, people simply move away from the flooded areas, but in Oryx’s home country, there is no moving away from the suddenly unproductive land, and no escape except through death or slavery. With nothing to market or eat, selling children becomes a rational, yet dehumanizing, response. Oryx recalls as much to Jimmy, explaining that the large family which would have been an asset in maintaining a farm becomes a liability when crops fail and her father dies, because “if there was no man to work in the fields or in the rice paddies, then the raw materials of life had to come from somewhere else” (Atwood, *Oryx and Crake* 116). Seen as such, Oryx is subject to western excesses on every front: her family and her village are pre-industrial, and thus not implicated in the production of greenhouse gases; furthermore, the men who purchase and trade her use her beauty to extract money from rich westerners. Her trajectory is shaped by what Maria Mies and Vandana Shiva term “the capitalist patriarchal world system” which originates from and continues “through the colonization of women, of ‘foreign’ peoples and their lands; and of nature” (333). Oryx may thus represent the endangered

(soon to be extinct) human species: her original community suffers from habitat loss, environmental spoilage, and exploitation as organic commodities.

Renaming the Feminine

Oryx never presents a solid identity; we hear the name she received after her mother sold her—“SuSu”—but never learn her birth name (Atwood, *Oryx and Crake* 129). When she has the choice of her own name, it is still from a list provided by a man (Crake), and based on Crake’s game of Extinctathon. She takes the name Oryx from “a gentle water-conserving East African herbivore,” not understanding the Extinctathon predicate of selecting only organisms which are already extinct (311). Her upset at discovering this rationale reveals the import she places on self-naming; most of the appellations she carries are descriptions of how she is perceived in society and are given by men, for men: sex slave, prostitute, and sex worker. For her to be able to choose her own name is therefore a significant statement, an assertion of identity. Signifying that language can liberate as well as constrain, Oryx trades sex for English lessons, the language she associates with opportunity (255). Though she lost her first language—“the words had been scoured out of her head”—she willfully captures new languages, understanding the power words engender (115).

Regardless of Oryx’s attempts to establish self-definition, the perceptions of the masculine figures in her life limit and construct her potential. Rosalind Gill notes that “Girls and women are invited to become a particular kind of self, and are endowed with agency,” by men, but that agency is predicated on the “condition that it is used to construct oneself as a subject closely resembling the heterosexual male fantasy found in pornography” (152). Oryx is still at the mercy

of the masculine forces in her life; caught between Crake's "alpha wolf" and Jimmy's "jackal" positions (Atwood, *Oryx and Crake* 300), she is unable to become other than that which they perceive. The image of her child-pornography, the revelation of her physical perfection, and her naturalized femininity continue to shape her identity even after her death.

As his ideal of femininity, Oryx lives ghost-like in Jimmy's memory. Before he meets her in the RejoovenEsense Compound, Jimmy carries the printout from the long-ago website, measuring all other women against her iconicity. After the epidemic, Snowman returns to his mental construct of her, reviving her in his memory. The metaphysical manifestation of Oryx is very real to him: "Sometimes he can conjure her up," "he can feel Oryx floating towards him through the air, as if on soft feathery wings" (Atwood, *Oryx and Crake* 110, 113). Through the lens of his fixation, Jimmy constructs a mythology of Oryx as the mother/nature-goddess for the Crakers, telling them the "Children of Oryx hatched out of an egg, a giant egg laid by Oryx herself," and reminding them to return the fish bones to the sea so "she can make other children out of them" (96, 101). The image of the goddess, as Tolan notes, is associated with second-wave feminism (291), but Snowman's invocation can also be viewed as a further attempt to capture Oryx's essence; through imposing his own language upon her after her death, he defines who she was.

In *Oryx and Crake*, feminine renaming is an act of agency, an attempt at self-liberation. The act is only partially successful: Sharon is efficacious at removing herself from the Compound life and establishing a redefined persona—even her own son recognizes she is no longer the mother figure he once knew—but her new identity does not protect her from execution. Oryx accomplishes her redefinition under the umbrella of a masculine framework which requires her

continued participation in expected behaviors. Sharon and Oryx each exhibit a different mechanism for action: Sharon pulls away from the ethical stance of the Compounds, fighting against the grain, and Oryx accepts and acquiesces, not questioning any of the science and technology she witnesses, and unwittingly participating in Crake's extinction plot for humanity.

Renaming includes reclaiming along with reconceptualizing, and in this context we return to Adamic nominal assignments. In her short story "She Unnames Them," Ursula K. Le Guin allocates the ability to erase nomenclature to her feminine narrator. This nameless woman finds "unnaming" the animals makes them appear "far closer than when their names had stood between [her] and them like a clear barrier" (2233). The human/nonhuman separation has been weakened by this nameless state; the possibility of both danger and knowledge is thus unwrapped. From the creatures' viewpoint, most "agreed enthusiastically to give their names back to the people to whom—as they put it—they belonged," shedding "all the Linnaean qualifiers that had trailed along behind them for two hundred years like tin cans tied to a tail" (2232-33). Le Guin unites the nonhuman with the feminine in this preference, showing that even those without a voice prefer going unnamed; their identity is something better defined through their own recognition. Sharon and Oryx find unnameing much more difficult, with not just change of nomenclature, but loss of life seemingly the only path out of the construct. The final identity for each exists only in the fractious, searching thoughts and memories of the last man, Snowman. As the feminine is perceived and dominated through the lens of nature, so the natural world itself is subject to domination. The Adamic principle assigns dominion to the sons of Adam, and the right of people to enjoy this privilege is challenged only when humans attempt to view nature as

a shared space. Agency depends on recognition of response, not just reaction, and even some within the human species are denied this recognition. Those who have no voice at all—animal others—are therefore doubly proscribed as objects, both in their silence and their difference. In the next chapter, I will show that Atwood's fictive portrayal of the human/nonhuman interface invites reassessing the animal other, and reveals humanism's expropriation of animal agency as a matter of design and degree, not a revelation of truth.

CHAPTER FOUR: (UN)NATURAL BODIES

Extinction and Revision

Atwood's future scenario is not a picture of what she imagines the world will be like in a few years, but a surmise of what it could be like if current scientific, technological, and commercial trends continue (Halliwell 260). By extrapolating these trends into possible or even probable outcomes, Atwood pictures a human-defined environment shorn from its natural moorings; a world in which manipulation of nature has reached a logical, if illusionary, apex. *Oryx and Crake's* macrocosm strikes us as strange on multiple fronts—the waning age of humans, the Mesozoic climate, and the genetically mixed-up life-forms. This alterity awakens another thought: if the earth exists for the benefit of humanity (as perceived through religious and humanist lenses), then what is the meaning of the world with humanity gone? Through the figure of Crake, with assistance from his human (*Oryx* and Jimmy) and technological (computer and Compound science) tools, the humanist paradigm runs into an impermeable wall, one it is undeniably complicit in constructing.

As the narratives of extinction wend their way through the different time frames of Atwood's text, it becomes clear that creation and destruction are inevitably entwined. The natural systemic transformations of evolution and extinction shape life on earth, with organic life following the contours of geologic time and place. The scientists of *Oryx and Crake* deliberately insert themselves into the natural transformations of evolution and extinction in their attempts to control nature, following an instrumentalist tradition that holds humans outside of natural processes. Murphy cites “individualism” as the rationale in the rejection of evolution in humans and the persistent dichotomy separating humans and nature (144). Humanist, empiricist, and

religious lenses legitimize humanity's consumptive habits through self-separation from, and ascendance over, other life forms, and evolutionary forces which propelled the human species' success compound this perception with adaptive intelligence and tool-making skill. Humans rise to the peak hierarchy of the great chain of being, asserting self-rationalized superiority through material culture and technological invention that, in turn, justify mindless consumption.²³

Atwood credits William Blake with recognizing that "human imagination drives the world," noting that imagination now encompasses the natural world as well as the human in its effects: "we have our hand upon the throttle and our eye upon the rail, and we think we're in control of everything" (*The Handmaid's Tale* and" 517). The intervention into natural evolution accompanying human consumption is not unique to Atwood's future, though; for thousands of years, humans have selected and bred organisms for desired features, enacting genetic modifications over multiple generations. In *Oryx and Crake*'s technology-centered Compounds, though, the pace has accelerated, and computers and bioscience enable gene-splice manipulation inconceivable before the digital age. Contemporary concerns over genetically modified organisms, or GMOS, are magnified through Atwood's descriptions of mutated species, and processes which took generations in prior hybridizations now take just a few years. The final destructive potential of *Oryx and Crake*'s bioscience is realized in the deadly hemorrhagic virus designed by Crake.

²³ Schiebinger describes the great chain of being as a "fixed and vertical hierarchy stretching from God above down to the lowliest sentient being." This doctrine supported a telos of natural hierarchies underlying social hierarchies in relation to the races of man (Schiebinger 145). I am extending it to include all creatures, sentient and non-sentient.

In building the *Oryx and Crake* universe, Atwood utilizes contemporary gene studies as the basis for her conjectures. Going far beyond GMOs for food production, she imagines biomedical and commercial applications thrust onto a public greedy for immortality and numbed to novelty. A few creations already exist outside fiction: the rabbit that glows neon green, and the goat that produces spider silk in its milk.²⁴ Such inventions' derivation does not fit the same mold as historic genetic improvements such as wheat, corn, barley, and rice from wild grasses, or milkable cows and horses from their wild kin. The altered rabbit and goat are not the result of human-influenced intraspecific breeding practices (which are not entirely innocent either), but mixed-species combinations.²⁵ Novel because of its non-natural guise, this type of production would not occur without human intervention: the computer and syringe have replaced reproductive union within species. Humans have graduated from simply experiencing genesis through the naming process and progressed to engendering synthetic biological entities.

The destructive aftermath of liberated human creativity emerges in the Compounds, where scientists produce bizarre as well as utilitarian creatures: “create-an-animal was so much fun, said the guys doing it; it made you feel like God” (Atwood, *Oryx and Crake* 51). Genetic engineering, as Regine Kollek explains, makes it “possible to overcome the barriers which normally limit the arbitrary cross-breeding of organisms of different species” (97). The resulting

²⁴ In a presentation at MIT in 2004, Atwood notes that her fiction in *Oryx and Crake* is “not pure invention . . . the spider goat is with us today, and so is the luminous green rabbit” (*Oryx and Crake* Revealed). The effort to develop a new “means of production” for spider silk led to the development of a transgenic goat which makes “beautiful, water-soluble, authentic spider silk” in its milk (Gould 44), and artist Eduardo Kac, with the assistance of a team of scientists, created Alba, “a transgenic artwork,” in 2000. The albino rabbit Alba, recipient of synthesized jellyfish genetic material, glows green under certain lighting (Kac 97).

²⁵ Inbreeding popular domestic animals such as purebred dog or cat breeds can weaken genetic diversity and lead to inherited diseases. Donna Haraway provides an example in her discussion of Australian Shepherds; describing the occurrence of the inherited eye disease CEA in the breed, she notes the condition was made worse by “overuse in the 1980s of a few popular sires” (*When Species* 115).

organisms are not coevolved with an environment, but outliers in the intricate web of natural processes. Some creations, like the glowing rabbits and gentle rakunks, are perceived as benign and even playful, while others must be destroyed as too dangerous, such as the snats, “Rats with long green scaly tails and rattlesnake fangs,” and the cane toad-chameleon hybrid (224, 51). Other manufactured hybrids include the wolvogs, bobkittens, and pigeons, creatures which overwhelm the natural fauna once released from human captivity.²⁶ The creations with the greatest alterity, though, are the hybrid humans Crake engineers as humanity’s successors, beings exhibiting multiple nonhuman characteristics from their animal kingdom genetic donors. The ultimate eugenics experiment, the Crakers embody an anti-humanist rationale, with survival, not culture, their dominant trait.

While J. Brooks Bouson views the “transgenic species” in Atwood’s menagerie as a mockery of genetic engineering and the contemporary debate over the ethics and ownership of genetic potential (140), Grayson Cooke perceives “rhetorical glee” in the blitz of inventive names Atwood assigns, language defining the novel’s “fully altered” and “fully alterable world” (109). The genetically modified creatures of *Oryx and Crake*, as Danette Dimarco points out, represent the natural world’s instrumentality in the hands of scientists such as Crake, material representations “grounded repeatedly in a violation of nature.” She calls attention to Crake’s emphasis on human ingenuity while he concurrently deemphasizes nature’s originary importance (181-82). Similarly, Jayne Glover notes that scientists playing God have “been blamed for the objectification of nature—thus leading to the use of nature as instrument or object” (52). Even the originary value of humans is called into question in the humanoid Crakers; they and the

²⁶ Eschewing Linnaean tradition, Atwood names her hybrid imaginary creatures instead with descriptive amalgams.

pigeons trouble what Chung-Hao Ku describes as “the fine line between humanity and monstrosity,” challenging “what it means to be human in the age of transgenics” (109). I propose that Atwood’s text also challenges the idea of natural hierarchical order and human exceptionalism, and that, through *Oryx and Crake*’s un-natural selection, opens a conversation on human-animal relationships, responsibility and non-human sentience.

Biophobia

As noted in chapter one, *Oryx and Crake*’s environs exacerbate human/nature estrangement, a factor made explicit in Snowman’s attitude toward the post-epidemic jungle-like ecology. His daily ritual includes contests with the biting insects and vigilance against “scales and tails” (Atwood, *Oryx and Crake* 4); the untamed world offers few chances at transcendent communion. Brief occasions hint at Snowman’s dormant biophilia, such as his experiencing “a sudden, inexplicable surge of tenderness and joy,” an “irrational happiness” while watching a caterpillar. Snowman’s biophilic experience with the caterpillar brings the conjecture that it is aware of his presence: “Maybe it’s smelling him, picking up on his chemical aura.” He notes “There will never be another such moment of time, another such conjunction,” but he then discounts the experience as “probably a vitamin deficiency” (41). His willingness to place this experience on a par with his starvation-induced hallucinations indicates that, though he is immersed in it, Snowman is not comfortable with nature.

Because of the child Jimmy’s empathic response to the burning pile of infected livestock, DiMarco posits his “potential to see himself as connected with nature” (188), but the moments of empathy are overshadowed by disengagement, fear, and resentment. Snowman’s tree residence is

a response to the biting ants, nuisance rakunks, curious pigeons, and hungry wolvogs; he even perceives the crawling “Beetles, flies, bees” as regarding him as “dead meat” (38-39). His primal response is situated in terms of survival against both naturally-occurring organisms and creatures which do not share a co-evolutionary path with humans. Those that do share a partial companion species bond with humans, such as the wolvogs, have been transformed by science into perversions of their originary stock. “Gazing at Jimmy with eyes of love” and “wagging their tails,” the wolvogs trigger Jimmy’s desire for a pet, but they merely mime affection; in actuality, “bred to deceive,” they embody human duplicity (205). As Snowman muses, “It hasn’t taken much to reverse fifty thousand years of man-canid interaction,” only the instrumental approach of human creativity (108).

The one living, breathing creature to which young Jimmy becomes attached is his pet rakunk, Killer, a “clean animal, with a nice disposition” (Atwood, *Oryx and Crake* 51). Jimmy’s name for Killer is an act of rebellion against his mother, Sharon, but it is also an oppositional appellation for the “placid” little animal. Killer is a human construct, a skunk without the odor, and a raccoon without destructive tendencies; she is an example of nature for human purpose, altered, tamed and subdued. Regardless of Killer’s lineage, Jimmy “fell in love with it” immediately (51), affirming that gene-spliced, bio-engineered beings also merit a place in the ethical discussion.²⁷ Killer, “His secret best friend,” provides Jimmy with unconditional affection and acceptance; she is “the only person he could really talk to” (59). Sharon’s

²⁷ Kac notes Alba, the “GFP Bunny,” is “like any other rabbit” in sociability. She needs “interaction through communication signals, voice and physical contact” (99). His art project is an exploration of human/nonhuman relationships, and the ethical, political, and social ramifications of genetic manipulation, and he points to Alba in asserting “transgenic animals are normal creatures that are as much part of social life as any other life-form and thus are deserving of as much love and care as any other animal” (100).

disappearance signals the loss not just of Jimmy's mother, but his beloved pet as well; he mourns both "for months" (61).

Interestingly, Snowman shares none of young Jimmy's affection for rakunks, describing the "annoyingly large population of them" living in close proximity to him, and their tendency to "nos[e] around him as if he were already garbage" (61, 38). The appearance of one of the animals covertly observing him triggers the response that "If he worked at it, if he really tried, he could probably tame one" (49), but it is an opportunity he does not pursue. Snowman's reluctance to engage with the rakunk might be taken as symbolic of his larger rejection of nature: the creature which brought him so much happiness as a child is now just another annoyance in the untamed wilderness. Even the dogs that lose their masters to the epidemic, the "woebegone house pets . . . begging with bewildered eyes to be taken in by some human, any human," fail to get past Snowman's resistance, and are rejected as "useless to him" (108).

Voiceless Properties: Animal Justice

From an ecocritical perspective, Atwood's text opens up multiple questions of ethical animal treatment, including our knowledge of what we eat and how it is produced. When Snowman recalls his childhood, he remembers he "thought of the pigeons as creatures much like himself. Neither he nor they had a lot of say in what was going on" (24). Both suffer from a lack of agency, a lack of voice: the pigeons as silent animals, and Jimmy as the powerless witness to his parent's dysfunction. The pigeons, used as organ banks, are developed "to grow an assortment of foolproof human-tissue organs in a transgenic knockout pig host" (22). The pigeons are not intended for use as a food source because "no one would want to eat an animal

whose cells might be identical with at least some of their own” (24). Nonetheless, suspicions exist because of the first generation’s single-use nature: harvesting organs requires killing pigeons. When Compound employees in the staff cafeteria refer to the pork dishes available on the menu by joking about “Pigeon pie again,” young Jimmy is disturbed; his intuitive kinship with the pigeons renders their consumption akin to cannibalism (24). Later, as he slowly starves, Snowman envisions “a pigeon feast,” accepting the taboo of potential cannibalism as a means of “Bring[ing] home the bacon” (150-51).

Wendell Berry recognizes “that food is a cultural product,” and “A healthy culture . . . clarifies our inescapable bonds to the earth and to each other” (43). Corporatized farming methods commoditize food culture, and sever the natural bonds of which Berry speaks.²⁸ Atwood takes industrial agriculture methods to the logical extreme with “ChickieNobs,” an assembly-line all breast-meat chicken that reduces the animal to just the muscle tissue humans find tasty. “ChickieNobs” are developed to offset protein shortages brought about when existing industrial farming is impacted by climate change and overpopulation. At the Watson-Crick Institute, Jimmy witnesses “a large bulblike object . . . covered with stippled whitish-yellow skin. Out of it came twenty thick fleshy tubes, and at the end of each tube another bulb was growing” (Atwood, *Oryx and Crake* 203). The removal of the head and brain in what Donna Haraway terms “organs without organisms” is intended to allay concerns over suffering (*When Species* 268), but even the Compound-born Jimmy calls “The thing . . . a nightmare” (Atwood, *Oryx and Crake* 202). Nevertheless, he eventually bypasses his reservations on eating the end product, later remarking

²⁸ Industrial farming challenges ethical understandings of human relationships with the animal other, and using “animals as machines,” as Berry points out, also “creates an enormous pollution problem” (62).

“the stuff wasn’t that bad if you could forget everything you knew about the provenance” (242). As in his internet viewing habits, Jimmy illustrates the mindless consumption of which humans are capable, and his easy participation in a cycle which he himself found abhorrent at first is an indictment of human lassitude in the face of natural dissolution.

Raising the question of human responsibility with his analysis of “*the animal*,” Jacques Derrida notes that the last two hundred years have seen exponential increases in our attempts to separate ourselves from the not-human (“The Animal” 393-94). We strive for disengagement through and because of the technology of industrial/post-industrial culture, to serve contemporary human demands. Derrida asserts this separation occurs through modernized, mechanized farming; industrial methodologies in animal meat production; processes such as artificial insemination and genomic manipulation for over-production; and the commercial use of animals for “all sorts of other end products” for “the so-called human well-being of man” (394). Kate Rigby adds to the discussion by stressing the “ecocidal” effects of “The hyperseparation that segregates the human other from other others,” and calling for “an ecological ethics, in which we are accountable to more than only human others” (176). Accountability is not merely a question of how we treat nonhuman entities, but how we acknowledge our own human existence in relation to the ecology of the biosphere. In *Oryx and Crake*, Atwood illustrates that, while maintaining human separation from natural processes allows us to ignore such ramifications for a while, ultimately we must face our ties to the physical earth. Decisions reached from a stance of separatism or human exceptionalism, such as manufacturing organ-donor pigs which must be sacrificed for human use, only examine ethical action from the narrow perspective of the human.

By juxtaposing Extinctathon's vanished natural species against bio-engineered organisms, Atwood makes clear that if a creature is useful or profitable to humans, it need not fear extinction—only utilitarian appropriation.²⁹ Haraway suggests the terminology "'endangered species'" works "simultaneously to locate value and evoke death and extinction in ways familiar in colonial representations of the always vanishing indigene," and she situates "the colonized, the enslaved, the noncitizen, and the animal" in the same discursive space ("Encounters" 100). Thus, the genetically modified organisms in *Oryx and Crake* are just the next-generation slaves, the voiceless properties in the Compound-plantations. Their utility to humanity establishes their valuation, a judgment enacted by humans and bypassing other considerations such as integrity of natural ecosystems or animal subjectivity; their disappearance, even at the hands of humans, can be returned to the natural world for absolution. While grave quantities of non-utilitarian natural species are allowed to disappear under the thrust of development and progress, pigeons and ChickieNobs pervade pre-JUVE Compound life. Atwood's text informs that extinction is never that easy to justify, and human exceptionalism is no longer a blind we can hide behind. *Oryx and Crake* questions if extinction is a more serious condition when it threatens the human, as opposed to the nonhuman, and if the idea of justice applies to the nonhuman other.

Listening to the Animal Other

Cary Wolfe offers that Derrida utilizes the notion of "shared embodiment, mortality, and finitude" with nonhumans as criteria that "subsume the more traditional markers . . . such as the

²⁹ Haraway observes that a lifestyle that "avoid[s] eating or wearing any animal products" in an effort to promote environmental ethics might unintentionally "consign most domestic animals to the status of curated heritage collections or to just plain exterminism" (*When Species* 80). This observation recognizes the economic imperatives of monoculture, or reducing livestock or crops to the most productive, profitable strain. Berry notes that the decline of "agricultural stability through diversity" has resulted in a system where "it is now, for the first time, deemed provident and wise to put all the eggs in one basket" (36).

capacity for reason, the ability to enter into contractual agreements or reciprocal behaviors” (“Flesh and Finitude” 8).³⁰ Human exceptionalism depends on understanding the human as possessing qualities and capabilities unique to our species, attributes such as speech, problem-solving, or empathy that present an insoluble barrier to the nonhuman other.³¹ But is the barrier impermeable or only unfathomable? If we drop the lens of humanism in our approach to the animal other—something I propose Atwood accomplishes in *Oryx and Crake*—will we discern an entity rather than a thing on the other side of the divide?

Communication is one of those markers of separation, but it is an element which can and has been challenged. The “différend,” according to Jean-François Lyotard, is instability in language “wherein something which must be able to be put into phrases cannot yet be,” and he includes “silence,” the “negative phrase” within this concept (13). Bill Readings interprets Jean-François Lyotard’s usage of “différend” to explain the idea of a language/communication barrier so great it will never be breached (114).³² Readings explains the failure of the colonial Australian government to achieve justice with the aboriginal population through différend: the aboriginal view of the world is so alien to western ways of understanding that there are no words to close the gap (112, 120). Any words the government might use to interpret will only reassert colonial preconceptions. And the western view is just as alien to the aborigine; despite protests to the

³⁰ According to Wolfe, to question “the ontological and ethical divide between humans and non-humans” and seek right action for the nonhuman leads us into the region of posthumanism (“Flesh and Finitude” 8).

³¹ Franz de Waal’s primate studies look beyond strictly behaviorist paradigms and into empathic evidence: “group specific behaviours,” those actions which present evidence of a “collective mindset and shared knowledge in a group.” Other animals, such as “hyenas, dolphins, or wolves” also provide examples of nonhuman social relationships (de Waal and Thompson 48, 44). These developing recognitions of nonhuman emotive and cognitive potential further shake the inviolate humanist claim on uniqueness.

³² While Lyotard analogizes that “the animal is a paradigm of the victim” for their lack of speech, he is not concerned with the différend between human and animal, but between human and human (28).

contrary, humanism is only universal to those enculturated to it. The barrier of *différend* is mutual, and prevents either party from recognizing the other as responsive entity.

I assert the absent phrase or word of the *différend* also describes the broken discourse between humans and animal others. Historically, human minorities have been treated as not-human frequently enough to show the relevance of *différend*; animals have suffered because the *différend* between “us” and “them” is even greater. If it is difficult to achieve mutual communications between different groups of humans, is there any hope of understanding the nonhuman? If the indigene has such a disparate response and relation to temporal and physical reality, how different, then, must it be for creatures with divergent sensory organs? To be human is to be immersed in and defined by language as we understand it, communication composed of sound, gesture, and facial expression. But other creatures use different sensory apparatus for intraspecific communion, including, for some species, infrared vision, scent and body language, chemical markers, or hearing that extends into registers beyond human perception.³³

Atwood illustrates the gap between human and animal communications with Alex the parrot.³⁴ As a child, Jimmy comes across Alex in an educational video; in his loneliness he turns to the parrot as a kind of mascot. Alex creates a new word, “*cork-nut*,” to describe an almond. Jimmy, grasping the significance of the event, adopts the word as his personal slang. Alex also cuts off the experiment when he gets tired of it: “*I’m going away now*” (54). Jimmy knows if he had the

³³ Butterflies, for example, locate their food sources in flowers by “pinpoint[ing] pollen and nectar . . . by the pattern of ultraviolet rays reflected off the petals” (Wilson, *Consilience* 46), and Louis M. Herman posits that bottlenosed dolphins are flexible communicators, and should be seen as “multi-modal animals, interfacing with their world through vision as well as hearing and echolocation” (277).

³⁴ Alex the parrot was an actual subject in a study on animal behavior in language; while he did not use the word “cork-nut,” he did exhibit an understanding “that his labels are made of individual phonological units that can be recombined in novel ways to create novel vocalizations” (Pepperberg 3).

chance to meet Alex, “they’d be friends, they’d be brothers” (261). Alex seems to be attempting human language for the purpose of closing the gap, but we see no complementary effort on the part of his human handler. Jimmy’s fascination with words—human communication—is the link that draws him to Alex; the door to understanding opens with a creature that approaches, even peripherally, human forms of verbal signifiers.

In his critique of Lacan’s Cartesian approach to the subjectivity of the animal, Derrida asserts that the monolithic judgment on animality or humanity hinges on symbolic communication. Whereas Lacan differentiates between “signs for human language” and “animal coding,” Derrida challenges that the divergence is not so cleanly marked; the attributes of human language, such as signs that create meaning, “must be accorded to any code, animal or human” (“And Say” 126). From another perspective, Murphy demonstrates the challenges faced even when both parties speak the same human language, but are of different genders. He queried his students on differing approaches to communicating with the opposite sex, and found the women more inclined to put forth the “active listening” effort to understand the “many realms of male discourse” (157-58) than men in a reciprocal situation. Murphy asks, “Is it the nature of language, of gender, or of a particular culture that generates asymmetrical structures of understanding difference? And if so many men are unwilling to learn the discourses of the other side of their own species, what about that of other species?” (158). Might the words and phrases in the animal others’ separate worlds not only exist, but exist in complex, non-instinctive forms beyond human notice or comprehension?

While human exceptionalism presupposes the divide, in *Oryx and Crake* the lines between human and not-human blur, becoming permeable. Lacking tongues and opposable thumbs, pigoons cannot produce words or even gestures; nonetheless, it's not only possible, but probable that they share human intelligence because of the human brain tissue mixed into their genetic design.³⁵ Snowman describes them as “A brainy and omnivorous animal,” as they coordinate their movements to entrap and ambush him in several instances (Atwood, *Oryx and Crake* 235, 267, 271). Snowman is witness to the pigoons' capacity to plan and organize, but here the *différend* is complicated by the overturned predator/prey relationship. As he observes, “pigoons have long memories,” and their interest in him has little to do with curiosity; rather, Snowman imagines they see him as “a delicious meat pie just waiting to be opened up.” Their self-directed behavior is indicative of agency, though, and challenges an anthropocentric reading. Pigoons, as “Team players,” are a rebuttal to the Cartesian machine animal (234, 268).

The Crakers also play a part in demonstrating *différend*; as shown in chapter one, their language is disjointed from past cultural and physical realities. Snowman's conversations with the Crakers are full of broken dialogue, as misunderstandings and questions proliferate. A simple slang expression from Snowman—“Piss off”—produces an untranslatable moment: “He's made a mistake, he's said a new thing, one that's impossible to explain” (Atwood, *Oryx and Crake* 9). Predominantly human in form, the Crakers are completely other in their communication and perception of the environment. Maybe the *différend* is simply too great a barrier to overcome. As

³⁵ Describing the pigoons, Snowman notes that “if they'd had fingers they'd have ruled the world” (Atwood, *Oryx and Crake* 267).

Readings asserts, “the radical incommensurability between the two kinds of arguments” assures that neither party can even “recognize the other as an ‘argument’ at all” (115).

The “universal dream” of western humanism (Readings 116) that segregates us inter-specially by race and geography also demands that the nonhuman be separated into a space of utility. Thus, the moral implications of genetically manipulating other species to increase their worth to humanity are rationalized through their otherness. Ironically, the same science that promises human mastery over nature also reveals the connections humans share with the natural world, and call into question humanity’s current relationship with that world. As Glen A. Love states,

recent scientific studies and findings deepen and complicate our understanding of the subject far beyond the simple categorizations of the past. We are increasingly led to the borders of our species, where, for example, we share over ninety-eight percent of our genetic makeup with the common chimpanzees, and where the ecological fascination with such edges is increasingly evident. (572)

Atwood shows the ease with which scientific and commercial interests can ignore such biological enlightenment, to the detriment of all.

Atwood exposes GMO technology as double-edged, as Crake performs the same cross-species alterations on the human animal that the other scientists are performing on pigs, chickens, and multiple other species. New understandings of the chemical and molecular connectivity of earthly organisms increasingly reveal human entanglement with the environment, and the artificial barriers of reason and speech fade in importance against the overarching struggle for survival witnessed in *Oryx and Crake*. In the conclusion, I will return to the concepts of extinction, evolution, estrangement, and affinity: Atwood’s platform in her grave new world.

CONCLUSION

Man, introverted man, having crossed
In passage and but a little with the nature of things this
latter century
Has begot giants; but being taken up
Like a maniac with self-love and inward conflicts cannot
manage his hybrids. (1-6)

Robinson Jeffers
“Science”

Man is but a part of the fabric of life—dependent on the whole fabric for his very existence. As the most highly developed tool-using animal, he must recognize that the unknown evolutionary destinies of other life forms are to be respected, and act as gentle steward of the earth’s community of being. (91)

Gary Snyder
“Four Changes”

Lab Animal

In *Oryx and Crake*, Atwood places humans in the position of the laboratory animal, as much a product of science and technology as the plants and animals we use and consume. In this, she recognizes and magnifies the fact that our domesticated hybrids have shaped humans and human culture just as we have shaped the organic world; coevolution has concurrently influenced human nature and Mother Nature. Jared Diamond outlines this concept in *Guns, Germs, and Steel*, explaining how higher food yields, concentrated populations, increased birth rates, and food surpluses made possible “settled, politically centralized, socially stratified, economically complex, technologically innovative societies” (89, 92). The evolutionary changes we have produced in others have shaped us as well, and the fictive alterations Atwood projects have similar, if more violent and drastic, effects on future humans.

Atwood’s text fits what Rigby describes as “biting, stinging words of prophetic imagination,” (178), an unnerving vision of a “not-so-distant-future . . . world currently feared by

environmentalists” (Glover 52). We react to the dangerous hybrids from the Compound labs much like Jimmy, with revulsion and confusion, yet these biological perversions echo the cultural perversions Atwood puts forth in internet porn and violence, human slavery, and authoritarian justice. Even the celebration of humanist triumphs in literature, music, architecture, and art falls on the losing side in the video game *Blood and Roses*, portending humanity’s future. However, the most disturbing elements in *Oryx and Crake* may be those with a hint of familiarity, such as the internet games, corporate greed, animal abuse, and social constructs of race and gender that reflect the contemporary world: the wolvog, CorpSeCorp officer, and our contemporary banking crisis are all products of a culture that condones corporate greed.

Bioengineered evolution as a malleable, controllable life process leads to extinction in the same vein; the God complex manifested in Crake and his fellow Compound scientists produces both creative and destructive outcomes. Crake, who believes in neither God nor Nature, valorizes human creativity and unabridged progress in his Watson-Crick phase, but later observes that “As a species we’re in deep trouble, worse than anyone’s saying” (Atwood, *Oryx and Crake* 206, 295). The terminology “as a species” reaffirms humanity’s ties to other organisms, and imputes a biological problem (and possibly a biological solution). In Crake, though, the confusion of human exceptionalism and nihilistic cynicism produces the lethal effect of narrow empirical androcentrism, as his inventiveness provides only extinction as a logical solution to planetary survival: “You’ve got to work with what’s on the table” (293). As Cooke notes, “Crake is a biological determinist, believing also in a logical biology, a biologic of sense” (119). For Crake, an elegant solution is logical and linear, never organic or rhizhomic. Speaking of the construction of the Crakers, Crake tells Jimmy “It was the result of a logical chain of progression” (Atwood,

Oryx and Crake 302), extending Atwood's concerns about "single-issue, single-focus thinkers" (Atwood, qtd. in Halliwell 260). In *Crake*, Atwood illustrates the double edge of science, the capacity for comprehension that can be subverted by egoistic drive and commercial profit. Technoscience thus portrayed is a seductive virulence, a human creation capable of trivializing all other human creations.

The women of *Oryx and Crake* further highlight the suspect uses to which science and technology are applied. Acknowledging the troubled history of exclusion and essentialism in women's relationships with science, Sharon and Oryx provide ambiguous hints of feminist agency in Atwood's dystopia. Both can be seen as figures enjoining nature with technology. Oryx is born in an Asian village surrounded by parched farms, the forest, and wild creatures, yet she ends her story in a Compound, Atwood's symbol for corporate technological/scientific elitism. Traveling from one extreme—third-world poverty and sexual slavery—to another—the privileged inner sanctum of the RejoovenEsense Compound—she becomes associated with the most complex forms of biotechnology yet, the humanoid Crakers and the JUVE pathogen. Sharon, in contrast, begins her story within the elite environs as a microbiologist working for the OrganInc Compound, and escapes to enact radical environmentalist protests against commercial perversions of the science she helped to create.

The characters of Sharon and Oryx are exercises in defining and redefining the feminine; the contested authority of claiming an identity frames both of their experiences, although they each have disparate concerns and goals. Sharon, as the doomed voice of ethical science, and Oryx, as the elusive exotic, challenge any notion of future egalitarianism; as Tolan observes, Atwood

“relinquishes the hope for a future generation of unified women” she displayed in earlier works (282). In discarding this vision, the machinations of corporatized empiricism become apparent, a commoditized perspective reducing all entities to a profit/loss valuation. The feminine, inherently linked to nature, is pictured as both tool and raw material in the world of Compound science. Sharon’s and Oryx’s individual deaths are mirrors to the larger cultural and species extinctions taking place in *Oryx and Crake*; their victimization to patriarchal motives of greed and control echoes the natural world’s exploitation by a humanist vision of progress.

In viewing humans as apart from nature, Crake represents a common scientific trap, forgetting or ignoring that, regardless of the control they are exerting or the environmental damage they are causing, humans are part of the biosphere. “Crake’s logic,” Glover recognizes, “seems valid: if humans are responsible for destroying the world, then it makes sense to alter humans radically in order to ensure this destruction can no longer continue” (54). But Crake’s answer to human overpopulation, the JUVE epidemic, aims for cultural extinction as well as human extinction. Knowledge of literature, art, music, architecture, and even technology will disappear without any hope of rebuilding (Atwood, *Oryx and Crake* 223). The devolution of artistic culture, already in progress prior to the epidemic, is as devastating to the human animal as the JUVE virus. Jimmy, the word person, is already an evolutionary dead end in the pre-JUVE future world, and Ku questions whether “the rejected, despised, outcast Snowman,” ostracized from his own society for technological lack, is “still a human being at all?” (111). Is the human still human when

stripped of language and culture, or, as Cooke avers, is it impossible to “separate the human from the technical” (108)?³⁶

After the plague, Snowman—the visible example of deteriorating humanity—is cut off from the things with which he self-identified, the “imaginative structures” that define “human meaning” (Atwood, *Oryx and Crake* 167). Ku asserts that the transgenic constructs of pigoons and Crakers “disrupt or perhaps topple Snowman’s human status” (111), while DiMarco contends Snowman is “in a position of being able to reinvent a future world . . . one that may or may not be more attentive to caring for others” (187). Perhaps Jimmy/Snowman’s ambiguous presentation is Atwood’s means of calling our attention to technology’s invasive degradation of cultural artifacts, a warning that more than just organic entities are going extinct. The “gnawed bones and old bricks and ossified shit” that encroach artistic products for archaeological significance; the “erosion” of art, music, literature, and dance at the Martha Graham Academy; and the disappearance of words all signal contemporary clues (Atwood, *Oryx and Crake* 167, 187, 195).

Human Re-Vision?

In contemporary culture’s rush to achieve technoscientific nirvana, the assumption of human hierarchical prominence is often taken for granted. Atwood deconstructs this assumption by introducing others who fill the void opened by humanity’s extinction. Ku affirms “the pigoons’ and Crakers’ mimicry of human beings . . . disrupts this ranking system,” as the demise of humanity “enables the highly adaptable pigoons and the extremely refined Crakers to dethrone the merely ‘human’ Snowman” (112). Human exceptionalism in the absence of material culture

³⁶ Wilson suggests “genetic evolution” runs along a “parallel track of cultural evolution,” and that “the two forms of evolution are somehow linked” (*Consilience* 130).

proves to be a hollow claim for Snowman, and “Life Skills” adapted to a technological world do not easily translate into survival skills in a globally-warmed, post-apocalyptic setting (Atwood, *Oryx and Crake* 42). The image of a bug-bitten Snowman, unshaven, unbathed, clad only in a dirty sheet, broken sunglasses, and baseball cap, is a stark physical contrast to the “amazingly attractive” Crakers (8). Furthermore, “lost in the fog” and drunk on bourbon (237-38), Snowman is nearly outmatched by the “Alert . . . on the lookout” pigeons (270).

“Modernist versions of humanism and posthumanism alike,” contends Haraway, owe ideological allegiance to the divisions “between what counts as nature and as society, as nonhuman and as human” (*When Species* 9). Thus, efforts to cast pigeons and Crakers as posthumanist figures become problematic. Although pigeons share human organs, a feature Ku relates as “exchangeability” (113), and coordinate their behaviors in social groups, they still appear to us as nonhuman and of nature, not society. And while the Crakers may look like “a superhuman race” (Ku 115), their lack of common history and language, as well as their alien alimentation, reproduction, life span, and self-defense mechanisms, mark them as other. As Glover notes, “Crake thus takes a variety of features from the animal kingdom and designs a human that appears closer to nature, yet is ironically the product of a laboratory experiment” (55). The ambiguity of the Crakers’ complicated origins reanimates Jimmy and Crake’s old discussion: are they real or fabricated? And if they are real, are they human?

Crake relates to Jimmy that the Crakers “were perfectly adjusted to their habitat, so they would never have to create houses or tools or weapons, or, for that matter, clothing. They would have no need to invent any harmful symbolisms, such as kingdoms, icons, gods, or money” (Atwood,

Oryx and Crake 305). This deliberate attempt to deconstruct human culture is undercut by Crake's own latent humanism, though; for all Crake's attempts to undo the humanist paradigm through physical alterations, residual evidence of cultural construction can be found in the Crakers. Bouson states that Crake uses appellations such as "Abraham Lincoln, Leonardo da Vinci, Madame Curie, Sojourner Truth . . . because it amuses him" (151), but it can also be seen as lingering cultural debris seeping into Crake's Adamic role. The new humans in the new world will begin their communities with names salvaged from pre (for them) -history.

The Crakers also remain suspect because of the enduring trace of human exceptionalism. Their bipedal locomotion and overall physical appearance, combined with basic human speech and an arguably human brain, locate them within anthropocentric expectations. The vanity of their creator, Crake, is evident in their green eyes, and the rest of their form follows aesthetic ideals, notwithstanding the extras he incorporated as survival insurance. As Snowman relates, they are "perfect, each one a different skin colour—chocolate, rose, tea, butter, cream, honey," and "they were so beautiful . . . Each individual was exquisite" (Atwood, *Oryx and Crake* 8, 302). If anything, Crake has merely extrapolated and codified species vanity for eugenic perfection. Through his actions, Atwood shows the futility of deconstructing humanism from a standpoint that has been saturated with humanist ideology from its inception.

In a question conceived before the advent of transgenic manipulation, Berry asks "How much can we 'modify' the environment before we fatally 'modify' ourselves?" (205). The answers Atwood proposes are not reassuring; posing environmental, cultural, physical, and mental alterations, she illustrates the fragility of the construct called human. Contemporary worries over

GMOs are extrapolated into alarming scenarios with *Oryx and Crake*'s wolvogs, pigeons, snats, and bobkittens, and the manipulation of the human genome raises questions of when, and how, will we stop?

Atwood ends the novel on an equally opaque note, with Snowman's discovery of other human survivors. Three strangers are camped on the beach, but by now, despite his desperate loneliness, Snowman finds these humans embody the unknown: the other. Confused and afraid, the thoughts that come to him are

Images from old history . . . sidebars from Blood and Roses: Ghengis Khan's skull pile, the heaps of shoes and eyeglasses from Dachau, the burning corpse-filled churches in Rwanda, the sack of Jerusalem by the Crusaders. The Arawak Indians, welcoming Christopher Columbus with garlands and gifts of fruit, smiling with delight, soon to be massacred, or tied up beneath the beds upon which their women were being raped. (366)

Quite aware of his responsibility to the Crakers, he is faced with his unfortunate understanding of human nature; while the strangers portend a mystery, he can easily project their destructive potential. The once half-sighted Snowman has taken off his sheet and sunglasses, and awake, with clear vision, he approaches his "zero hour" encounter (374).

Atwood's deliberately ambivalent closure—the narrative ends before Snowman makes his move—invites participation from the reader. The open ending can be construed as a promise of renewed humanity or a new beginning (Cooke, DiMarco, Ku); it can also be seen as a warning against technoscientific vanity and the dangers of transgenic experimentation (Bouson, DiMarco, Glover). I agree it is a warning, an example of Rigby's call to prophetic imagination: now we may be implicated in our own extinction, not just from a misanthropic Crakish genius, but from our neglect and abuse of the living earth. In addition, though, Atwood is asserting the biological

human, and through her discourse on evolution and extinction, establishing humanity as a part of, not apart from, the organic mix.

In 1978, Dr. Paul Abell uncovered a fossilized set of footprints in Laetoli, Tanzania, evidence of at least two hominids who walked across the wet sand of a lake shore “between 3.6 and 3.8 million years” ago (White 175). The footprints are attributed to *Australopithecus afarensis*, a “geographically and ecologically widespread, bipedal, megadont, small-brained hominid species lineage” (White, et al. 883). To paleoanthropologists, the footprints, together with bones, give evidence of existence, just as the footprints Snowman finds provide evidence “of his own kind” (Atwood, *Oryx and Crake* 372). For much of the novel, Atwood reveals Snowman as a less than substantial figure, “existing and not existing,” “known only through rumours and . . . backward-pointing footprints” (7-8), but by “stamp[ing] his own good foot into the wet sand” (373), he firmly establishes his own undeniable physical existence. The Australopithecines walked upright, like us; whether or not they were ancestral is not significant. What is significant is the fact there were many branches of the proto, near, and ancestral hominids that went extinct, pointing to the temporality of species life, even human species life. If the rules of the game were changed to include the distant past, the various hominids would be game points in Extinctathon, just as *Homo sapiens sapiens* becomes after JUVE (344). Atwood reminds us that evolution and extinction are not static, but ongoing processes, and humans, as biological entities, are included in the system.

The Crakers are evolving, expressing emotions and constructing icons. Emoting when Snowman returns from his journey to Paradise, “All are smiling happily; the children jump up

and down, laughing; some of the women clap their hands with excitement.” They are developing rituals—playing percussive instruments and chanting—and displaying “Symbolic thinking,” as made evident in their material representation of Snowman (361). Nevertheless, although they display what may signify an anthropogenic predilection toward religion, it is stamped with a new ethos: following the “teaching of Oryx” in an emerging ecological spirituality, they dismantle their art, returning it “to its place of origin” (363). Snowman feels “he himself has been torn apart and scattered” through this de-composition, and originary humanist approaches are disassembled and recast.

Snowman is evolving, too. His perception of nature is changing, perhaps indicating biophilic inculcation. The beginning of the last chapter mirrors the first, but whereas he originally only perceived the “rosy, deadly glow” that “still seems tender,” he now “gazes at it with rapture.” Even though the birds’ cries still “sound like nothing human,” he now recognizes the sublime natural beauty of the world (3, 371). The butchered rakunk the strangers are cooking elicits empathic feelings, now appearing as a “poor creature” to him rather than a pest (373). Tellingly, his empathy toward the Crakers has also grown, as his first impulse upon his return is to visit and reassure them (359), and his chief concerns over the response of the strange humans is how they will behave toward the Crakers. How will he “present[] the Crakers to them in the proper light” to ensure their understanding (366)? Furthermore, he worries that he cannot explain the dangers of human contact to the innocents, recognizing the impossibility of describing concepts of colonialism, slavery, abuse, and rape with the available language tools. Finally, Snowman begins to realize he is cared for in return by the Crakers: “He feels himself being lifted gently, carried,

lifted again, carried again, held” (367). Snowman’s re-humanization signals the beginning of his adaptation to the post-apocalyptic world.

On his way to meet the strangers, Snowman reiterates “An old conundrum of Crake’s”: “Can a single ant be said to be alive . . . or does it only have relevance in terms of its anthill?” (371). A following question might be can a single human be said to be human? Or does he/she only retain humanity in terms of a social group? Snowman’s humanity is seemingly revived in the context of the developing Craker social unit, and although his blank-faced watch indicates the absence of human-imposed order on the world, it may also signal a timeless opportunity for reanalyzing human relationships with the rest of the biosphere. Jimmy/Snowman, the master story-teller, “ma[kes] a narrative mistake” recounting his journey to the Crakers, an error that engenders a sense of unbalance (362); his loss of balance encapsulates all that has proceeded in *Oryx and Crake*’s human interactions with the biosphere. In *Negotiating with the Dead*, Atwood explains the longevity and mutability of the oral story: “An orally transmitted tale does not die with the teller,” but it “changes from teller to teller” (50). In *Oryx and Crake*, a world devoid of written texts, stories once again become changeable and adaptable. Perhaps Atwood is signaling the need for a new, adaptive narrative, wherein the post-human signifies an organism integrated into its ecosystem rather than an intellectual singularity. This potential narrative promises a consilient and ecological rendering of humanity: a survival guide in which animality and imagination share equal roles in evolutionary endurance.

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