

Future Traditions of Nature

AMY MURPHY

This article examines a set of contemporary anime films that use the apocalyptic trope to critique the hubris of human development and its effect on the natural world. Faced with self-extinction, the protagonists of these films are forced, as we are today, to contemplate how their traditional views of nature have brought them to this particular precipice. The article argues that we must move beyond the unsustainable ideology of resourcism, and critically reassess many of the spatial metaphors, constrictive binaries, and false hierarchies that have contributed to the current struggle between the built environment and nature.

Postmodernism is what you have when the modernization process is complete and nature is gone for good.

— Fredric Jameson¹

As evidenced by recent interest in Alan Weisman's bestseller *The World Without Us* (2007), the History Channel's documentary *Life After People* (2008), and Pixar's summer blockbuster *Wall-e* (2008), many Americans are beginning to imagine the potential of a post-postmodern world — one where nature returns once Western industrial progress has reached its own fatal demise. While these works examine hypothetical scenarios where humankind has vanished from the Earth, other signs have also emerged in the real built environment that suggest a rethinking of the presumed hierarchy between human progress and nature well before modernization is complete and “nature is gone for good.”

In fact, over the past few decades, urban reclamation projects have increasingly promoted a “return-of-the-repressed” attitude, in which nature is allowed to recolonize obsolete industrial landscapes. Looked at chronologically, one of the first of these, Seattle's Gas Works Park (completed in 1975 to some controversy), now seems fairly suburban in its reinstatement of nature (FIG. 1). In contrast, one of the most recent, the Highline in New York City, has pushed the postindustrial, return-of-nature aesthetic much further (FIGS. 2, 3). Well received both publicly and critically, the Highline perhaps provides an apt allegory for our times, rendering nature with a relatively high degree of autonomy while still embracing an icon of the industrial past. It suggests that certain post-postmodern worlds, where nature is again more in control of itself, might not be so terrifying after all, and might actually be quite beautiful.

Amy Murphy is an Associate Professor and Vice Dean of the School of Architecture at the University of Southern California.



FIGURE 1. *Gas Iron Works, Seattle, WA.* Photo courtesy of Seattle Parks and Recreation.

At best, though, these narratives and projects can be seen as registers of a desire for a future, less totalizing relation with the natural world. It is not yet possible to argue that human culture has changed in any truly consequential way. It is the machines, not really mankind, that save nature in *Wall-e*; and it was the highly talented horticulturalist Piet Oudolf, rather than nature, who has so carefully replanted the Highline. Historically, real change in any traditional practice or thought usually only follows a change in collective understanding of a context. At the moment in the United States, it is not clear that the ubiquitous environmental crisis has become of critical enough concern to actually change the way people think about their relationship with nature. Nevertheless, in the relatively recent past, several decisive events, including the nuclear explosions at Hiroshima and Nagasaki, have been context-changing enough to make us



FIGURE 2. *The Highline, New York City. Chelsea Grasslands, between West 19th Street and West 20th Street, looking north.* Photo by Iwan Baan © 2009.

question our presumed superiority over nature and the absolute value of technological progress.

To assess these issues, this article looks at a set of well-known postapocalyptic anime, or feature-length animation films produced in Asia, that directly address this transformed cultural and historical awareness. Many films within this genre interrogate our continuing technological optimism and its effect on future traditions of nature. Yet, unlike American environmental disaster films such as *The Day After Tomorrow* (2004), which portray only imagined environmental catastrophes, many Asian anime narratives start from the presumption that an environmental apocalypse has already occurred. They presuppose that the dawn of the nuclear age has already created a transformed, toxic future, an approach which gives these works a heightened level of intensity and urgency compared to their Hollywood counterparts.

While there are dozens of subgenres under the umbrella of anime, this article looks only at feature-length works that depict dystopian or toxic futures in which the human species must adjust its modes of thought and action to survive. The titles include *Akira*, directed by Katsuhiro Otomo (1988); *Appleseed*, directed by Shinji Aramaki (2004); *Ghost in the Shell*, directed by Mamoru Oshii (1995); *Nausicaä of the Valley of the Wind*, directed by Hayao Miyazaki (1984); and *Sky Blue*, directed by Moon-saeng Kim (2005).

When grappling with environmental themes, a sense of loss haunts the characters in these films — as it is intended to haunt viewers as well. On the whole, they discount any cornucopian visions of the future, particularly the notion, as described by eco-theorist Greg Garrard, that “the dynamism of capitalist economies will generate solutions to environmental problems as they arise and that increases in population eventually will produce the wealth needed to pay for environmental improvements. . . .”² Whether located in the



FIGURE 3. *The original Highline.* Photo by James Shaughnessy, 1953. © Friends of the High Line, 2009.

Neo-Tokyo of *Akira* or the less specific Ecoban of *Sky Blue*, these narratives uniformly contend that the harm done to future nature has been done by all of us as a species.

Many scholars trace the origin of anime to the comics that American GIs brought to Japan during the post-World War II occupation. This makes anime one of the earliest forms of postmodern, transnational, boundary-erasing cultural production. Likewise, with fairly equal reference to both Western and Eastern values, the works discussed here depict nature's wrath as nondiscriminatory and all-encompassing (although some claim that dogs seem to always be pretty lucky in both Japanese and Hollywood apocalyptic productions).³ Thus, while this article acknowledges that anime is the product of a specifically Asian context, its argument is intentionally larger, focusing on more "transportable" issues that the West can also contemplate as it confronts its own seemingly doomed, unsustainable future.

The article begins with a brief examination of the historical use of the apocalyptic trope in art and literature. It then discusses three dominant Western traditions of nature: idealizing a pastoral age; seeing nature as the threatening Other; and categorizing nature solely as a resource for progress. The article concludes by arguing that this last tradition, resourcism, in fact underwrites all other traditions of nature. It thus creates a global scenario dependent on continuing undemocratic class division, unrestricted material progress, and unsustainable ecological destruction. Its rethinking will be essential if any substantial resolution of the world's natural and social stresses is to occur.

A USEFUL TROPE: THE APOCALYPTIC IMAGINATION

*Can our imaginations of apocalypse actually forestall it. . . ?
Even the slimmest of possibilities is enough to justify the
nightmare.*

— Lawrence Buell⁴

An apocalyptic mindset has been central to the formation of every major culture's values regarding nature. For at least three millennia, some portion of the world's population has subscribed to the notion that the world is going to be destroyed either by the wrath of nature, the will of God, or more recently, the activities of humankind. As such, the apocalyptic trope has been employed by both sides of the culture/ecology debate through most of recorded history. Specifically for the West, the dominant social organization has been informed by the synergistic triad of Judeo-Christianity, the scientific Enlightenment, and the ideology of progress. As Paul Shepard wrote in *Man in the Landscape: A Historical View of the Esthetics of Nature*:

The Greeks and the Hebrews had invented the linear perspective of time. Their new historical awareness attributed

to time a beginning and end, to the world a creation and a doomsday. As the Christians came to entertain this idea, finite nature was symbolic of a greater universal history. . . . The belief in an immanent apocalypse could scarcely enhance any hope for a harmonious future in nature for mankind. . . . the division between sacred and profane was emphatic. . . . the landscape was enigmatic, dangerous, animated by demons.⁵

These binaries have underscored much of the West's historical development and its hegemonic practices with regard to nature.

As a form of counterinsurgency, the apocalyptic imagination has also been employed by most every environmental group throughout an equally long history. As summarized by Garrard, "Scholars dispute its origins, but it seems likely that the distinctive construction of apocalyptic narratives that inflects much environmentalism today began around 1200 BCE, in the thought of the Iranian prophet Zoroaster."⁶ In fact, the rhetorical idea of an environmental apocalypse has "provided the green movement with some of its most striking successes, [and] several of the most influential books in the environmentalist canon make extensive use of the trope, from Carson's *Silent Spring* through Paul Ehrlich's *The Population Bomb* (1972) to Al Gore's *Earth in Balance*."⁷ Likewise, in *The Environmental Imagination*, Lawrence Buell wrote that "apocalypse is the single most powerful master metaphor that the contemporary environmental imagination has at its disposal."⁸ Because of the West's continuing attempt to master nature (as much now to avoid apocalypse as to create it), Buell added, "there is no question of it disappearing anytime soon as plot formula. . . ."⁹

As such, many anime directors use this trope to address some of the most difficult issues confronting the world today, including environmental degradation. Paraphrasing Buell's analysis of the apocalyptic form, their works typically portray several themes: 1) a mythology of betrayed Eden; 2) images of a world without refuge from toxic penetration; 3) the threat of hegemonic oppression by powerful corporations or governments; and 4) the "gothicization" of squalor and pollution as an environmental exposé.¹⁰ The opening of one of the most well-known anime works, *Akira*, for instance, shows Tokyo being destroyed at the start of World War III by a nuclear explosion (FIG. 4). The film then jumps to 2019, when corruption and anarchy reign over Neo-Tokyo and bike gangs rule its streets. The film tells of an insecure biker teen, Tetsuo, with emerging psychokinetic abilities. Like the mythical Akira (the boy who destroyed Tokyo in the 1988 blast with his own psychokinetic energy), Tetsuo begins an epic struggle against the authorities and the scientists who are trying to control his power. Aided by a set of strange, elderly, psychic-empowered children called the Espers, Tetsuo ultimately destroys Neo-Tokyo after the authorities push him beyond the edge of reason.



FIGURE 4. *The nuclear apocalypse over present-day Tokyo at the beginning of Akira. Screen-capture image courtesy of Orion Video (academic use only).*

The apocalyptic trope is also valuable to narrative art because of its proleptical form. It allows the future to be contemplated in the present. For most people, traditions define the past. Yet, as these anime films demonstrate, traditions can also help define the future.

Some suggest that the apocalyptic theme has historically been “used to anticipate and, if possible, forestall actual apocalypse.”¹¹ It remains to be seen whether the recent increase in apocalypse-themed films will alter our course toward environmental self-destruction. But the genre reveals one thing remarkably clearly: with the advent of the nuclear age, a significant shift has occurred in our apocalyptic imagination.

Historically, agency (or blame) for apocalypse was first attributed to the supremacy of nature. Later, it was attributed to the will of God. Now, we imagine apocalypse as a byproduct of our own self-destructive hubris. According to Buell:

The image of nuclear holocaust helped reactivate apocalyptic thinking precisely by providing a more convincing secular frame of reference for the apocalyptic paradigm than had been available since the so-called Enlightenment started to undermine the credibility of Christian sacred history. The nuclear generation probably does differ from its forebears in its emphasis on annihilative apocalypticism (the “prediction of an imminent end to history controlled by no God at all” . . .), but it is a change of emphasis and not a new conception. The contempt of annihilative apocalypse itself is as old as Lucretius.¹²

Regardless of whether they are made in Hollywood or Tokyo, apocalyptic films place responsibility for the coming calamity on humanity’s own, secular shoulders.

BEYOND THE TRADITION OF THE PASTORAL

The word “environment” is very anthropocentric as it does not allow nature to be outside of human consideration.

— Jhan Hochman¹³

Set in a near dystopic urbanized future, *Ghost in the Shell* tells the story of Major Motoko Kusanagi, a government agent assigned to track down a rogue cyborg called the Puppet Master who is trying to defy the limits of artificial life after gaining self-awareness. The Puppet Master now seeks to experience the two definitive aspects of animal species: to reproduce and to die. Like the Puppet Master, the Major is almost entirely cyborg, with her “ghost” residing in an almost entirely artificial body. The film thus explores the blurred boundaries between nature and technology, identity and uniqueness. Ultimately, we learn the Puppet Master seeks to “merge” his ghost with the Major’s — to create a new single entity and terminate his existence. Knowing the merger will eliminate her identity as well, the Major accepts the proposal, convinced that a desire to stay unchanged or become too specialized limits a species’ potential, and leads only to its extinction. The climactic confrontation takes place in the atrium of a grand museum, where a huge mural of the “Tree of Species,” with bacterium at the bottom and homo sapiens at the top, provides a backdrop to the drama (FIG. 5). During the conflict prior to the “merging,” most of the tree is destroyed by gunfire, with the bullets stopping right under the supreme species, “hominis.”

Major Eastern and Western philosophies and religions have always positioned humans *within* nature. Yet in the West since Aristotle, this has consistently been based on an ordering that places the physical elements at the bottom and the more intellectual or knowing entities at the top.¹⁴ This view has made use of a variety of visual metaphors, including the Tree of Life, the Great Chain of Being, and the Scala Naturae. However, as Christopher Manes has written, in each variation, humankind’s place is “higher than beasts and a little less than angels.”¹⁵



FIGURE 5. *The Tree of Life, now riddled with bullet holes in Ghost in the Shell. Screen-capture image courtesy of Manga Entertainment (academic use only).*

As the *Ghost in the Shell* finale confirms, these mappings, though flawed from a contemporary scientific point of view, remain active as a way to retell the story of what Shepard has called Western culture's "four thousand years of struggle to 'lift' man 'above' nature."¹⁶ While some historical figures, such as Thomas Aquinas, have argued that such a ranking predicates human responsibility for the natural world, most authorities since the Enlightenment have used it to justify an ideology of "resourcism" in which the natural world exists primarily for the service of mankind. According to the Manes: "When the Renaissance inherited the *Scala Naturae*, . . . a new configuration of thought that would eventually be called humanism converted it from a symbol of human restraint in the face of a perfect order to an emblem of human superiority over the natural world."¹⁷

The arrival of Darwinism significantly undermined the position of humanity at the top of the Great Chain. Yet by that point, mainly through the now well-established modes of Christianity and early capitalism, these visual metaphors had already become embedded in a larger cultural narrative, allowing the trope to remain in circulation. Though theorists such as Manes have suggested that biologists have been too reticent to articulate the actual relationship between nature and the human species, scientists do generally "recognize that humans are not the 'goal' of evolution any more than tyrannosaurs were during their sojourn on Earth. As far as scientific inquiry can tell, evolution has no goal. . . . The most that can be said is that during the last 350 million years natural selection has shown an inordinate fondness for beetles."¹⁸ Indeed, if fungus, or the lowliest of forms on a humanistic scale, were to disappear, the results would be catastrophic because of their interconnection with life forms throughout the biosphere. On the other hand, if homo sapiens were to go extinct, "the event would go virtually unnoticed by the vast majority of Earth's life forms . . . no lofty language about being the paragon of animals or the torch-bearer of evolution can change this ecological fact."¹⁹

Traditionally, Eastern philosophies have depicted a less hierarchical positioning of human beings in nature. Yet, as a result of Western global dominance during the colonial period, Japan, for one, found it necessary to begin to integrate the realities of Western science into its philosophical understanding of the natural world. One example is the seminal work of natural scientist Kinji Imanishi, *The World of Living Things*. Attempting to provide an alternative reading of Darwinist evolution within the more Eastern construct of "oneness," he started with this poetic analogy:

It may seem incredible that the earth, originally detached form what is now the sun, which further nourished it with light and warmth, gradually developed into the ship filled with passengers we now see. . . . Now during the course of the growth and development of the earth itself, part of the earth became the materials for the ship and eventually

took the form of the ship. The remaining parts became the passengers. Thus the ship did not precede the passengers, or the passengers the ship. The ship and the passengers originally differentiated from a single thing. Moreover, they did not differentiate haphazardly. The ship became as ship in order to take passengers and the passengers became passengers in order to board the ship. This is a natural conclusion as we cannot conceive of the ship without passengers, nor the passengers without the ship . . . the world has a structure and a function, which derive from the growth and differentiation from one thing. This single source is the basis of the fundamental relationship between everything, plants and animals, both living and non-living.²⁰

For Imanishi, Darwinian evolution and specification could equally be defined around a notion of *difference*, not superiority; thus, every "thing" is defined not by its own limits, but by its relationship to its context and to other things.²¹

Hayao Miyazaki's anime, *Nausicaä of the Valley of the Wind*, focuses on human choices when attitudes of resourcism and self-elected domination can no longer be ignored by nature. At its core, it is a tale of conflict between Imanishi's "passengers" and "the ship" — in other words, humans and nature. One thousand years after an apocalyptic event, "The Seven Days of Fire," only a collection of human settlements remain, separated by a toxic jungle filled with huge, potentially aggressive insects. Furthermore, as a result of past wars, the air on most of the planet is unbreathable by humans without respirators. The heroine, the young Princess Nausicaä, lives in a uniquely peace-loving, pastoral village, located in the Valley of the Wind — so named because a wind there keeps the air tolerable for the villagers to breathe without assistance. Nausicaä has great empathy for the nonhuman elements of nature, and she can trespass in the jungle without conflict.

Unlike Nausicaä's village, two other urban settlements, Pejite and Tolmekia, are still at war with each other — and, more importantly, with the jungle. Each is trying to steal from the other the single remaining "God Warrior," a lethal biological weapon used in the ancient war, to burn down the jungle and dominate the resources of the land it occupies. Escaping from kidnappers, who are trying to prevent her from stopping the conflict, Nausicaä discovers why the insects and other nonhuman life forms are so aggressive: they are trying to protect a vast network of tree roots that purify the air and water from further human destruction (FIG. 6). In the final conflict between the insects of the forest and the people of the three settlements, Nausicaä is able to placate nature's wrath, fulfilling the prophecy that a young traveler in blue would reunite future human beings with nature.²²

Miyazaki presents this conflict as a showdown between two manmade forms of development (farmland and city) and the most iconic form of nature — wilderness. At the beginning of the film, Nausicaä's village is shown as being idylli-

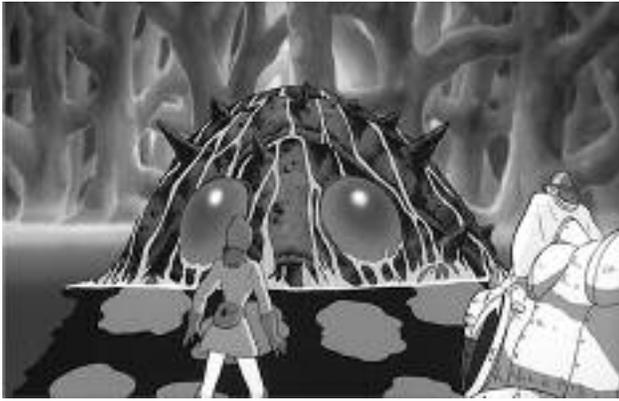


FIGURE 6. A huge Ohm insect protecting the tree roots below the toxic forest in Nausicaä. Screen-capture image courtesy of Ghibli (academic use only).

cally balanced with its surroundings. Since the villagers wear almost medieval garb, a viewer might think Miyazaki is advocating a turning back of human practices of consumption to a simpler, less destructive time than that represented by the city dwellers. Yet, in an interview about his work and the resolution of the film, he argued that the necessary break in belief systems about our coexistence with nature must go beyond notions of settlement density:

The power balance between humans and animals — that was decidedly changed when humans started using gunpowder. Really, though, the biggest reason why mountain animals decreased so much is agriculture. It's human arrogance to say that the country scenery is beautiful. A farm basically takes away the chance to grow from other plants. It's more like barren land. The productivity of wasteland is higher than that of farmland. . . . It's because of the time [we live in today] . . . that I have to even think such things.²³

For Miyazaki, depending on dated pastoral ideals is not an option for the future in Japan, a country that is approximately 70 percent covered by mountains, whose land has been significantly damaged by thousands of years of agriculture, and where the population is highly urban.

In fact, many environmentalists cite the pastoral ideal as one of the most problematic concepts with which they must contend. Though often cited as that stage in human evolution when settlement was most in balance with nature, the pastoral, as Garrard has written, “has shown itself to be infinitely malleable for differing political ends and potentially harmful in its tensions and evasions.”²⁴ Raymond Williams noted that the “pastoral has always been characterized by nostalgia”; through it, “we see an ‘escalator’ taking us back further into a better past.”²⁵ Yet, as a mode of life, the pas-

toral did not endure for so many years because it embodied a true balance between development and nature. Rather, as Shepard has noted, the “struggle to exploit” was merely constrained by the “empirical wisdom of custom and the obstacles presented by Nature itself” — neither of which limit humankind any longer.²⁶

In contrast, the wilderness in *Nausicaä* represents nature as a transcendent Other, distinct from the crops and livestock that dominate the pastoral world. And because it provides the clean water and air necessary for all life, its demise as a result of further human conflict would not only bring the end of nature, but of humankind itself. Importantly, the wilderness in *Nausicaä* is not overidealized in its own right; it is portrayed as now and forever toxic, due to several millennia of human conflict and destructive development. In this sense, it echoes Bill McKibben’s famous observation that humans have “changed the atmosphere, and thus we are changing the weather. By changing the weather, we make every spot on earth manmade and artificial.” By this, “we have deprived nature of its independence, and that is fatal to its meaning. Nature’s independence is in its meaning; without it there is nothing but us.”²⁷

Yet, regardless of wilderness’s compromised independence, both in *Nausicaä* and in our world, its ecological importance still determines our future ability to survive. As the film purports to show, humans must accept that there is still a tipping point, even in such a toxic condition, beyond which we will have gone too far — when nature will return as an avenger.²⁸ And, as in other narratives such as *Grimm’s Fairy Tales* or the 1970s American film *Deliverance*, the forest of Nausicaä becomes an animated character itself, pushed to aggression when humankind tries to conquer it. This moment arrives in the final scenes of the film when the beasts and the insects leave the forest to attack the warring humans.²⁹ In a classic return-of-the-repressed scenario, a stampeding herd of humongous beast-like Ohms save a baby Ohm kidnapped by a few Tolmekians. This provokes a final conflict between the three human societies and the forest. Metaphorically, Mother Earth has been pushed too far, and must take action to save all life from humans bent on killing everything. When the beasts return to the forest with the baby Ohm at the end of the film, they have not compromised their position. It is the humans who have had to change their ways after the sacrifice of young Nausicaä, killed saving the young Ohm.

The message of *Nausicaä* does not go as far as that of some environmental writers, such as David Rains Wallace, who has written that a future world “purged of humans by human-engineered environmental apocalypse would not be so apocalyptic after all because wilderness in some form would be sure to endure.”³⁰ Rather, the film suggests a future where civilization and nature can be at peace once people come to understand nature’s inherent value as the protector of elements such as air and water — which are too

important to be controlled based on humanity's immediate self-interest. This conclusion, if accepted, might move ecological thinking beyond the static pastoral vies implied by many mainstream environmental theories, dislodging the traditional reading of wilderness as an irrationally aggressive Other that must be controlled, or at least contained, to ensure man's survival.³¹

Interestingly, *Nausicaä* is set a thousand years in the future, implying that the first apocalypse was so devastating that human civilization required a thousand years just to reenter a medieval or pastoral period. At that future date, however, the film describes how humans are given a second chance to make the correct choice at a pivotal fork-in-the-road of existence — a second chance to value nature as a larger life-source, not just as a resource (as when civilization emerged from a first agrarian period).

Compared to other contemporary postapocalyptic anime, *Nausicaä* is also a uniquely styled film. Its "look" makes it seem as if it is depicting a medieval past, in contrast to the most other postapocalyptic or futuristic anime, which depict a techno-centric world where humans have either displaced or almost entirely destroyed nature. Yet, even considering the natural world's almost complete destruction in these more dystopic urban films, the presence of past traditions of nature continue — particularly as a hierarchical structure, now extended to "natural" distinctions between humans, androids, minorities and children. Controlled by the same ideological categorizations that positioned the former natural world below the human one on the Scala Naturae, these future worlds correspondingly designate some beings, both human and humanoid, as the "resources" or "property" of hegemonic powers that control wealth and limit personal freedom. The narrative conflict in these more techno-centric films arises when these "resources" are pushed to a point where they must struggle for their own survival, much as in the conflict that forms the basis of *Nausicaä*.

BEYOND THE TRADITION OF NATURE AS THE OTHER

The cyborg will be a key figure in a poetics of responsibility because its irreverence and keen sense of irony are quite incompatible with traditional pastoral, wilderness, and apocalyptic tropes.

— Greg Garrard³²

For some time, eco-theorists have suggested a direct relationship between attitudes toward nature and toward youth, gender, race and class. Historically, to justify its control, Western culture has viewed certain subgroups of humans as being more "of" nature than others. According to Jhan Hochman: "poverty, femaleness, youth, or rich melanin content become problems primarily through traditional linkage to reified negative nature: living close to nature as a kind

of poverty, nature as a punishing mother goddess or innocent child, youth as wild, or nature as the past or immaturity of culture. . . ."³³ Just as nature is routinely constructed as "raw material," anything associated with nature "gains admittance into culture only or primarily as a material, aesthetic, recreational, or suffering object. People of color/difference, women, the lower classes, and youth, all reduced to labor, gain admittance into culture predominately as means to another's profit and leisure. . . ."³⁴

With the introduction of humanoids or androids in future societies, however, the traditional division between humans and nature becomes less definitive. According to Garrard, this may lead to the conclusion that "(i)n the world teetering on the edge of final collapse, the insuperable line between human and animal [will be] undermined in order to bolster the boundary between human and android."³⁵ In other words, biotech advances may force humans to see themselves in a context larger than that of nature vs. man. Historically, while humankind has been willing to render animals almost human-like, as Hochman has pointed out, we rarely are "willing to think of ourselves as animals."³⁶ Thus, while biogenetic technology holds the potential of ending nature as we have known it, it ironically also opens the door to finally seeing and accepting our entire species (rather than just those deemed to be primitive) as inherently of nature.

Originally defined by Ernst Haeckel in 1866, the word "ecology" would remain relevant to this new world as "the relationship between biological bodies or organisms and their animate and inanimate environment."³⁷ The distinctions between living and nonliving things are thus less important than the more primary relationships of things to their contexts (or Imanishi's "ship"). Indeed, in *The World of Living Things*, Imanishi suggested that the roots of words in Asian languages support the profound notion that everything on earth is first a "thing," and only occasionally a "living" thing. Thus, the Japanese *seibutsu* (translated as "living thing") is composed of two ancient Chinese characters: *sei*, meaning "living," and *butsu*, meaning "thing." This indicates that "living things are first of all conceived to exist as things . . . life tends to be left out, and has to be tacked on with difficulty afterwards. This is because this world is first of all understood as a world of things, and this is in fact known as a natural feature of our recognition."³⁸ The creation of cyborgian hybrid identities in futuristic anime show just how dynamic and nonhierarchical our understanding of ecology and nature will need to be in order to accept the consequences of the future.

In *Ghost in the Shell*, *Appleseed*, *Sky Blue* and *Akira*, youthful characters, females, underclass humans, and cyborgs are all under assault from the same hegemonic forces, typically comprised of some combination of scientific, capitalistic or paternalistic power that has already destroyed nature or the wilderness. And while the youthfulness of the films' heroes might be related to the age of their main audi-

ences, it is also essential in establishing the ideological position of the narratives themselves.

Youth at the border of adulthood is typically associated with a sense of imminent loss. Applying Jacques Lacan's theory of self to the ecology movement, Sueellen Campbell has argued that we leave infancy "only when we begin to experience ourselves as separate from everything else, especially from our mothers' bodies. This happens at the moment we enter into the network of language, the 'symbolic order' that will determine what we become."³⁹ Ecologists, she continued, "see an experience of lost unity and desire to regain it as central to our human nature. . . ."⁴⁰ In light of this belief, as children we are understood to be in harmony with nature. Yet we lose that harmony as we gain a sense of self and enter culture and the network of language. As Campbell then observed: "Because our culture does not teach us that we are plain citizens of the earth, because we live apart from the natural world and deny our intimacy with it . . . our desire marks what we have lost and what we still hope to regain."⁴¹

Typically, the youth in these films are in a state between childhood and adulthood. They are no longer truly children; nor have they gained access to the destructive power or hegemonic knowledge of adult culture. Their bodies illustrate this transitional state, being typically a strange hybrid between ultra-sexual and decidedly innocent. Most cultures believe that children are, in fact, closer to nature; they can thus hear nature in ways adults cannot, as does Christopher Robin in the tales of *Winnie the Pooh*, or as does Nausicaä in Miyazaki's film.

In general, animation is best known for its use of "neoteny." According to Garrard, this is where "characteristics we instinctively associate with infant humans and animals," such as large eyes and rounded features, are used to connote child-like or animal-like characteristics.⁴² Yet unlike the common tendency in American animation to render animals and young characters as infantile or stupid, Asian anime typically employs this stylistic metaphor to connote purity and innocence. It is the vulnerability of these anime protagonists to both environmental contamination and cultural corruption that defines the emotional arc of the narrative and allows the audience to believe change in traditional attitudes and actions is possible.

In addition to being youthful, the majority of protagonists in environmentally dystopic anime are women or female cyborgs. Though these films tend to fetishize male dominance and high-tech weaponry, the presence of this technology is often complex and contradictory, even tragic, when aligned with these female characters. On the one hand, the technology continues to symbolize domination, while on the other it can become the Achilles heel of the main protagonists.⁴³

Within the larger genre of anime, female lead characters are sometimes created for exploitive purposes. But in more introspective works they can be used to explore central questions in the narrative. As Miyazaki noted in regard to the strong, contradictory character of Tataru Ba in his other eco-

logically themed anime, *Princess Mononoke*: "If I made the boss of Tataru Ba a man, he would be a manager, not a revolutionary. If it's a woman, she becomes a revolutionary, even if she is doing the same thing."⁴⁴ Along with potentially complicating the meaning of hegemonic technologies, these characterizations also allow animators to make quick metaphoric references to larger traditional attitudes toward nature.

Gender-based ecology arguments tend to begin with the idea that in Western theology a father-figure sky god was substituted for an original mother-figure earth goddess. This was followed by a secondary substitution during the Enlightenment, when the more bio-centric image of the world as an interdependent web of pre-Judeo-Christian spiritual practices was replaced by the rational image of the world as a masculine machine (e.g., as proposed by Bacon, Descartes, and Newton).⁴⁵ As seen in *Ghost in the Shell* (as well as in its sequel, *Ghost in the Shell 2*, which goes even further in debating Western philosophies drawn from Judeo-Christian history), the choice of a female protagonist helps explore the "what if" of new technologies — particularly, how changes and mutations might complicate ideological boundaries between civilization and nature. In the *Ghost in the Shell* series — as in other android-themed films such as the American film *Blade Runner* (1982) — the female cyborg can be understood as metaphorically embracing what Breton has called "the fractured identity of the post modern world. In many ways it also symbolizes and articulates the post-gender politics of ecological consciousness, while also serving to promote a powerful humane expression of eco-responsible agency."⁴⁶ For some theorists, the advent of the cyborg trope in cinema might force some constricting binaries of the past to fall away. This is the well-known view of one of most optimistic of techno-focused critics, Donna Haraway: "The cyborg will not recognize the Garden of Eden; it is not made of mud and cannot dream of returning to dust."⁴⁷

It must be said, though (with the exception of both the more sophisticated stories of *Princess Mononoke*, *Blade Runner*, and the *Ghost in the Shell* series), that many other contemporary dystopic anime with female protagonists feature narrative conclusions that only reinforce traditional hierarchies of nature and an unconditional belief in technological benevolence. One such film is *Appleseed*, which follows Deunan, a young female protagonist of African-European descent, as she tries to save the world from destruction. But it is not Deunan herself who resolves the narrative conflict; rather, it is the strength of the hyper-masculine technology given to her by the society's male authorities. On this level, these films remain consistent with the traditional trope of the damsel in distress — except that now such a figure is not saved directly by a specific male authority, but indirectly by the tools of male culture (FIG. 7). For the sake of discussion, a direct parallel can also be drawn from this reinforcement of traditional views on gender to contemporary attitudes to solving environmental problems primarily through technological means.



FIGURE 7. *The female protagonist, Deunan, within an ESWAT armored suit in Appleseed. Screen-capture image courtesy of Geneon (academic use only).*

If one considers the semantics of the common rallying cry “Save the Environment!”, one can see a similar attitude emerging — one which promotes the idea that nature, like a woman-in-peril, must be saved by traditional authorities or their technologies. Yet, as current scientific reality suggests, nature would flourish, not perish, without a continued human presence. Thus, the use of technology to try to reverse the damage done by our past position of dominance might be seen, at least, to be logically problematic, and, at most, to be ironic. In fact, nature, like the women protagonists in these films, would not have been put in peril if the tools of mankind had made such destruction possible. Critiquing Haraway’s optimism toward technology and cyborgian development, Hochman thus concluded that beliefs in machinery and technology are based on mistaken desire. “It is doubtful that we can be or will be responsible for machines since many of us cede responsibility for even our own and other’s bodies partially because of the addiction to and mediation of technology.” Even if certain technology is in fact beneficial, in terms of nature, “all tools, even those used by animals, are weapons.”⁴⁸

One does not have to be opposed to the use of technology in potential environmental solutions to see how issues of cyborgian identity illustrate the inherent paradoxes of these solutions. It is clear that if humans worked to lessen their

impact on the environment, they would not need to be so technologically heroic in the end to save it. In truth, the sustainability debate is often more about devising a way to use technology to sustain current destructive lifestyles than to sustain the environment itself. Just as the cyborgs in *Blade Runner* or *Ghost in the Shell* cannot remain autonomous from the technology that created them and are caught in the binaries between technology’s benefits and its destructive endgames, nature will also be converted to technology when we use technology to save it. As Louise Westling wrote in “Literature, the Environment and the Question of the Posthuman,” post-nature cyborgs might “escape from bodily limitations and environmental constraints,” but “a redefinition of our species as beings fused with the technologies and media experiences we have designed as tools seems only further elaboration of the Cartesian mechanistic definition of humans as transcendent.”⁴⁹ This is not to say that those involved in the built environment should avoid debating the appropriate use of technology in the “arsenal” of ecological cures. But a shift in their fundamental position might be necessary to accept the effect of technological intervention on nature and to more overtly acknowledge what they are truly trying to save.

BEYOND THE TRADITION OF RESOURCISM

A way of speaking is, in itself, a way of living in the land. . . . It is not then language per se that ensures the continuity of tradition. Rather, it is the tradition of living in the land that ensures the continuity of language.

— Tim Ingold⁵⁰

In 2005, several Los Angeles-based artists and public organizers created a living art-scape on a 32-acre abandoned rail yard, which they entitled “Not A Cornfield” (FIG. 8). In



FIGURE 8. *Lauren Bon, “Not A Cornfield,” October 2005: corn, seeds, water, earth, human tending. Photo by Steven Rowell, 2005. Digital Print. © 2005 Not A Cornfield LLC/The Annenberg Foundation.*

this temporary urban reclamation project, the group returned corn, an icon with a millennium's worth of meaning for the region and its various past inhabitants, to a historic site in the city. The group's founder, Lauren Bon, stated that

[this landscape] redeems a lost fertile ground, transforming what was left from the industrial era into a renewed space for the public. . . . By bringing attention to this site throughout the Not A Cornfield process, we will also bring forth many questions about the nature of urban public space . . . and about the politics of land use and its incumbent inequities.⁵³

The initial settlement sites in urban areas are selected based on found natural “resources” vital to future development; those in Los Angeles were no exception. Located within fifty yards of the Los Angeles River, this site, known as the Zanja Madre, or “Mother Ditch,” provided the initial water system for the area. But once the downtown became established, this flat basin was claimed by the Southern Pacific Railroad, and became known by locals as The Cornfield. According to Bon, this was “either because corn seeds used to spill off the rail cars and flourish in the area, or because corn used to migrate from the nearby mill just south of the site, or perhaps because of the subsistence crops that rail-riding hobos grew in the immediately adjacent hillside.”⁵³ After the yield from “Not A Cornfield” was harvested in 2007, it was replaced by a temporary corn-related land work, entitled “The Anabolic Monument,” representing the continual change inherent in all natural systems (FIG. 9).

With its references to preexisting natural conditions, pastoral occupation by indigenous people, industrial contamination, and natural regrowth in the face of continued toxicity, this project provides a useful means to consider the traditions of nature, progress and reclamation discussed above. With its implied references to relocated cultures and

national struggles over limited resources, it also helps introduce the final tradition of nature to be examined in this article — the tradition of resourcism and the resultant class and political hierarchies that this tradition tends to produce at both local and global levels.

Confronting class issues within the ecology debate can create as many divisions between ideological camps as it does commonalities. For example, according to Garrard, many “social ecologists and eco-Marxists lament the individualism and pervasive mysticism of deep ecologists, which, they argue, represent a retreat from rational thought and real political engagement.” Instead, they argue that “environmental problems can not be clearly divorced from things more usually defined as social problems such as poor housing or lack of clean water. . . .”⁵³ Yet for these same social ecologists and eco-Marxists, it can be maddening that progressive agencies, which call for the end to human exploitation (Marxists, Leninists, Maoists, etc.) have an environmental record that is equally horrible as that of Western capitalists. Eco-theorist Kate Soper thus suggested in *What is Nature: Culture, Politics and the Non-Human* that one cannot use the political ideology of a particular culture to understand its impact on the environment.

For instance, Soper suggested that categorizing the Enlightenment in only negative terms is to forget that it was also responsible for the notion of inalienable human rights. Likewise, it is a mistake to consider the Romantic return-to-nature movement of Rousseau as solely benevolent. While it inspired “the emancipatory social and political movements of the 1960s and 1970s as well as the environmental movement,” its ideals have also been, and continue to be, employed as “a component of all forms of racism, tribalism, and nationalism” — often castigating “‘deviations’ from social, sexual, and racial norms.”⁵⁴ To this end, nature needs to be understood as autonomous from human culture. The term “nature” should be used to refer to “everything which is not human



FIGURE 9. Lauren Bon, “Anabolic Monument”: corn, seeds, water, earth, human tending; February 2006–ongoing. Photo by Steven Rowell, 2007. Digital Print. © 2006 Not A Cornfield LLC/The Annenberg Foundation.

and distinguished from the work of humanity. . . .”⁵⁵ This relationship between nature, resourcism, and social justice is central to the themes within a unique Korean work of anime, *Sky Blue* (also known in English as *Wonderful Days*).

Sky Blue is set in 2142. Following a worldwide environmental disaster, an elite group of survivors builds a carbon-fueled city called Ecoban. Yet because of the hundred years of acid rain since the apocalypse, no one in the present generation has ever seen a blue sky. Furthermore, the continued existence of this society depends on a separate class of human “diggers,” refugees forced to live outside the hermetic city, who mine the wasteland to feed Ecoban’s energy needs (FIG. 10). A young female resident of Ecoban, Jay, is troubled by this exploitation and its unsustainable social organization. The narrative follows her eventual allegiance with a rebel, Shua, who wants to destroy Ecoban, restore the environment, and free the human slaves.

Though most art forms dealing with environmental issues typically avoid difficult issues of exploitation and class, *Sky Blue* represents nature, and the underclass considered a part of it, as caught between satisfying economic desires and providing for biological needs.⁵⁶ While Karl Marx stated in the nineteenth century that every culture sees its land according to its own desires, we today are forced to see something more complicated, viewing land not only as property but also as nature — the literal “ship” that provides our continued survival as a species, not just a society.

Where “Not A Cornfield” references eighteenth- and nineteenth-century agrarian and colonial views of nature (which ultimately displaced indigenous communities and transformed nature into a toxic brownfield), the extreme social divide in *Sky Blue* reflects a new contemporary mapping of ecological injustice. As Western superpowers “export” the production of consumer products to poorer, less developed nations, they also export future blame for the continued ecological destruction needed to produce these products. According to Hochman, in our current globalized economy, there is “too much room to foist our (and we are numbering in the hundreds of millions) ecocidal labor onto others who are available to blame for greater or more direct damage (even when it is our own acts we are more able to change).”⁵⁷ In the past, consistent with the ideology of the *Scala Naturae*, poverty was aligned with nature. In light of the decrease of nature today, poverty has become more aligned with its opposite, pollution. This is attested to by any aerial photograph of Mexico City and its peripheral waste-based communities.

In “Feminist and Postcolonial Perspectives on Ecocriticism,” Simone Birgitt Hartmann called this condition “garbage imperialism.”⁵⁸ The consequences of this global bifurcation will eventually be driven home to the West in ways that transcend environmental issues. For example, a Cable News Network website item recently began “Global warming may test U.S. security. Report finds global warm-



FIGURE 10. Jay riding into the elite city of Ecoban through the toxic wasteland in *Sky Blue*. Screen-capture image Courtesy of Palisades Tartan (academic use only).

ing could destabilize ‘struggling and poor’ countries around the world, prompting mass migrations and creating breeding grounds for terrorists. . . .”⁵⁹ As suggested in *Sky Blue*, if Western culture is to survive ecologically or ideologically, it will have to come to see the world as one nature, undivided by the luxuries of global class divisions and past hierarchies of custom, language, or geographic location.

We, the global audience of these anime, are the ancestral citizens of our own future Valley of the Winds, Ecoban, Neutral Cities, and Neo-Tokyo. We are the ancestors in *Sky Blue* who knew the apocalypse was coming. And we know of its potential scope not only from signs of distress in nature itself from the warnings of our own scientific experts. Yet unlike scientific experts of the past who could base their hypotheses on direct empirical evidence, today’s scientists can only be second-hand experts on future nature. As Ursula Heise has suggested, today’s world involves risks and future situations that no one has experienced first-hand. Relative to the past, authorities today (scientific or otherwise) cannot truly know our future risks, “if knowing means having consciously experienced them.”⁶⁰ As a result, society tends not to readily accept scientific speculation that challenges past belief and tradition, such as the *Scala Naturae*, which support the continued ideology of unlimited resourcism.

As such, many eco-theorists and activists fear that too much apocalyptic evocation can have a reverse effect, leading us to do nothing. Thus, in regard to the post-Chernobyl world, Heise found that “the question of how an awareness of environmental deterioration and technological risk can become part of everyday life without leading to apocalyptic despair, reluctant resignation to a new state of normalcy or bored indifference has become an urgent issue for environmentalists and eco-critics.”⁶¹ People have lived so long in the shadow of future disaster that they don’t live in fear so much

as “dwell in crisis,” she continued. “They live with an awareness that certain limits in the exploitation of nature have already been exceeded, that past warnings were not heeded, and that slowly risk scenarios surround them on a daily basis.”⁶² Because, traditionally, humans are driven as much by instinct as thought, Garrard has suggested that the lack of human action toward the signs of a future environmental apocalypse confirm “(Ulrich) Beck’s argument that the risk anxiety cannot be relieved or even addressed by ‘instinct’, the lack of definite threat itself making it all the more pervasive.”⁶³

Humankind started on the road to destruction because nature seemed like an overwhelming, unexplainable threat to our existence, the ultimate Other.⁶⁴ Now it has arrived at a precipice because it has become, in reverse effect, a threat to nature. As examined in both the anime films and the few recent urban reclamation projects mentioned earlier, it is time to rethink working within such extreme binaries. There is no reason to replace the extreme tradition of hierarchy with a new extreme of resignation. We can accept the basic modest truth that “all forms of life modify their context,” and then assess our role in managing the inevitable consequences of this modification.⁶⁵ According to *Nausicaä* director Miyazaki:

*It's not like we can coexist with nature as long as we live humbly, and we destroy it because we become greedy. When we recognize that even living humbly destroys nature, we don't know what to do. And I think that unless we put ourselves in the place where we don't know what to do and start from there, we cannot think about environmental issues or issues concerning nature.*⁶⁶ (emphasis mine)

We must begin to fundamentally accept the whole of nature as something that has to be connected, something that cannot be further undermined by other divisional ideologies such as individual nation-states, existing class orders, or certain continuing theologically justified hierarchies. We can actually accept McKibben’s point that nature is no longer independent, yet still recognize that any further divisions of it will in fact undermine our own future existence.⁶⁷ As a species in nature, we can accept a certain level of resourcism, but we can also reconsider extreme or totalizing past ideologies which justified breaking nature’s wholeness for our own social and material desires.

If it is true that nature will continue to survive despite the end of human civilization, we do not need to manage nature in order to sustain it; instead, we need to manage our own actions to sustain ourselves in nature. We must also recognize how deep the ideology of resourcism runs and how difficult such an inversion may be. One only needs to consider some of the names of U.S. government agencies created to help with current environmental problems — such as Office of Migratory Bird Management, or the Natural Resources Conservation Service — to see how we have

always highlighted the management of natural resources, not the management of us. Ironically, it is the continual disappearance of nature, after a millennium of unbalanced consumption, that is forcing us to recognize this wholeness of nature, rather than the predictions of second-hand scientific experts or other cultural authorities. With each species lost due to a changed habitat, extreme drought, the melting of ice sheets, we are finally coming to see the larger connectivity in nature — even if only through the “presence” of nature’s increased absence.

The youthful protagonists of the anime films mentioned here are drawn to action and toward change because they could hear this silenced nature before it was destroyed completely. In their liminal state, prior to full adulthood, they were not yet deafened by the common binaries that establish our own apocalyptic traditions.⁶⁸ According to Manes, the language of nature has been a language of silence for adults and the adult-like powers in Western culture. Nature has “grown silent in our discourse, shifting from an animistic to a symbolic presence, from a voluble subject to a mute object.”⁶⁹ He continued:

*To regard nature as alive and articulate has consequences in the realm of social practices. It conditions what passes for knowledge about nature and how institutions put that knowledge to use. Michel Foucault has amply demonstrated that social power operates through a regime of privileged speaker, having historical embodiments of priest and kings, authors, intellectuals, and celebrities.*⁷⁰

Referencing Heidegger’s premise that all language reveals as much as it conceals, Manes has argued that the traditional hermeneutics of the West, developed since the Renaissance, “has created an immense realm of silences, a world of “not saids” called nature, obscured in global claims of eternal truths about human difference, rationality, and transcendence.”⁷¹ For Manes, “(i)f the domination of nature with all its social anxieties rests upon this void, then we must contemplate not only learning a new ethics, but a new language free from the directionalities of humanism, a language that incorporates a de-centered, postmodern, post-humanist perspective.”⁷²

Colloquially, we often use the term “nature” — as in a person’s human nature — to categorize what cannot be easily articulated, to describe that which is below the surface connecting that individual to something larger — something that transcends any historically specific ideology or culturally conditioned characteristic.⁷³ The nature as described narratively within the anime discussed here and embodied in the cited reclamation projects is closer to this type of nature, even if it has been forever altered by man’s presence over the millennia.⁷⁴ While these works might be criticized for not being fully radical enough in their propositions, they do collectively provoke a set of questions about future traditions of nature. Most importantly, they offer a glimmer of hope that

humankind is capable at least of imagining them. As Garrard has written, “the real moral and political challenge of ecology may lie in accepting that the world is not about to end, that

human beings are likely to survive even if Western-style civilization does not. Only if we image that the planet has a future, after all, are we likely to take responsibility for it.”⁷⁵

REFERENCE NOTES

The author would like to acknowledge the assistance of the USC graduate research scholar, Teng Yi, with collecting images, the very helpful editing of Heather Galles, as well as Nezar AlSayyad, David Moffat, and IASTE for the opportunity to share this recent work.

1. F. Jameson, *Postmodernism, or, the Cultural Logic of Late Capitalism* (Durham, NC: Duke University Press, 1991).
2. G. Garrard, *Ecocriticism* (London: Routledge, 2004), p.17.
3. See H. Rabinowitz, “The End is Near!” *Washington Monthly*, http://findarticles.com/p/articles/mi_m1316/is_n4_v29/ai_19279949/1197 (accessed July 2008).
4. L. Buell, *The Environmental Imagination* (London: The Belknap Press of Harvard University Press, 1995), p.308.
5. P. Shepard, *Man in the Landscape: A Historical View of the Esthetics of Nature* (Athens: The University of Georgia Press, 1967), p.221.
6. Garrard, *Ecocriticism*, p.85.
7. *Ibid.*, p.93.
8. Buell, *The Environmental Imagination*, p.285.
9. *Ibid.*, p.308.
10. Garrard, *Ecocriticism*, p.12.
11. Buell, *The Environmental Imagination*, p.285.
12. *Ibid.*, p.299.
13. J. Hochman, *Green Cultural Studies: Nature in Film, Novel and Theory* (Moscow: University of Idaho Press, 1998), p.12.
14. Shepard, *Man in the Landscape*, p.228.
15. C. Manes, “Nature and Silence,” in C. Gofffelty and H. Fromm, eds., *The Ecocriticism Reader* (Athens: The University of Georgia Press, 1996), p.20.
16. Shepard, *Man in the Landscape*, p.237.
17. Manes, “Nature and Silence,” p.21.
18. *Ibid.*, p.22.
19. *Ibid.*, p.24. See also C.K. Yoon, “Loyal to Its Roots,” *New York Times*, June 10, 2008, p.D1, for an interesting article about discoveries in the area of intraplant communication.
20. Kinji Imanishi, *A Japanese View of Nature: The World of Living Things*, P.J. Asquith, H. Kawakatsu, S. Yagi, and H. Takasaki, trans. (London: RoutledgeCurzon, 2002), p.2.
21. This notion of “oneness” as a counter-ideal to hierarchy could be related to the contemporary blurring between architecture and landscape in the work of FOA, Hadid, and others. Yet, as Hochman and others discuss, there are real dangers for nature in any practice of mimicry — as it embeds nature further within the construct of culture rather than giving it autonomy.
22. See also the anime feature *Origin of the Past*, directed by Keiichi Sugiyama (2006), for an alternative noncyberpunk postapocalyptic anime dealing directly with nature/forest as “other.”
23. See “An Interview with Hayao Miyazaki,” Mononoke-hime Theater Program, July 1997, http://www.nausicaa.net/miyazaki/interviews/m_on_mh.html (accessed July 2008). About the pastoral age and rapid transformations, see also L. White, Jr., “The Historical Roots of Our Ecological Crisis,” in Gofffelty and Fromm, eds., *The Ecocriticism Reader*, p.8.
24. Garrard, *Ecocriticism*, p.33.
25. *Ibid.*, p.37. Many connections can be made to seemingly progressive impulses to return to the pastoral in contemporary urban landscape practices. See Farmlab, <http://farmlab.org>.
26. Shepard, *Man in the Landscape*, p.236.
27. B. McKibben, *The End of Nature* (London: Penguin, 1990), p.54.
28. See Garrard, *Ecocriticism*, p.60, where he discusses the stability of the term “wilderness,” from “wilddeoren,” across several centuries of Judeo-Christian and Graeco-Roman culture.
29. For an interesting discussion on the wilderness trope in the film *Deliverance*, see Hochman’s “The Forest as Primarily Evil,” in *Green Cultural Studies*, pp.71–92.
30. Buell, *The Environmental Imagination*, p.304. See also Alan Weisman’s “The World Without Us” website, http://www.worldwithoutus.com/did_you_know.html (accessed July 2008).
31. See the discussion of the limits of conservation as an idea in Shepard, *Man in the Landscape*, p.237.
32. Garrard, *Ecocriticism*, p.146.
33. Hochman, *Green Cultural Studies*, p.7.
34. *Ibid.*, p.8.
35. Garrard, *Ecocriticism*, p.144. Here, he also addresses Philip Dick’s *Do Androids Dream of Electric Sheep?* and its protagonist’s desire to have a pet to distinguish himself from androids.
36. Hochman, *Green Cultural Studies*, p.175.
37. As paraphrased in C. Gersdorf and S. Mayer, “Defining the Subject Ecocriticism: An Introduction,” in C. Gersdorf and S. Mayer, eds., *Nature in Literary and Cultural Studies: Transatlantic Conversations on Ecocriticism* (Amsterdam: Rodopi, 2006), p.15.
38. Imanishi, *A Japanese View of Nature*, p.16.
39. Sueellen Campbell, “The Land and Language of Desire: Where Deep Ecology and Post-Structuralism Meet,” in Gofffelty and Fromm, *The Ecocriticism Reader*, p.135.
40. *Ibid.*
41. *Ibid.*
42. Garrard, *Ecocriticism*, p.142.
43. Hochman, *Green Cultural Studies*, pp.177–78.
44. See “An Interview with Hayao Miyazaki,” Mononoke-hime Theater Program.
45. Garrard, *Ecocriticism*, pp.61–62. Shepard, *Man in the Landscape*, p.227, also discusses human technology as a masculine desire for procreation, via Bruno Bettelheim. See also P. Brereton, *Hollywood Utopia: Ecology in Contemporary American Cinema* (Bristol: Intellect Books, 2005),

p.202, for a discussion of *Terminator 2* and the role of motherhood.

46. Brereton, *Hollywood Utopia*, p.185.

47. As cited in Garrard, *Ecocriticism*, p.146.

48. Hochman, *Green Cultural Studies*, p.185.

49. L. Westling, "Literature, the Environment and The Question of the Posthuman," in Gersdorf and Mayer, eds., *Nature in Literary and Cultural Studies*, p. 29.

50. Cited from Timo Maran, "Where Do Your Borders Lie? Reflections on the Semiotic Ethics of Nature," in Gersdorf and Mayer, eds., *Nature in Literary and Cultural Studies*, p.147.

51. See <http://notacornfield.com/> (accessed July 2009).

52. Ibid.

53. Garrard, *Ecocriticism*, pp.28–29. See also Shepard, *Man in the Landscape*, p.231, for a discussion of the equally poor records of capitalism and socialism in terms of the ecology.

54. As summarized in C. Gersdorf and S. Mayer, "Defining the Subject Ecocriticism," in Gersdorf and Mayer, eds., *Nature in Literary and Cultural Studies*, p.17.

55. Ibid.

56. See also the anime feature *Metropolis*, directed by Rintaro (2001), for an alternative that explores the future world of techno-apartheid rather than human apartheid.

57. Hochman, *Green Cultural Studies*, p.181.

58. S.B. Hartmann, "Feminist and Postcolonial Perspectives on Ecocriticism," in Gersdorf and Mayer, eds., *Nature in Literary and Cultural Studies*, p.96. Also see Garrard, *Ecocriticism*, p.167, discussing how environmental groups like Worldwatch seek to ensure that the burden of sustainability should not fall disproportionately on the Third World.

59. CNN Headlines, June 25, 2008.

<http://www.cnn.com> (accessed July 2008).

60. U.K. Heise, "Afterglow: Chernobyl and the Everyday," in Gersdorf and Mayer, eds., *Nature in Literary and Cultural Studies*, p.181, referencing U. Beck, *Risk Society: Towards a New Modernity*, M. Ritter, trans. (London: Sage Publications, 1992).

61. Heise, "Afterglow: Chernobyl and the Everyday," p.181.

62. Ibid.

63. Garrard, *Ecocriticism*, p.13.

64. Shepard, *Man in the Landscape*, throughout.

65. See White, "The Historical Roots of Our Ecological Crisis," p.4. Here she describes a paradoxical conversation with A.L. Huxley about the loss of wild rabbits in England due to purposeful introduction of myxomatosis, to stop them from destroying crops, "when the rabbit itself had been brought in as a domestic animal to England in 1176, . . . to improve the protein diet of the peasantry."

66. See "An Interview with Hayao Miyazaki," Mononoke-hime Theater Program, July 1997.

67. See *The Environmental Imagination*, p.294. Buell discusses the "two modes of environmental imagination: a bioregionalist commitment, which looks to "the solution," if any there be, at the level of community; and a globalist commitment, which focuses on pervasive environmental systems or attitudes rather than regional variants," drawing conclusions about the level of optimism each mode can maintain.

68. Interestingly, in contrast to American apocalyptic films, in which a middle-class male is often thrust into saving the world, the main heroes in Asian anime often have an implied connection to traditional power.

Thus, the heroine of *Nausicaä* is the princess of her village, and the heroine of *Appleseed* is the daughter of the country's most important scientists, etc. For an interesting discussion on the tendency for personal abdication of responsibility for environmental destruction to authority in Japanese culture, see the interview with Miyazaki discussing his anime *Princess Mononoke* (1997) in Mononoke-hime Theater Program, July 1997. Also see Imanishi, *A Japanese View of Nature*, p.xxxiii; and J. Martin, "Where Are China's Disaster Movies?" *Danwei: Chinese Media*, August 31, 2007.

http://www.danwei.org/film/where_are_chinas_disaster_movi.php (accessed July 2008)

69. Manes, "Nature and Silence," p.16.

70. Ibid.

71. Ibid., p.17

72. Ibid. See also L. Westling, "Literature, the Environment and the Posthuman," p.39, where she discusses Merlau-Ponty's desire at the time of his death to "restore the awareness of the wild Being of the world" and its "voices of silence."

73. See Shepard, *Man in the Landscape*, pp.88–89. Also see White, "The Historical Roots of Our Ecological Crisis," p.10, where she discusses the role of animism and genius loci in antiquity.

74. See Hochman, *Green Cultural Studies*, p.3, in which he mentions the relationship between nature as a prop and the concept of property.

75. Garrard, *Ecocriticism*, p.107. See also p.89, where he recalls: "The coincidence of radical anthropocentrism and millennial zeal is epitomized by Ronald Reagan's first Secretary of the Interior, James Watt, who argued against environmental protection on the grounds that God would soon destroy the old earth."