

1-1-2010

Ecology & Ideology: An Introduction

Gerry Canavan

Marquette University, gerard.canavan@marquette.edu

Lisa Klarr

Ryan Vu

Marquette University

e-Publications@Marquette

English Faculty Research and Publications/College of Arts and Sciences

This paper is NOT THE PUBLISHED VERSION; but the author's final, peer-reviewed manuscript.
The published version may be accessed by following the link in the citation below.

Polygraph, Vol. 22 (2010): 1-31. [DOI](#). This article is © Duke University Press and permission has been granted for this version to appear in [e-Publications@Marquette](#). Duke University Press does not grant permission for this article to be further copied/distributed or hosted elsewhere without the express permission from Duke University Press.

Ecology & Ideology: An Introduction

Gerard Canavan

Marquette University, Milwaukee, WI

What is really amazing and frustrating is mankind's habit of refusing to see the obvious and inevitable, until it is there, and then muttering about unforeseen catastrophes.
—Isaac Asimov¹

How small the vastest of human catastrophes may seem, at a distance of a few million miles.
—H.G. Wells²

Ecology as Critique

From Hurricane Katrina to the Deepwater Horizon oil spill to the metastasizing specter of climate change, an initial foray into the rhetoric of “natural” disasters over the past decade finds surprise and shock as a primary theme. Whatever happens, “no one could have predicted” the results; ostensibly secular pundits have learned to comfortably and without contradiction invoke “acts of God” as the first line of defense against anyone ever being held responsible for anything. Ignorance has become the ground for our relationship with Nature, precisely mirroring those official descriptions of terrorist violence in which “hatred” and “anti-modernity” provide instant and totalizing explanations for the

actions of otherwise unrelated agents. Once Nature takes over, throwing off the economic function assigned to it, “we”—humanity—are all forced together onto the same side. Who, after all, could possibly be to *blame* for hurricanes, floods, volcanoes, and earthquakes? Who could possibly have the power to predict when and where disasters will erupt? Even in the case of BP’s irreparable destruction of the Gulf Coast—where the “culprits” seem clear and the potential consequences of deep-sea drilling eminently foreseeable—mainstream commentary finds itself goaded on the horns of a false dilemma: because the spill was not *purposeful*, because no one *wanted* this to happen, it must therefore be a terrible “accident.” Speaking simultaneously about the Deepwater Horizon spill and the recent Massey coal mine collapse in West Virginia, and by implication a host of other disasters past and future, an indignant Rand Paul, the current Republican Senate candidate from Kentucky, lamented “It’s always got to be someone’s fault instead of the fact that maybe sometimes accidents happen.”³ Here we see the paucity of options for critique in the neoliberal age: the profit-seeking hand of the market can never be faulted, not even in the face of incalculable catastrophe.

There are, of course, for any given disaster, an avalanche of *facts* that might be arrayed against such vacuity, from the centuries-long colonial reduction of Haiti’s infrastructure that magnified the earthquake’s toll to the numerous accounts of corporate neglect and regulatory decay in the years and decades leading up to the Deepwater Horizon disaster. But just as clear as these facts is the sense that they are not enough. Reversing the logic of “nobody could have predicted” only leads us to the conclusion that *somebody* should have known, *somebody* should have done something, *somebody* screwed up—that is, it distorts our perspective towards processing crises as discrete, disconnected events, each of which might have been mitigated or averted altogether if only autonomous bad actors been more judicious with their choices. That the real crisis is a systemic one, propelling us ever faster towards these and worse disasters, remains unsayable, even unthinkable, outside a thin sliver of academic and activist writing—and even the realization that the smooth operation of global capitalism necessarily produces manmade catastrophes (BP, Massey) and worsens the impact of natural ones (Katrina, Haiti) is a judgment without clear consequences for political action, an analysis that simply replaces “nobody could have predicted” with the hopeless “realism” that insists all possible alternatives to neoliberal market hegemony have already been exhausted. Rather than generating a motivation to act, ecological consciousness can produce instead a claustrophobic sense of futurological limit, of resources and even time itself running out; in popular culture this binds together with nationalistic identity construction and neo-Malthusian race panic in such contemporary science fiction films as *Children of Men*, *Avatar*, *Daybreakers*, and *WALL-E* to manifest the creeping terror that technological modernity and its consumer lifestyle may in fact have no future. According to Fredric Jameson’s oftquoted diagnosis of postmodern consciousness, it is indeed easier to imagine “the thoroughgoing deterioration of the Earth and of nature” than the end of capitalism;⁴ even capitalism’s unmistakable role as the agent of this deterioration seemingly cannot shake the baseline conviction that there are no possible alternatives and nothing can be done.

In the face of all this so-called realism it is nonetheless our conviction that the inevitable disjunction between capitalism and the long-term sustainability of life on Earth contains within itself the best seeds for revolutionary consciousness in the contemporary moment. Bruno Latour, who declared in his most well-known book that “we have never been modern,” much less postmodern, recently wrote: “It has now almost become common sense that we were able to *think* we were modern only as long as the various ecological crises could be denied or delayed.”⁵ In this Latour (though not a radical in any political sense) echoes a tradition of Marxist scholarship that traces its origins back to Marx

himself. “[A]ll progress in capitalistic agriculture,” writes Marx in *Capital, Volume 1*, “is a progress in the art, not only of robbing the labourer, but of robbing the soil; all progress in increasing the fertility of the soil for a given time is a progress towards ruining the lasting sources of that fertility.”⁶ For Marx agricultural capitalism is the most visible example of a second contradiction in capitalism that exists alongside the first contradiction in the labor cycle. John Bellamy Foster has traced Marx’s interest in (and horror at) this “metabolic rift” to its origins in the work of Justus von Liebig,⁷ whose recognition of the breakdown in the cycle of soil replenishment led to the development of a process to replenish fields artificially through the use of chemical fertilizers, which led to a colonial project of importing guano and other materials from places as far-off as Peru and the South Pacific, and which itself ultimately leads to an unbalancing of the nitrogen cycle and further ecological degradation of soil, water, and the climate. *Nature* magazine recently published an article identifying the nitrogen cycle as one of three ecological boundaries whose crisis thresholds we have already far overshot; with 35 million annual tons projected as the “safe” annual limit, we currently convert over 120 million tons of nitrogen per year.⁸ “Scientific management” of the soil has, in this way, only made the problem worse.

In the soil cycle we find a first mode for imagining what has come to be known as “ecological debt.” Here we have ecological debt at a kind of zero-level: when you grow food and ship that food far away—when, that is, you strip necessary minerals from the soil and ship them out of the local ecosystem—you erode the long-term sustainability of your own agricultural practices. In a sense here the “debt” is owed to oneself, or at least to one’s local area and immediate descendents, and due to the local temporal and spatial scales involved it is a debt whose repayment manifests as relatively urgent concern. The agricultural capitalist is thus motivated to embark on some sort of rational management of their soil if only to protect their own assets—though myriad examples around the world show how rarely this sort of careful management is undertaken without a level of cost-cutting that only leads to self-defeat.

We might think here of the short-sightedness inherent to Peak Oil; the strangest feature of the pending energy crisis is that the basic futurological projections are *agreed upon by all commentators*, all of whom agree that oil discoveries are drying up and that EROEI (energy returned on energy invested, a metric of the efficiency of a given energy source) is trending sharply downward: initially 100:1 as late as the 1930s, 30:1 in the 1970s, and still approximately 11:1 on average in the 2000s.⁹ Oil is getting harder to find and what oil we do find is harder to extract. And yet, as Imre Szeman has written in a 2007 article in *South Atlantic Quarterly* arguing that oil in fact constitutes capitalism’s unacknowledged ontological ground: “Oil capital seems to represent a stage that neither capitalism nor its opponents can think beyond.”¹⁰ Even knowing the oil is running out, the only thing we can think to do is drill harder.

The more fraught cases for capitalism, however, are those in which the consequences of the ecological debt do not ramify onto us, or even onto our immediate descendents, but onto other people living in distant spaces and times. This is the power plant whose emissions blow across a mountain range into some another nation, or the factory whose toxic dumping floats downstream into someone else’s water basin, or (as above) the civilization who uses up the entire fossil-fuel reserve of its planet in a single hundred-year spree. If, in the case of the soil, the agricultural capitalist cuts his own throat, we are now on more familiar ground, with the capitalist returning to his usual practice of cutting someone else’s. It was this phenomenon that K. William Kapp abstracted in 1950 in *The Social Costs of Private Enterprise* as a general law of capitalism: “Capitalism must be regarded as an economy of unpaid costs, ‘unpaid’ in so far as a substantial portion of the actual costs of production remain unaccounted

for in entrepreneurial outlays; instead they are shifted to, and ultimately borne by, third persons or by the community as a whole.”¹¹ Capitalism, that is to say, is always predicated on the existence of structural debts, “unpaid costs,” that in the case of ecology at least are becoming unavoidably and often painfully visible to us. This suggests a political strategy of actualizing these unacknowledged debts, making an accounting of them in the demand that they begin to be paid back.

The assertion of a debt where none is recognized is therefore a political act of anticapitalist resistance; it is an assertion that historical relations of domination and exploitation have ongoing consequences in the present, an insistence that reparation or remuneration is possible and that therefore it is necessary. *Our Common Agenda*, a report published by Latin American and Caribbean intellectuals in the run-up to the 1992 Earth Summit, states the point directly: “The industrial revolution was based in large part on the exploitation of natural resources in ways which did not reflect their true costs.... The industrialized countries have incurred an ecological debt with the world.”¹² As with Ariel Salleh’s naming of “embodied debt” as the costs not paid to those engaged in reproductive labor, ecological debt becomes a way to reverse the discursive logic of a lending North and borrowing South.

We should not, however, misunderstand ecological debt as some abstract obligation to the biosphere as such. As Joan Martinez-Alier notes in her essay “Environmental Justice (Local and Global),” “ecological debts” are less extractive than incursive—they are *imperial*—as they transmogrify the consequences of global capitalism into “externalities” to be borne by persons distant in both space and time.¹³ “The ecological debt,” writes Jose Maria Borrero Navia, one of the early popularizers of the concept, is an obligation to “humanity, acquired by reason of often irreversible damages to the biophysical base of societies, provoked by the islands of privilege, wasteful economics and industries of barbarity, the consequences of which have been the impoverishment and exclusion of hundreds of millions of people, ethnocide, and subjugation of cultures.”¹⁴ Ecological debt, that is, is owed not to the planet but to other persons: persons who were not volitional participants in this anti-ecological exchange in the first place, persons who never signed any sort of contract but whom we must conclude are owed a moral and *legal* debt for what has been done to the space in which they live without their consent. When Ecuador passed its new constitution in 2008 declaring that Nature had a “right to exist,” this could only be accomplished through the naming of persons who could “demand the recognitions of rights of nature.” And as important as the declaration of Nature’s right to exist may be as a symbolic gesture, the more crucial clause may be the one which codifies the rights of indigenous people to food sovereignty—a declaration, in effect, that indigenous people themselves have a right to exist.

The most exemplary case for this more abstract mode of “imperial” ecological debt could be the archipelago nation of Tuvalu, population 12,000, whose remoteness and lack of extractable natural resources lead to a largely bloodless colonial relationship with the imperial powers of Europe and North America. Tuvalu rose to prominence during the climate negotiations in Copenhagen in 2009 because, at only 4.5m above sea level at its highest point, it will be one of the first nations to face the consequences of climate change, and the effects will be immediate and catastrophic. The existential threat to Tuvalu has lent it moral weight as the leader of the faction of developing nations demanding immediate sweeping action, including a legally binding accord stabilizing carbon at 350 ppm, insisting on a temperature rise of only 1.5C, demanding wide-ranging financial payments from developed Northern nations, and opposing carbon exceptions for faster-growing developing nations like India, China, and Brazil.¹⁵ Ian Fry, Tuvalu’s delegate at Copenhagen, told those gathered that the nation’s “future rests on the outcome of this meeting,” and when the meeting ended with none of its demands having been met

Fry concluded that “It looks like we are being offered 30 pieces of silver to betray our people and our future... Our future is not for sale. I regret to inform you that Tuvalu cannot accept this document.”¹⁶

Unfortunately, Tuvalu may not have a future at all. According to James Lewis’s 1989 paper “Sea-Level Rise: Some Implications for Tuvalu,” published by the Royal Swedish Academy of Sciences—which we use despite its age precisely as a reminder that the climate change crisis has been widely recognized for over two decades without any significant action on the part of the Northern nations producing greenhouse gases—a 20–140 cm rise in sea level by the end of the century will render much of Tuvalu unlivable, and much or all of the population will likely need to be evacuated.¹⁷ If these estimates of sea level rise are too conservative, naturally the situation will only be worse.

most immediate and urgent form: the relationship of a Southern people facing deprivation, displacement, or outright elimination of their way of life as a consequence of the actions of the industrialized North. In what Naomi Klein has memorably called a “cruel geographical irony,” the chief economist at the World Bank has estimated that “about 75 to 80 percent” of the damage caused by climate change “will be suffered by developing countries, although they only contribute about one-third of greenhouse gases”—and even that “one-third” suggests a presentist perspective that obliterates all but the most recent history of emissions.¹⁸ The true number is closer to 20% of the population of the planet having emitted 75% of the total historical greenhouse gas emission, with the United States (5% global population) having emitted approximately 25% just on its own.¹⁹ Haiti, in contrast, emits just 1% of total global carbon emissions, but according to the Maplecroft Climate Change Vulnerability Index is the world’s second-most endangered nation due to climate change, behind only Somalia.²⁰ Klein has called attention to the work of Bolivia’s chief climate negotiator, Angelica Navarro, who has said, “Millions of people—in small islands, least-developed countries, landlocked countries as well as vulnerable communities in Brazil, India and China, and all around the world—are suffering from the effects of a problem to which they did not contribute”—and Bolivia’s two largest cities, it should be said, themselves face severe water shortages as a result of nearby glaciers melting from rising temperatures.²¹

In contrast to the usual political assertions of climate emergency—that we are “one planet” on a “pale blue dot,”²² all in this together, facing a shared crisis that threatens us all *equally*—climate debt stakes its claim on universal climate justice by insisting first on particularity and difference. Climate change, the argument goes, is not at all some “natural disaster”; it is not something that “just happened” like an asteroid from space it is something the global North *has inflicted* and *is inflicting* on everybody else, with the worst consequences ramifying on those nations in the global South who did not contribute to the crisis and who are worst positioned to adapt. This is why the market “solutions” proposed by Lord Stern in the *Stern Report* and pushed by capitalist elites always have a whiff of opportunism that borders on the obscene. Vandana Shiva in *Soil Not Oil* writes that this sort of eco-imperialism only “allows corporations to gain increasing control of the Earth’s resources—energy, water, air, land, and biodiversity—to continue to run the industrialized globalized economy”²³—which is to say continue to run it into the ground. Shiva highlights the absurdity of a pollution reduction strategy in which “carbon credits” are given to historical polluters to financialize as profit in new bubble economies: “Nonpolluting, nonindustrial activity does not even figure in Kyoto’s CDM [Clean Development Mechanism]. To be counted as clean, you must first be dirty.”²⁴

Blissful inaction and deliberate malfeasance on the part of elites in the developed world has been so stark, in fact, that for some (including NASA’s James Hansen, whose 1988 testimony before Congress was a breakthrough moment in climate awareness) the operative frame is not *climate debt* so

much as *climate trials*. Hansen—arrested at a mountaintop removal anti-coal protest against the now-infamous Massey Energy Corporation in 2009, whose Upper Big Branch coal mine collapsed in West Virginia in early 2010 after receiving thousands of dollars in fines from mine safety citations—has called for CEOs of major energy corporations to be tried for “crimes against humanity.”²⁵ Others, like Jamais Cascio, the founder of worldchanging.org, have speculated on the near-future “tobaccoification” of carbon—particularly in the context of industry-funded denialism in the face of established scientific consensus.²⁶ Still others would name the Bush, Blair, and Harper administrations (for starters) as co-defendants. Naomi Klein has highlighted the way indigenous groups in Canada have attempted to leverage the nation’s unpaid obligations to First Nation peoples against its WTO status and its Standard & Poor bond rating, essentially arguing that Canada keeps vast “unfunded liabilities” off its books.²⁷ The same judo-like reversal of market logic might be made against other transnational corporations and governments of industrialized nations of the global North. In 2008, in an astonishing act of jury nullification in the UK, six anti-coal activists were cleared of criminal liability of £ 35,000 pounds of damage on the grounds that they had a “lawful excuse” to prevent the coal plant’s functioning in order to prevent damage to the environment;²⁸ that same year, a stunt class-action lawsuit was filed by an activist in the International Criminal Court asking for “\$1 billion dollars in damages on behalf of future generations of human beings on Earth—if there are any.”²⁹

Ecology as Ideology

Though the politically conscious forms of ecological critique we have been outlining here insist on the reality of systematic difference against the bland (and blind) universalism of planetary elites, it tends not to *replace* existing democratic theory with alternative concepts but to act in the name of a true universalism to come. We refer to the Derridean notion of “democracy-to-come” outlined in *Specters of Marx*,³⁰ written after the fall of the Berlin Wall and the apparent demise of any obstacle to capitalist expansion. For Derrida, the practical demise of the utopian communist dream leaves to its would-be inheritors the practice of maintaining the possibility of a democratic future, something Derrida argues is the defining responsibility of any democratic politics in conditions that are hostile to their full realization (global capitalism). The notion of ecological debt is a prime example of what this mode of politics looks like, demanding as it does a greater, more expansive idea of justice than any currently acknowledged juridical norms. But the universal scope permitted by the contemporary notion of “ecology” is simultaneously its greatest liability. Just as it can be used to insist on the payment of unpaid costs, it can also be invoked to demand “sacrifices” from those unequipped to make them.

Any consistent form of ecological critique is thus necessarily a systematic attack on capitalist civilization as it exists, including its most and least privileged forms of everyday life. If capitalism as a total system is “at fault” over and above certain powerful individuals and institutions, then anyone, from the gluttoned American consumer to the rapidly (post-)industrializing Chinese to the unregulated populations of Africa to the wealthiest petroleum industry shareholders, is a potential target for ideological attack and economic austerity. This is true despite the very different distributions of power fought for by the world’s competing interests. Indeed, ecological rhetoric today, though a discourse of limits, presents itself as a discourse *without* limits, something never fully achieved by capitalism even at the high point of the so-called End of History. Over the past 40 years of perpetual crisis, “ecology” has gradually become a universal and even necessary target for appropriation by opposed and contradictory political positions, socioeconomic classes, and religious worldviews; it has become in essence a kind of “final” discourse, the trump to which we can always retreat, a depoliticized font of value on which we all

always already “agree.” It is striking, for example, how easily political ecology’s critique of capitalism can be assimilated by its antitheses, both in terms of the sort of corporate greenwashing best exemplified by BP’s “Beyond Petroleum” sloganeering and in the so-called “Brownlash” of the neoconservative right, who disingenuously invoke skepticism as a means of channeling right-wing populist *ressentiment* to foreclose any collective action that might restrict the free hand of capitalist elites.

In the manner of an ideological arms race, this conundrum would seem to commit us to ever more comprehensive forms of critique—but critique, Latour informs us, has “run out of steam” in the face of climate change.³¹ Critique’s inability to directly confront climate change’s radical implications for all life on Earth stems from the dialectical structure of argument in which critique has typically played the role of negation: what Ricoeur personifies as the “man of suspicion”³² and Sedgwick calls the “paranoid inquiry,”³³ a mode of critical analysis that aims to “forestall pain” through disbelief. Jameson notes that within critical theory, affirmative positions are believed to be “flawed and ideological because they reflect our own personal and class (and race and gender) standpoints.”³⁴ Following this logic, critique compels us to interpret global warming strictly in terms of its conditions of appearance, that is, its various social and cultural constructions. But “bracketing” the real existence of global warming does little to advance our knowledge of the problem; if anything, it simply highlights how the traditional roles of the academic and the layperson have reversed, with the academic now having to exhibit vast amounts of “belief” in ecological data and the general public becoming increasingly wary of arguments from expert authority and scientific consensus.

Of course, this tension between belief and doubt belies a larger epistemological question haunting critical thought in general: namely, how do we come to “know knowledge”? Or, how do we occupy a properly critical position by knowing the conditions of knowledge production? In terms of global warming, the issue seems to hinge on the nature of the distinction between the concrete (the empirical, the causal, the quantifiable) and the abstract (the total, the sum, the system). In other words, the argument devolves into schisms over the status of metonymy as a mode of knowing, either assuming the part’s capacity to represent the whole (faith), or denying the relation (doubt). The individual who recycles a single plastic bottle does so out of a belief that this action is an affirmation of “the planet,” containing and signifying both humans and nonhumans indiscriminately. But doubt, by assuming the non-relation between part and whole, opens up the dialectic of manifest and latent content central to Marxist and psychoanalytic critique. So while ecology encourages us to massify our consciousness, to move from thinking the individual to thinking the collective, whether in political, ethical, or aesthetic terms, what the metonymic *agon* of faith and doubt reveals is the *difficulty* of forging a link between the individual and the collective without falling into the trap of ideology, which hardens every conflict into a war between abstractions.

According to the Pew Research Center, in 2008 92% of Americans believed in God, 71% believed in global warming, and 47% believed that climate change is the direct result of human activity.³⁵ For ecology, the possibility of “belief” emerges in the gap between the individual (who burns fossil fuels, who recycles plastic bottles, who produces bodily and municipal wastes) and the planet as a totality of systems. In the example of recycling, placing a bottle into a bin is an act of faith because our individual consciousness, localized and quite myopic, has no way of knowing if this action has any concrete, material effects. We could follow our bottle into the crusher, trailing it along its epic journey into new post-consumer objects, fragmented and recombined into a plurality of durables, but even here we begin to see the limits of a singular, embodied consciousness attempting to grasp global processes. Ecology, in

its quasi-religious valence, reveals the conceptual chasm between these two scales, offering to fill the void through the creation of deified metaphors like Mother Earth and Lovelock's Gaia. These abstractions are meant to articulate the relation of the individual to the collective, whether in the form of deep ecology's "holism," which seeks to enlarge the Individual Ego to the point of being the World, or in the form of messianic prophecy, a structural narrative (Revelation, Apocalypse, Salvation, Renewal) that bestows a collective fate on the perpetrators of singular action. While the eco-apocalypse differs from its mythical predecessors in that the "revelation" does not originate with a higher set of divinities but emerges instead from the biochemical cycles of the planet, it nevertheless grounds itself in a form of revealed knowledge, commandments not etched on stone tablets but interpreted from the rings of ancient trees. Just as in some mythic epistemologies, the original sources of knowledge seem inaccessible to all but a select (and ostensibly privileged) few.

Responding to this formal affinity, the Right characterizes "green" as the new religion. As Fox News put it recently: "A major tenet of the global warming religion, straight from the Book of Gore, has been that the ability of the Earth to handle increasing CO2 emissions is finite and that once the 'tipping point' is reached, the earth will warm uncontrollably."³⁶ What Foucault refers to as the "primordial responsibility" of critique, to "know knowledge,"³⁷ is here activated in the service of radical skepticism. Perceiving global warming to be issuing from Authority, to be coming from a consensus of the world's top scientists—a veritable global elite—the skeptic evokes Ricoeur's "hermeneutics of suspicion," demanding to know "knowledge and its limits,"³⁸ a request that erupts into a variety of loud vocalizations: from outright denial to demands for an impossible standard of certainty. In an interesting reversal, the very same mode of critique the empiricists once marshaled against Christian theology is now used to debunk science itself as a faith-based metaphysics. It is now global warming that is seen, to reappropriate Teresa L. Ebert's terms, as ineffable, mystical, and religious, its proponents who manifest a decided "will to truth."

What strikes us about this position is how closely it resembles postmodern critique. Indeed, the Right tends to opportunistically appropriate various critical stances in order to defend the indefensible—that is, without actually defending it. Negation, in its most atrocious form, serves BP CEO Tony Hayward, who in May 2010 executed the metonymic function to minimize the oil spill's impact by "putting it into perspective": "The Gulf of Mexico is a very big ocean. The amount of volume of oil and dispersant we are putting into it is tiny in relation to the total water volume."³⁹ Here, Hayward reduces the oil spill to a "drop," an instance of particularity that does not articulate the entire system but is rather subsumed by it. Such a defense relies, both rhetorically and materially, on the Ocean to diffuse the problem, deploying a form of radical reductionism that replicates the logic of the dispersant: to differentiate the mass into simple, localized, and (most importantly) sinkable particles. But the discovery of giant oil plumes, currently said to be "22 miles long, six miles wide and more than a thousand feet deep," challenges the ability of the Ocean as a transcendent form that can effortlessly "absorb" our mistakes.⁴⁰

As these examples illustrate, the function of what we might call the denialist's "transcendental skepticism" toward ecological crisis is ultimately to doubt that human beings have the ability to significantly alter the Earth's natural processes. This extends the critical gap between individual and collective to cut the species off from its "environment," a.k.a. the totality of beings. Of course, the United States (where most such arguments originate) has been uniquely insulated from the effects of global warming, since (1) North America has not yet had to contend with the full ramifications of climate change due to the quirks of global climate patterns,⁴¹ and (2) the U.S. way of life (and perhaps especially

those aspects of it foregrounded in U.S. mass media discourse) has little connection to or direct dependence upon weather. In places where fresh water sources are rapidly depleting, or where extreme weather disruptions are increasingly common, or where large populations of fishermen and farmers have day-to-day contact with an increasingly degraded environment, the ecological crises are obvious without “expert training.”

Although this type of skepticism often seems so farcical, formal analysis reveals surprising parallels within the critical Left. The rift between Marxist scholars John Bellamy Foster and David Harvey over whether or not humanity should be allowed to conflate its destiny with the destiny of the planet is a prime example.⁴² In his critique of Left apocalypticism, Harvey argues that “it is *materially* impossible for us to destroy the planet earth... the worst we can do is to engage in the *material* transformation of our environment so as to make life less rather than more comfortable for our own species being while recognizing that what we do also does have ramifications (both positive and negative) for other living species” (emphasis added).⁴³ Precisely by critiquing the metonymic link between human and planet—that is, by asserting a non-relation between particular and universal—Harvey risks reifying it. The possibility of widespread suffering that will for all intents and purposes be “apocalyptic” is displaced onto the *impossible* destruction of the entire planet as an abstract totality. Foster rightly asserts the necessity of framing the human relation to ecological crisis metonymically, arguing “it matters whether we as a species utterly destroy our own moment on Earth. It is to deny an essential anthropocentrism without which it is probably impossible for human beings to respond to the ecological crisis on the scale at which we must—that is, in the largest human terms, which identifies our fate with that of the planet.”⁴⁴ For Foster, Harvey’s attempt to speak from a “geological” perspective, while perhaps empirically correct, is also idealist; failure to affirm that the particular must necessarily represent the universal, even if not empirically (or ethically) correct, stalemates in political apathy.

The critical assertion that ecology is a “belief” in an often unseen or unrepresentable totality also suggests the problems with liberal environmentalism’s historical insistence on the global “truth” of *particular* class, race, and gender standpoints. Because early preservationists sought to protect natural spaces in order to escape the often racialized “contaminates” of the industrial city, expelling, in the process, indigenous dwellers like the Ahwaneechee of the Yosemite Valley, the Left initially dismissed the environmental movement as an affectation of the middle-class. In his 1974 “Critique of Political Ecology” Hans Enzensberger judges the implicit “socio-psychological” needs of the 20th century movement—i.e. collapse, salvation, escape—to be functioning in the service of a bourgeois ideology: “The bourgeoisie can conceive of its own imminent collapse only as the end of the world. In so far as it sees any salvation at all, it sees it only in the past.”⁴⁵ Here, the bourgeoisie appears to assert a link between the fate of its class position and the fate of the planet. Enzensberger argues instead that the middle-class is not the metonymic representation of the totality—the human species—but merely a fragment, one possible epistemological relation among many. For him and other Left critics, the metaphor of Spaceship Earth (another version of “we’re all in this together”) dangerously obfuscates the very different material relations different socio-ethnic groups have to the environment.⁴⁶

Since bourgeois consciousness fails to signify universal consciousness, 1970s environmentalism for Enzensberger was therefore merely an expression of class anxiety. “[E]cological debate,” he writes, was more a “symptom” that tells us about the society it comes from rather than an actual material problem.⁴⁷ This sort of doubt works to critique ecology-as-belief both in its explicitly religious form (Gaia, apocalypse) and in its bourgeois figuration (middle-class ideology of the Global North). Passing over non-bourgeois resistance movements which defy Enzensberger’s theoretical framing, from Chipko

Andolan to the contemporary Naxalite Maoists in West Bengal, the Deepwater Horizon oil spill itself attests that there is a danger—politically, materially—in doubt as a form of cognition that strives to “forestall pain” through the willful suspension of belief. The scale and scope of the crisis is striking: up to 800,000 gallons of oil leaked a day, 993,000 gallons of dispersants applied, 20,000 workers, both government and contract, 17,500 National Guard troops, four million feet of containment and absorbent boom.⁴⁸ So the question remains: how do we massify the particular into the universal without asserting particularity as immediately representative of universality, thereby magnifying our local epistemological standpoints into global universals?

Ecocritique

Today this problem is both more acute and harder to think than ever before. The “bourgeois environmentalism” critiqued by Enzensberger looks positively radical when the only acceptable epistemological standpoint today is that of the atomized consumer. Now that environmentalism is fully mainstream, any “realistic” solution to ecological crisis must be routed through liberal economics, which locates the possibility for ecological change in the moment of consumption—in the ability of the *individual* (and the individual alone) to direct the market through consumer preferences. In this iteration, ecological crisis is critiqued as a market incentive—a way to motivate shoppers to “buy better,” to replace all of their “bad” non-green items with “good” green products. But as Foster and Clark argue in “The Ecology of Consumption” (this issue), locating the ecological problem solely in the act of consumption assigns total responsibility for the reparation of the planet to the individual consumer. The issue then becomes articulated around “ethics,” individual responses to collective crises, rather than around systemic change. Western liberalism locates agency in the individual as the signifier of totality, but the “individual” here is not the individual who is representative of the species; rather, the individual is a specific locus of purchasing power. Unlike the totalities we have thus far discussed, the market reduces difference to the abstraction of exchange, an ostensibly untotalizable process in which all individuals (humans, lions, birds) are utterly generic bundles of qualities. All but the faintest nostalgic trace of the individual as a unique locus of *potentia* (ecological or otherwise) is nullified.

The recent Earth Day 2010 episode of the American game show *The Price Is Right* is telling in this respect. The “greening” of the show left it structurally unchanged: the stage set in brazen color with massive energy expenditures on light, the series of “guessing games” intent on exposing the “actual retail price” of innumerable goods. Only the commodities alter: non-petroleum based soaps bottled in 90% post-consumer plastic, baked chips in plant-based biodegradable foil, energy efficient appliances. The minuteness of the descriptions resonate with what Teresa L. Ebert calls Derrida’s “detailism,” where the “ideological role of [this vertigo of details] is to locate the subject entirely on the surface of reality.”⁴⁹ And while the show still rewards contestants for their consumer knowledge, for having mastered the minute differences between each of these wares, the prize is now an “eco-trip,” a journey to the South Pole to view polar bears.

Collective agency is impossible within this logic. The dialectical way beyond this ideological impasse (the contours of which have been compellingly laid out by Slavoj Žižek among others) would be to massify the individual into the collective while simultaneously retaining a “parallax view” of both of these poles. We must retain this bifocality because if we think *only* the collective, or *only* the totality, we run the risk of entering the immanent logic of the market, where, to quote Arturo Leyte, “one thing becomes absolutely interchangeable with another because it represents the value of the totality. Thus

the very notion of the 'other' may dissipate; and without an other, how is one to speak of the self?"⁵⁰ According to this view, the crux of the problem is the loss of the Other; the loss of any neutral measure or radical alternative against which to judge political and ethical action. Robert Geroux (this issue) argues that there is no Other; we currently exist in a state of "immanent hydrologics" that undercuts all interspecies boundaries. Immersed in a biopolitical continuum, we cannot confront the Market that renders impossible the process of individuation. But for thinkers like Timothy Morton, the first "law" of ecology, the interconnectedness of all things, both liberates us from the problems of metaphysics and provides an ethical ground in the form of sheer relationality; in other words, the simple fact of standing in relation to an(O)ther activates the ethico-political imperative. In this immanent strain, ethics does not require the existence of an outside through which to articulate the "response-ability" of the individual. Contrary to this, Ben Woodard (this issue) argues that we maintain "productive nature" as a radical Other, as the necessary outside on which to establish an ethical program. Perhaps such an "outside" could also arise in the differential produced between the individual and the collective, as in the relation between one plastic water bottle and six billion of them.

Artists engaging with ecology often attempt to represent the totality of the crisis through a process of massification. What we might refer to as "serialization," in the sense of Warhol's silkscreens,⁵¹ becomes the default mode for representing the gravity of the contemporary situation. Chris Jordan's *Running the Numbers* photography series (see pages 14–19, this issue) is a classic example of this aesthetic; in his work Jordan overlays hundreds of thousands of disposable consumer objects in an effort to visually capture the sheer amount of waste inherent to capitalist society. A portrait of Charlie Brown and Snoopy turns out to be composed of ten thousand dog and cat collars, equal to the number of these animals euthanized per day in the United States; a portrait of a woman's breasts turns out to depict 32,000 Barbie dolls, one each for the number of elective cosmetic surgeries performed each month by U.S. doctors.⁵²

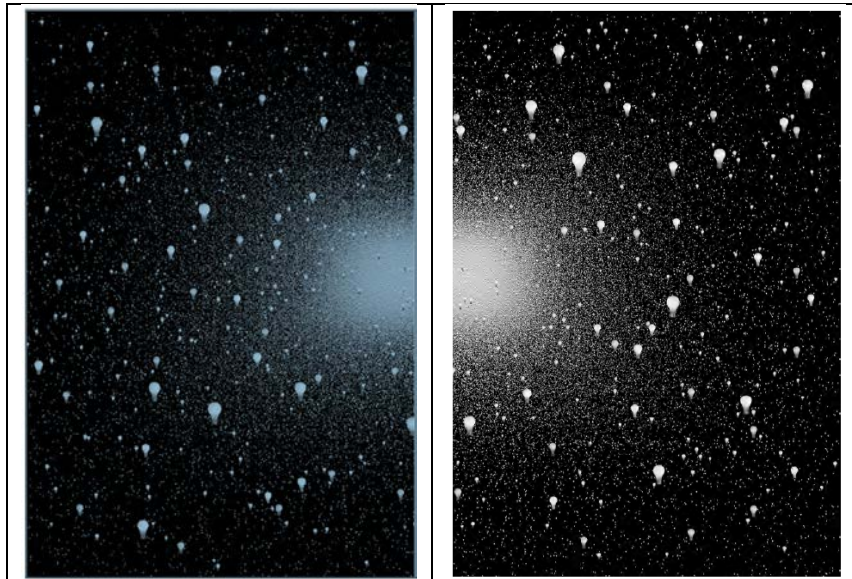
Here the conceptual problems bound up with massification become manifest—your individual carelessly discarded cell phone (426,000 a day) becomes recontextualized as a single instance of a terrifying sublime whole, the mantra of capital—*accumulate! accumulate!*—murmuring through the debris.

Edward Burtynsky's photographs likewise work within this aesthetics of accretion: piles of tires, heaps of television monitors, mounds of computer screens; they are attempts to massify the individual (singular) instance of the problematic (the individual consumption of electronic goods) into an Absolute that is Crisis. Burtynsky's recent collection *Oil* deploys a similar representational strategy.⁵³ Instead of a singular oil well as representative of the industry, Burtynsky features a serialized image of oil derricks completely saturating the landscape. While the metonymic mode exemplifies the *pars/totum* relation, the figure/ground effect, where *totum* is the "ground that becomes the figure" and *pars* the "figure that becomes the ground,"⁵⁴ what we witness in *Oil* is the collapse of the metonymic function, as the figure (oil pump) becomes the ground (field of oil pumps) that becomes the figure that becomes the ground. In Chris Jordan's work we likewise "toggle" between levels, beginning first with a view of the totality, a representation that often replicates familiar artistic abstractions— an arrangement of objects in a post-Impressionist Seurat, a collection of cell phones reminiscent of Jackson Pollock, oil barrels swirled into ancient circular forms—and slowly "zooming in" toward the concrete, arriving finally at the individual object— paper cup, plastic bag, light bulb—hidden in the mass. But the object is never individualized, meaning we never lose sight of its connection to the larger abstraction:

the amount of waste the system excretes on a daily basis. This movement between figure and ground illustrates the slippage between these concepts in both political and epistemological terms. It also gestures toward an answer to one of our key questions: how do we extricate ourselves from the belief/doubt dualism that seems to plague ecological thought? Following this aesthetic example, we can place ourselves, critically, between these two poles, “flickering” between doubt and belief, figure and ground, individual and collective.

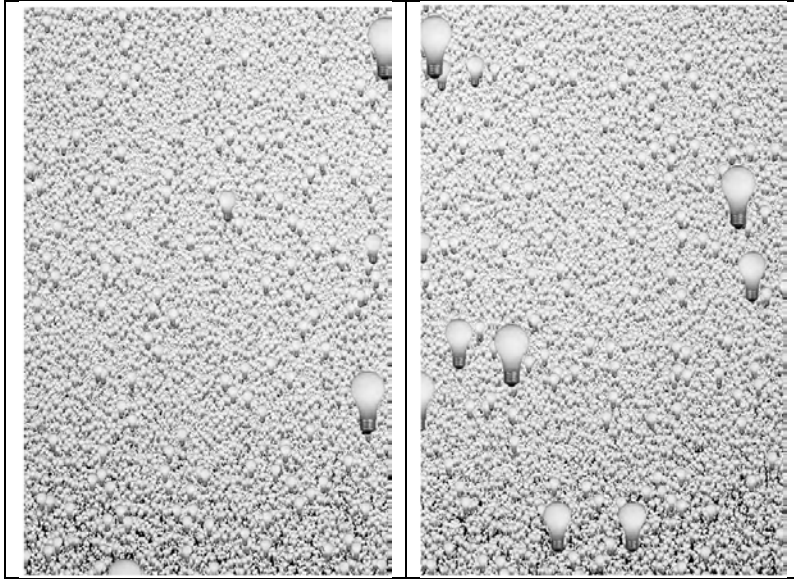
In our issue these poles find themselves exemplified by two camps. The first (embodied by the critique of Timothy Morton in *Ecology without Nature*) seeks to take the problem of reification head-on by arguing that big-N Nature doesn’t and has never existed, that it was only ever an ideological fantasy of a stable transcendent referent that is *produced*, rather than memorialized, by the ecomimetic style. And the other approach, which speaking very broadly we might associate with the ecological Marxism of John Bellamy Foster, is to insist instead on the material reality of nature *against* its fuzzier valences, its more spiritual, sentimental, and affective qualities—to in some sense *reduce* nature to statistics, facts, graphs, and charts, and to marshal these against statistics, facts, charts from other perspectives (usually political-economic) in an “objective” debate. This approach, that is to say, insists on the final *knowability* of nature, the extent to which we can access it directly through experimental measurement of its constituent parts.

In some sense these two approaches appear incommensurable—and so the bad version of the bifurcation we’ve just laid out would be to fall into the trap of endorsing one position *against* the other. This, to put it mildly, is a road to nowhere. What

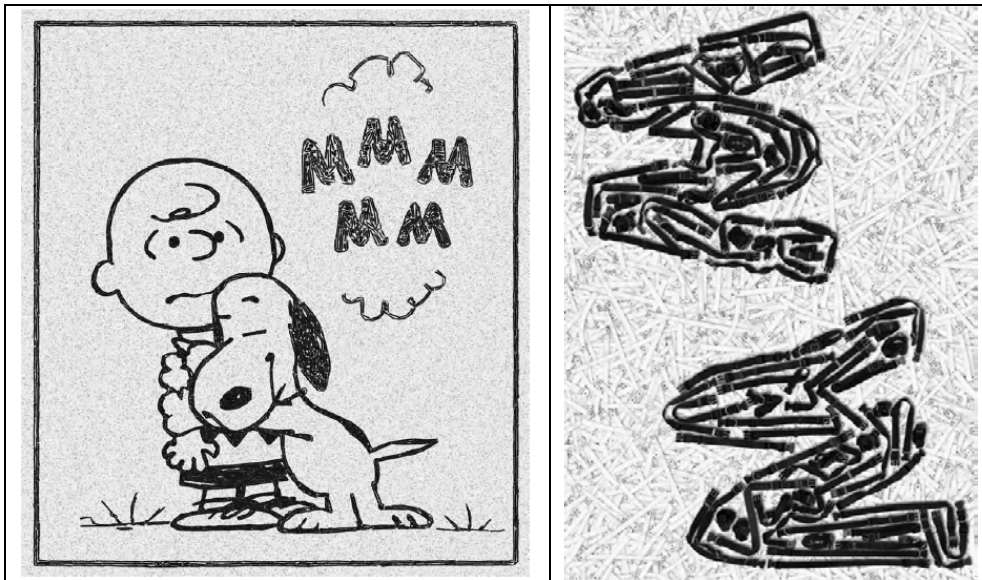


Chris Jordan, “Light Bulbs” (2008)

Depicts 320,000 light bulbs, equal to the number of kilowatt hours of electricity wasted in the United States every minute from inefficient residential electricity usage (inefficient wiring, computers in sleep mode, etc.).



Chris Jordan, "Light Bulbs" (detail)



Chris Jordan, "Dog and Cat Collars" (2009) and detail

Depicts ten thousand dog and cat collars, equal to the average number of unwanted dogs and cats euthanized in the United States every day.

we propose instead is to short-circuit the dilemma; the challenge of what we call ecocritique (as opposed to 1990s ecocriticism) is to straddle the gap between these two approaches, to live and work within that impasse.

If we take up, in this vein, a popular contemporary science fiction film like *Avatar* (2009), we find alongside everything else a fascinating attempt at resolving the contradictions inherent in the idea of nature as it exists today. The engine of conflict in *Avatar* is a resource struggle initiated by human

invaders, who, faced with the shock of energy scarcity on Earth, seek to mine the fictional resource “unobtainium” on Pandora, home of indigenous aliens called the Na’vi. Between these two worlds and two cultures, there are also two ecologies. On the human side is the technocapitalist relationship to nature as a collection of inert natural resources to be ruthlessly exploited for human benefit; on the Na’vi side is what initially appears to be a primitivist, holistic view of nature as benevolent totality. The humans, that is, present an extreme version of the instrumentalist attitude towards nature that John Bellamy Foster critiques, while the Na’vi represent the reifying “nature worship” of the sort Morton is concerned about.

The film addresses its two basic formal disjunctures, one epistemological (the “worldview” of the multinational mining corporation scientists against the nature worship of the “primitive” Na’vi), the other aesthetic (the technological medium against the narrative and visual paeans to authentic Nature), simply by insisting that there is no problem at all. The Na’vi’s beliefs can be explained “biologically”: their hair contains a kind of fiber optic cable that allows for direct communion with animals and trees, rendering Pandoran Nature a kind of Web 2.0 cloud computer in which the planet has not merely reactive reflex but a proactive proto-consciousness. We are repeatedly told that the truth-value of all explanation is subordinate to our hyperreal sensory experience of the impossibly verdant natural world of Pandora and the equally impossible victory of Na’vi bows and arrows over human bombers—the world as single ecstatic special effect, a seamless union of the imaginary and the real, constructed by Weta Digital and Industrial Light & Magic entirely inside computers. *Avatar* is thus in this way a radically relativist and even *antipolitical* film.

Here, then, may be the solution to the critical impasse on the Left over *Avatar*’s reception, between those who find it to be fatally compromised by its recycled, condescending, and racist frontier mythology of the Westerner who “goes native,” and those on the other side who note that the “surface” reading—the environmentalist global South versus the exploitative capitalist North—has indeed been taken up as a political banner by many environmental and indigenous resistance movements in South America, Asia, and the Middle East, who understand the struggle of the Na’vi to be continuous, or even isomorphic, with their own. Perhaps the film’s strenuous efforts to resolve intractable conflict through technological bedazzlement (itself dependent on vast resource expenditure) can be successful *only* among the audience Hollywood has best trained to accept vicarious thrills as the limit of both aesthetic satisfaction and political possibility. The world of *Avatar* is not our own and never can be, precisely because it follows too closely the experience of life in the late capitalist consumer bubble: total sensory overload of phenomena competing for our attention, with the promise that they will all continue forever, without even guilt to slow us down. Until the inevitable sequel comes along, despite its surface plotting, *Avatar* is the digital capitalist utopia incarnate.

The postmodern difficulty of convincingly imagining a world (futuristic or otherwise) that is *not* ravaged by capitalism favors apocalyptic fantasy even over such ersatz utopias. The versatility of the apocalyptic mode speaks, as a political, ecological science fiction, to what Lawrence Buell wrote in 1995: “Apocalypse is the single most powerful master metaphor that the contemporary environmental imagination has at its disposal.”⁵⁵ Instead of massifying our consciousness through a process of accretion, apocalypse forces us to grasp the collective (humans, polar bears, birds) through its extinction. But the apocalypse that restarts History is one of human survival (Adam and Eve), whereas recent texts like History Channel’s *Life After People* or Alan Weisman’s book *The World Without Us* do not allow us even that genetic luxury. Thus, it is a difference of “kind”—categorically unlike post-

apocalyptic scenarios of Crusoe-style adventure and their implied fantasies of entrepreneurial regeneration.

By attempting to narrate the unnarratable—to render visible the inevitable extinction of the human species, however and whenever it happens—*Life After People* provokes us to think collectively, to think the *world* through our absence. The show also speaks to a nascent desire for critique as the series premise pushes the same limits we've been sketching out here to new heights of absurdity: how do you speak from a genuinely post-apocalyptic, genuinely posthuman *non*-perspective, a positionality that should be not just aesthetically impossible but conceptually impossible as well? There are at least two ways to solve this conceptual riddle: one is to default to a higher omniscience; the other is to project our consciousness into non-human entities. One is transcendent; one is immanent; both are equally implausible.

Life After People perfectly exemplifies the first mode of narration. In a future in which humans have suddenly disappeared, natural forces undo all of our great works. Rather than concern itself with the cause of the extinction, the drama focuses instead on the spectacle of decay, narrated in the hyperbolic rhetoric of war and plague: “outbreak, it’s what happens when Nature is left unchecked,” “stealthy enemies are on the march, attacking cities around the world,” “those who kept the forces of Nature under control have vanished. Nature, long contained, is poised for an outbreak of violence and chaos, disease and disaster.” The language of intention used to describe these “acts” of nature on the human artifice suggest a malevolent foe indeed. But we’ve seen plants grow through cracks, we’ve seen homes weather-beaten by wind, we’ve seen hurricanes set neighborhoods awash. The “assault” of the natural is not new. What, then, is the function of these stories?

We might find an answer in the dual temporalities operating within the show. To see what will happen in a posthuman future, *Life After People* does not simply generate CGI models of mildew violently decomposing wood five decades hence; we also turn to Gary, Indiana where, the show narrates, “huge swaths [of the city] have been abandoned” due to a “slow unfolding disaster.” The disaster, the show informs us, is the death of the steel industry. With its demise, Gary transformed from a bustling city of 200,000 to the “The Pompeii of the Midwest... a city of ruins”—a “city of decay.” Recognizing the post-apocalyptic future in the post-industrial present forces us to link the disaster-of-the-present (the end of capitalism in a city) to the unnamed disaster-of-the-future (the end of capitalism on the globe). This structural analogy resonates with contemporary ecological science, which increasingly warns us that “the end of capitalism” and “the end of the world” describe in fact the same event— that, indeed, the first is the cause of the second. Capitalism’s increasingly violent attempts to surpass its own limits thereby generate a version of Jameson’s desire called Utopia that is an orthogonal “desire called apocalypse”—a drive towards death that is part the desire to live to see the world’s final end (The Greeks: “Call no man happy till he is dead”; Malraux: “Death turns life into destiny”) and part a desire to see the guilty punished, even if (especially if!) the guilty are we ourselves.

To mediate between its two temporalities, *Life After People* provides a voiceover, non-focalized and disembodied, interspersed with clips of “specialists,” civil engineers, architects, structural designers, whose ruminations over the possible fate of many of our creations, act, in this mode, as a kind of signal from the past: a piece of digital memory floating in the galactic ether. There can be no “place” from which the narrator speaks—only a kind of pure, impossible presence. Its anonymity is reassuring, familiar from hundreds of other programs with the same sensationalist format, and even disturbingly *authoritative*, interpellating its audience not through any overt ideological stance or “argument,” but

through an affective appeal to watch, to once again align our desire (along with our historical and political consciousness) with the camera's function.

In the immanent mode of post-apocalyptic narration, we focalize our consciousness through objects. This requires us to portion our intellectual legacy amongst a variety of "actants," to use Bruno Latour's language of ontological equilibrium, a feat already begun in any number of animated cartoons and oral folktales. In the CGI film *9*, it is sentient dolls that awake post-apocalypse with growing levels of consciousness; in *WALL-E*, where humans are absent from Earth but not from the galaxy, it is our garbage that "speaks," our leftover cassette tapes and time-worn images that captive the droid. Like the delay of a beacon sent into outer space—despite our departure, despite our extinction—we continue to communicate out into eternity through our shit.

Another place we see this is in the recent short film "Plastic Bag," directed by Ramin Bahrani. The film is part of *Futurestates*, an eleven-part series of shorts based on "exploring possible future scenarios through the lens of today's global realities."⁵⁶ "Plastic Bag" is the only one of the eleven devoid of explicit references to "the future": there is no advanced technology, no utopian or dystopian politics, and only fleeting references to the passage of time. The plastic bag, our hero, does not age.

We are introduced to the bag at its point of "sale" at a grocery store, which it describes as its first breath—and we follow it through its many uses to its disposal by the shopper it understands to be its "maker" and subsequent arrival in a landfill. Then—and this is the film's sole science fictional conceit—all the people disappear. But we continue with the bag as it aimlessly floats about the human-abandoned world, until it finally ends up shipwrecked at the bottom of a coral reef underneath what appears to be the Great Pacific Garbage Patch, also known as the North Pacific Trash Vortex—that location in the Pacific Ocean where currents bring all the plastic, non-biodegradable flotsam of our global consumer society, where it bunches and groups together and is now said to cover an area the size of the United States itself—and, it must be admitted, there's a certain horrible poetry in these reports, the notion that day by day we are each of us helping to construct a shadow version of ourselves comprised entirely of garbage. Here, again, we find the nightmare of massification—all our garbage, together, becoming larger than ourselves, becoming in a sense history's true subject.

Werner Herzog's narration overlays the bag's physical journey with a sentimental search for its "maker," or first owner/consumer, that takes us from the ecstatic promise of birth to apocalyptic disillusionment. Herzog as narrator summons two immediate reference points: there is his famously anti-humanist view of nature developed over decades of narrative and documentary films. Then there is his more recent popularity as a cult figure among 20- and 30-something hipsters. A series of YouTube clips have imitations of his distinctive voice reading children's books, most successfully with non-human protagonists like *Curious George*, where the supposed innocence of the familiar stories is undermined by "Herzog's" equally familiar cosmic pessimism. "Plastic Bag" appears to repeat the joke—at least one web commentator first assumed it was a parody of *American Beauty* and shocked to learn that it featured Herzog's real voice.

And this ironic play between innocence and experience, sentimental kitsch and authentic pathos, is also at work in content of the film. Everything we see and hear heightens the absurdity of its premise, from the bag's existentially threatening encounters with animals—"monsters"—to its melancholy reflections as it moves across landfills and empty fields. But the film dares us to go beyond mere absurdity. In the film's closing dialog, the plastic bag, first extracted from the Earth as crude oil, shipped 8,000 miles across the globe, used for at most a few days and then discarded to rest at the bottom of the ocean for as many as one thousand years or more (and perhaps even then only to be

broken down into constituent plastics to be consumed as poison by fish and birds) says mournfully to us: "I wish you had created me so that I could die."

Like its distant 18th-century predecessor the "object-narrative," a popular genre of satiric novels told from the perspective of everyday objects like coats, coins, and couches, the ironic conceit of "Plastic Bag" is commodity fetishism pushed to an absurdist limit: that the lowliest commodity object has a range of "experiences" infinitely more varied than any class-, gender-, and geography-bound human subject. From a strictly empirical point of view, this suggests that if only our objects could speak, their knowledge of an increasingly complex, mystifying, and alienating human society would be more "objective" than that of the most worldly traveler or erudite scholar. And, like the figure of the foreign observer, whether as the Oriental traveler of Montesquieu's *Persian Letters* or alien visitor David Bowie in *The Man Who Fell to Earth*, the "it-narrator" is uncorrupted by prejudice; our worldly objects are also "naive" at the same time.

The survival of the plastic bag beyond the twin horizons of formal realism and human existence is not, then, a reflection of its "fitness" à la the super-humanoid post-apocalyptic Road Warriors of late 20th century science fiction, but rather of its transcendent *worthlessness* as a commodity. It only has value for us, its impossible audience—a value as witness that only increases when all humankind is wiped out.

It is through this very absurdity, which the object fantasy makes no effort to conceal but rather embraces, that the outline of the world through which it moves—its cognitive map—is thrown into stark relief. The unreal excess that "Plastic Bag" encourages us to accept is not, as in *Avatar*, justified to us through an impactful sensory experience and the deployment of familiar myths; nor is the end of the world "explored" in the kind of impossible detail that seems always to carry a hint of pornography; nor, finally, are we seduced into cynical acceptance of "how the world works" in all its opportunism and hypocrisy. Rather, the vast distance between the world as we would like it to be and as it is is pressed upon us again and again by bringing together its furthest extremes: romantic subjectivity's most intimate longings with consumer society's unworthiest refuse; the most unimaginable futures with the most quotidian experiences; the parts of the world we've forgotten or would like to forget—trashbins, landfills, garbage patches—recast as exotic alien landscapes. "Plastic Bag" highlights, for us, the proper significance of the "ecosystem" metaphor for ecocritique: *all* the worlds hidden within the one we call our own that can't be reconciled, *all* the worlds whose coexistence is impossible but unavoidable.

In "System Failure: Oil, Futurity, and the Anticipation of Disaster" (*South Atlantic Quarterly* 106, no. 4 [2007]), Imre Szeman laid the foundation for an approach to the history of capitalism that focused not on geopolitical nation-state actors but on the forms of energy that were hegemonic in that moment. Such a historiography of capital would transition us from *steam capitalism* (c. 1765) to *oil capitalism* (c. 1859), in which massive reserves of solar energy stored in fossil fuels are converted into mechanical power at staggeringly efficient rates of EROEI. From such a standpoint oil and capitalism begin to look like one and the same phenomenon, with the looming end of cheap oil therefore presenting itself as a catastrophe for the system as such. "The Cultural Politics of Oil: On *Lessons of Darkness* and *Black Sea Files*" continues the theoretical trajectory begun in Szeman's earlier essay with a laying out of how such an "oil ontology" might be thought and represented in culture, with special attention to films from Walter Herzog and Ursula Biemann that usefully problematize the desperate petro-capitalist strategies of continuance and the ecstatic eco-apocalyptic prophecies of doom that otherwise dominate discussions of oil capitalism's terminal prognosis using the perspective of the sorts of "it-narrators"

we had occasion to discuss above.

In his essay, “Ecology after Capitalism,” Timothy Morton extends his critique of the very concept of Nature, arguing for an ecological ethics that takes its first principles from contemporary evolutionary and genetic theory’s deconstruction of the stable subjects assumed by traditional ethics. In a roundtable discussion with Duke Women’s Studies professor Kathy Rudy and the *Polygraph* Collective, also in this issue, he and she extend these ideas with a sustained consideration of the roles of animals, alterity, eco-feminsm, spirituality, and apocalypse in ecological thought. Morton’s ecology arises “after” capitalism not only in the expected Utopian sense of a better, more responsible future but also in our recognition that the adaptability of advanced capitalism puts it light-years ahead of our ossified notions of transcendent Nature. He also develops the consequences of scientific ecology’s derealization of the everyday experience of large-scale phenomena like climate change, arguing that it undermines traditional aesthetic criteria for ethical concern, along with all associated justifications for action or inaction based on ‘natural’ sympathy. In its place, Morton’s “dark ecology” makes an ethical call to responsibility based on existence alone.

Andrew Hageman activates Althusseur’s definition of “ideology” to interrogate the various ways Nature “hails” its subjects, either through his example of “Nature’s call” as the requisite mandate to expel interiorized externalities, or in the ideologically inflected “call” of contemporary green thinking: “Save the Planet!” Hageman utilizes Althusseur to understand how the Nature ideology of the green movement impedes ecocritical thinking, arguing that only a sustained critique of ideology can differentiate Nature from ecology. To this end Hageman gestures toward a central paradox of green dogma; namely that both climate change believers and non-believers activate the notion of the “essential harmony of Nature” as proof of their cause. Since both figure Nature as “metonymically signified by the climate,” there is an “ideological unity” subtending these two positions that requires critical work to disentangle. Further, global warming discourse circulating in the ISAs—schools, dvertising, popular culture—frame, or limit, the horizon of ecological thought, while the ecocritical obsession with Wordsworth as nature-writer fails to recognize that “nature writing” is not mimetic but rather the inscription of an *imagined* relation to material conditions. The chain store REI, along with popular “wildlife snuff” films (*Grizzly Man*) and documentary forms (*An Inconvenient Truth*) all illustrate how the circulation of Nature ideology inflects cultural production, mostly through the imperative to connect to Nature through the market.

Against theorists like Morton and Hageman, Ben Woodard writes in Nature’s defense. However, this Nature is neither form of forms nor bucolic paradise, but a material force that exceeds every *a priori* structure posited by human consciousness. Woodard draws on Schelling’s productivist *Naturphilosophie* and contemporary theorists like Iain Hamilton Grant and Reza Negarestani to argue that thought and formal ethical reasoning have no authority to legislate the dynamic forces that constitute them. The Yucca Mountain nuclear waste depository serves as an example of how ecological responses based in the removal of the “artificial” and preservation of the “natural” rely on an increasingly untenable, anthropocentric valorization of phenomenological life over real nature.

Anthony Paul Smith notes that ever since the philosophy of nature, philosophy has tended to prescribe its own set of ethical and aesthetic norms when trying to think ecologically, itself remaining unchanged by the encounter. Smith draws out the implications of Francois Laruelle’s “non-philosophy” for the development of a “unified theory” of philosophy and ecology, one that would avoid determination by either transcendental critique or scientific empiricism. For Laruelle, philosophy has a

deeply problematic faith in its own self-sufficiency, and consequently in its unique ability to comprehend the Real within “regional knowledges”: science, literature, history, etc. The effect of philosophy’s hubris is to surreptitiously replace the Real with philosophy itself. For philosophy to address ecology, according to Smith, both must be changed by the encounter. A “transcendental ecology” would submit philosophy to conditions other than its own pre-existing, self-sufficient concepts. Smith ends the paper with an attempt at conceiving what the organization of philosophical thought according to the concept of ecosystem might look like.

In “The Ecology of Consumption: A Critique of Economic Malthusianism,” John Bellamy Foster and Brett Clark critique the liberal environmentalist preoccupation with the consumptive sphere, an ideological commitment which they identify as the economic heir to classic demographic Malthusianism. (Where once we had *too many people*, we now have *too many consumers*.) Treating consumption as a sphere discrete from and prior to production distorts society’s actual economic-ecological structures, leading to a crucial misidentification of the actual agents of global ecological devastation as well to the fantasy that one might “remove” oneself from environmentally destructive behavior simply by curbing one’s discretionary consumer spending. Ethical attacks on “wasteful consumption” and “bad consumers” take the “consumer sovereignty” postulated by mainstream market economics as a premise, thereby foreclosing any investigation of the production’s determinative role in causing and exacerbating the various ecological crises above and beyond the capacity of individual consumption choices to redress. A genuine ecology of consumption, and a truly radical politics, can only emerge out of a steady-state ecology of *production*, one which directs itself not towards “sustaining economic accumulation and growth,” as with capitalism, but rather towards “sustainable human development.”

Recently, the positing of immanence as an ontological solution to ecological crisis has come to replace the transcendent imaginary of Gaia or Mother Earth. In his essay Geroux diversifies the concept of “immanence” in order to complicate these debates. He classifies our current ecological reality as “immanent hydrologic,” meaning that we exist in a nexus of circuits and flows, all of which undercut interspecies boundaries. The human is now a “posthistorical, posthuman hybrid”; in other words, an animal. This animal exists both within and without, the “animal within” being an evocation of Agamben’s concept of the mobile border, the interior caesura that divides subjectivity. Yoking biopolitics and ecology, Geroux argues that we belong to a biopolitical continuum that harnesses surplus biopower for the market, a continuum that renders impossible the process of individuation. Outside of sovereignty, all life is immanent. Geroux then turns to two key examples, the cannibalism of Meiwes and the version of Christianity espoused in AiG’s Creation Museum, to underscore how immanence functions ecologically. The Creation Museum in particular foregrounds how the animal/human split troubles pre- and post-lapsarian versions of unity. Within the logic of the exhibit, prelapsarian harmony is an immanence operating according to the logic of grace, the vegetarianism of the animals a negation of the “absolute” immanence of Bataille’s animal (the predator-prey relation). The “Fall,” then, produces this negative, absolute form of immersion, a negativity that ultimately challenges the equally immanent logic of the bio-market.

Britt M. Rusert traverses a wide range of historical events, from the recent post-Katrina abandonment of New Orleans to the management of the plantation ecologies of the South, to interrogate how the anthropomorphizing of ecology perpetuates environmental racism. Recognizing that the racialization of nature often works in tandem with environmental degradation, Rusert seeks to unpack this contiguity by engaging ecology’s fraught relation to the human. While both of the

discipline's early founders, Haeckel and Uexkull, began with "radically anti-anthropocentric worldview[s]," Nazi doctrine adopts their work into an "anthropocentric" social program invested in human population control and eugenics. The Chicago School's model of human ecology—their "concentric circles" approach to urban expansion highlighting the "foreign" element inhabiting the undesirable cores—similarly works to naturalize the segregationist strategies of the industrial city through the application of ecological concepts like "competition" and "succession" to the struggle for space. Second Wave feminist appropriations of ecology also fall into the trap of an anthropomorphized ecology, dovetailing into issues of state-sponsored birth control that often specifically targeted black reproduction. Despite ecology's compromised genealogy, Rusert concludes the piece by reclaiming ecology-as-network, a key conceptualization for 19th century black activists rebelling against a global plantation system, and one that will allow ecocriticism to engage with race in terms of "blackness," a radical non-anthropocentric ontology.

Environmental historian Joachim Radkau analyzes the contradictory history of the German anti-nuclear movement. He begins by noting its strengths relative to other comparably industrialized nations: its unique continuity, fervor, and mainstream political influence, the latter demonstrated by its close relationship to Germany's Green Party, the most powerful environmentalist political party in the world. Throughout, Radkau emphasizes a series of contingencies and inter-institutional struggles, contesting the common assimilation by historians and sociologists of the German anti-nuclear power plant movement into the so-called "new social movements" of the 1960s and '70s, as well as any culturalist reduction to some version of the German Nature-Romantic spirit. Radkau's comparisons of the German situation with anti-nuclear movements in France, the United States, and Japan highlight not only the specificity of the German history but the specificity of every political response to the ecological threats and economic potentials posed by the industrial use of nuclear energy.

In an interview with *Polygraph's* editors that challenges the theoretical presuppositions of several of our other contributors, Ariel Salleh forwards embodied materialism as a mode of inquiry capable of grounding the Left in materialist practice. To realize the potential of this concept, she calls for the immediate recognition of the humanity/nature split as both historical, as the requisite condition for the theft of reproductive labor by capitalist and pre-capitalist systems, and sex-gendered. For Salleh, it is the persistence of this gendering (Man/Woman = Nature) that sustains the humanity/nature divide. Discourses that replicate this split are simply "ontologies for capitalism," including those in the academy who refuse to acknowledge the patriarchal structures of violence undergirding ecological degradation. Salleh introduces embodied debt as a corrective to the capitalist method of valuation, a form of accountability that would (theoretically) tabulate the inclusion of externalities "outsourced" in the system of global production as well as reverse the loan/debt relation of IMF and World Bank debtor-nations. Embodied debt would also allow for the valuation of what Salleh calls the "meta-industrial worker." Operating at points in the global system where humans directly metabolize nature, where mothers, farmers, and peasants oversee biological flows, the meta-industrial worker is a viable political subject. Embodied debt would thus accrue "value" to the reproductive labor of these workers, creating in the process a new economic system based on metabolic value.

In his interview with *Polygraph 22's* editors, science fiction author Kim Stanley Robinson untangles the Utopian potentialities of science, social justice, and science fiction. Robinson argues that social justice is now a "survival technology": the severity and immediacy of the various ecological crises demand an end to the structures of power and inequality that only exacerbate the disaster. Both science

and democracy emerge in Robinson's formulation as instances of actually existing leftist praxis— always compromised by capitalism and by power, but, he says, never fully or determinatively so. Science fiction suggests itself as a field in which these potentialities might be thought through, a "casting forward of the imagination" into better spaces and times. The urgency of ecological crisis calls for these Utopian potentialities to be made actual, and quickly, and Robinson finds encouragement in recent actions from climate scientists and worldwide democratic movements, including the election of Barack Obama in the U.S.

In "Living in the End Times" Slavoj Žižek suggests the usefulness of the apocalyptic mode with an omnibus accounting of impending ecological collapse. Žižek calls attention to our inability to properly *think* apocalypse, to grasp its scale, its urgency, or our own agency in bringing it about. We remained trapped in old ways of thinking that are not appropriate to reality as we now encounter it; we must come to terms with the fact that "we are not impotent, but, quite on the contrary, omnipotent, without being able to determine the scope of our powers." The science fictional solution to the problem, one he borrows from the alternative temporal logic of Jean-Pierre Dupuy, is remarkable: we must short-circuit this doom by reconciling ourselves to apocalypse and accept that the disaster is already here and that technological civilization has failed. From this *futur antérieur* perspective we can then recognize the counterfactual actions we might have taken to prevent the disaster—at which time we can return to our usual temporality and *change* our "destiny" before it is too late.

Finally, in "Two Faces of Apocalypse: A Letter from Copenhagen," Michael Hardt identifies a cleavage point on the Left between anticapitalist and ecological politics. While both groups, Hardt argues, are engaged in a struggle with capitalist hegemony over control of *the common*, the two groups come to diametrically opposed conclusions about the possibilities inherent within the common. If anticapitalist social movements might be said to be organized around the slogan "We want everything for everybody," ecological politics are motivated instead by a profound recognition of planetary limit; the slogan of the ecological left can be found in the posters at Copenhagen proclaiming "There is no Planet B." This split reflects a tension increasingly obvious in the workings of global capitalism itself, in which the reproducibility of immaterial goods—which are more productive and more valuable the wider their distribution—is in irresolvable conflict with the need to privatize such goods for the purposes of profit and accumulation. The antimonies of the common, Hardt says, present in the end two faces of the apocalypse; one (the anticapitalist version) in which the breakdown of global capitalism is an "event of radical transformation" that leads to renewal and a better world, and the other (the ecological version) in which the ecological devastation endemic to global capitalism is an irreparable final catastrophe and "the end of days is just the end." The struggle of the Left is now to find the conceptual framework that can shatter this antimony, in much the same way that the 1990s antimony between globalization and anti-globalization was broken by the development of practices of alterglobalization and theories of alternative modernity. We offer this issue, in that spirit, as a tentative first step. ■

The editors would like to thank the Polygraph Editorial Collective, as well as the members of the Political Ecology and Ecology and the Humanities working group

1 Isaac Asimov, "How Easy to See the Future!", *Asimov on Science Fiction* (New York: Doubleday and Company, 1981), 83.

2 H.G. Wells, "The Star," *Tales of Time and Space* (New York: Harper & Brothers, 1900), 57.

3 Rand Paul, television interview, *Good Morning America*, ABC, May 21, 2010.

- 4 Fredric Jameson, *The Seeds of Time* (New York: Columbia University Press, 1994), xii.
- 5 Bruno Latour, "Will Non-humans Be Saved? An Argument in Ecotheology," The Henry Myers Lecture, 13 April 2009, <http://www.bruno-latour.fr/articles/article/113-MYERSECOTHEO.pdf>, 4.
- 6 Karl Marx, *Capital*, Vol. 1 (New York: Penguin Classics, 1992), 638.
- 7 See, for instance, his *Marx's Ecology* (New York: Monthly Review, 2000).
- 8 See Johan Rockstrom et al., "A safe operating space for humanity," *Nature* 461 (September 2009): 472–475. The other two critical thresholds are the species extinction rate and climate change. In five of the remaining seven boundaries we are either approaching or only slightly over the proposed boundary, and in the last two, total atmospheric aerosol load and chemical pollution, the relevant boundary condition has not yet been quantified.
- 9 See, for instance, David Murphy, "The Net Hubbert Curve: What Does It Mean?," The Oil Drum, June 22, 2009, <http://netenergy.theoil Drum.com/node/5500>.
- 10 Imre Szeman, "System Failure: Oil, Futurity, and the Anticipation of Disaster," *South Atlantic Quarterly* 106, no. 4: 806–807.
- 11 K. William Kapp, *The Social Costs of Private Enterprise* (New York: Schocken Books, 1971), 231.
- 12 Qtd. in Andrew Simms, *Ecological Debt: Global Warming and the Wealth of Nations* (New York: Pluto Press, 2005), 90.
- 13 Joan Martinez-Alier, "Environmental Justice (Local and Global)," *The Cultures of Globalization*, ed. Fredric Jameson and Masao Miyoshi (Durham, NC: Duke University Press, 1998), 313.
- 14 Jose Maria Borrero Navia, *The Ecological Debt: Testimony of a Reflection*, tr. Blanca Elena O'Byrne O and Janeth Frances Cracraft (Cali, Columbia: Fundación para la Investigación y Protección del Medio Ambiente, 1994), 13.
- 15 This aspect of the negotiation is highlighted in Richard Black's report for BBC News, "Developing Countries Split Over Climate Measures," BBC.co.uk, December 9, 2009. <http://news.bbc.co.uk/2/hi/science/nature/8403745.stm>.
- 16 Qtd. in "Future Not for Sale: Climate Deal Rejected," ABC.net.au, December 19, 2009. <http://www.abc.net.au/news/stories/2009/12/19/2776604.htm>.
- 17 James Lewis, "Sea-Level Rise: Some Implications for Tuvalu," *Ambio* 18, no. 8 (1989): 458–459.
- 18 Naomi Klein, "Climate Rage," *Rolling Stone*, November 11, 2009. Republished at <http://www.naomiklein.org/articles/2009/11/climate-rage>.
- 19 Ibid.
- 20 Klein, Naomi. "Haiti: A Creditor, Not a Debtor," *The Nation*, February 11, 2010, <http://www.thenation.com/doc/20100301/klein>; "Maplecroft's Climate Change Risk Atlas 2010 highlights vulnerable nations and safe havens," Maplecroft.com, March 9, 2009, http://www.maplecroft.com/about/news/climate_change_risk_list_highlights_vulnerable_nations_and_safe_havens_05.html.
- 21 Klein, "Climate Rage."
- 22 The quoted language is meant to evoke, among other references, the final scene of Al Gore's climate documentary *An Inconvenient Truth*, which makes precisely this appeal.
- 23 Vandana Shiva, *Soil Not Oil* (Cambridge, MA: South End Press, 2008), 15.
- 24 Ibid. 24.
- 25 James Hansen, "Twenty Years Later: Tipping Points Near on Global Warming," Guardian.co.uk, June 23, 2008, <http://www.guardian.co.uk/environment/2008/jun/23/climatechange.carbonemissions>.

- 26 Jamais Cascio, "Crimes Against the Future," *OpentheFuture.com*, August 6, 2007, http://www.openthefuture.com/2007/08/crimes_against_the_future.html. See also Jamais Cascio, "Climate, Cancer, and Changing Minds," *OpentheFuture.com*, May 2, 2006, http://www.openthefuture.com/2006/05/climate_cancer_and_changing_mi.html.
- 27 See, for instance, her February 25, 2010, talk on "Climate Debt" at the Canadian Centre for Policy Alternatives on YouTube. <http://www.youtube.com/watch?v=2FtrSql3vss>.
- 28 "Lawful excuse" connotes a British legal category, roughly analogous to self-defense in the U.S. Michael McCarthy, "Cleared: Jury decides that threat of global warming justifies breaking the law," *TheIndependent.com*, September 11, 2008. <http://www.independent.co.uk/environment/climate-change/cleared-jury-decides-that-threat-of-global-warmingjustifies-breaking-the-law-925561.html>
- 29 Mitchell Anderson, "Putting Global Warming Laggards on Trial." *DeSmogBlog.com*. November 22, 2008. <http://www.desmogblog.com/putting-global-warming-laggardstrial>.
- 30 Jaques Derrida, *Specters of Marx* (London: Routledge, 1994), 64–5.
- 31 Bruno Latour, "Why Has Critique Run Out of Steam?," *Critical Inquiry* 30, Winter 2004, 225–248.
- 32 Paul Ricoeur, *Freud and Philosophy: An Essay on Interpretation* (New Haven: Yale University Press, 1970), 34.
- 33 Eve Sedwick, "Paranoid Reading and Reparative Reading, or, You're So Paranoid You Probably Think This Essay Is About You," *Touching Feeling: Affect, Pedagogy, Performativity* (Durham, NC: Duke University Press, 2002), 126.
- 34 Fredric Jameson, "Symptoms of Theory or Symptoms for Theory?," *Critical Inquiry* 30 (Winter 2004), 404.
- 35 See <http://pewresearch.org/pubs/828/global-warming> and <http://pewresearch.org/pubs/876/religion-america-part-two>.
- 36 "Another Global Warming Myth Explodes," *Fox Nation*, January 5, 2010, <http://www.foxnation.com/global-warming/2010/01/06/another-global-warming-myth-explodes>.
- 37 Michel Foucault, "What is Critique?," *The Politics of Truth*, eds. Sylvere Lotringer and Lysa Hochroth, (New York: Semiotext(e), 1997).
- 38 Ibid.
- 39 "BP boss admits job on line after Gulf oil spill," *Guardian.co.uk*, May 14, 2010, <http://www.guardian.co.uk/business/2010/may/13/bp-boss-admits-mistakes-gulf-oil-spill>.
- 40 "Underwater Oil Plumes Disputed by BP CEO Tony Hayward," *The Huffington Post*, May 30, 2010, http://www.huffingtonpost.com/2010/05/30/underwater-oil-plumesdis_n_595015.html.
- 41 See, for instance, this description of the global temperature anomaly for January 2009 from Kevin Drum at <http://motherjones.com/kevin-drum/2009/02/chart-day-2142009>: As you can see, there are only two areas in the entire world that are colder than the 1951–1980 average: eastern Siberia and the American northeast, home to virtually the entire national press corps. So naturally cold temps are getting lots of media play. But, in fact, the rest of the world continues to be substantially warmer than in the recent past, and if you look at entire latitudes, even in this chilly month every single one is warmer than in the past.
- 42 See *Monthly Review* 49, no. 11, April 1998.
- 43 David Harvey, *Justice, Nature and the Geography of Difference* (Cambridge, MA: Blackwell, 1996), p. 194.

- 44 John Bellamy Foster, *Ecology Against Capitalism* (Monthly Review Press, 2002), 72.
- 45 Hans Mangus Enzensberger, "A Critique of Political Ecology," *New Left Review* (March–April 1974), 17.
- 46 Ibid.
- 47 Ibid.
- 48 "The Size of the Problem," *USA Today*, June 3, 2010, http://www.usatoday.com/news/nation/2010-06-02-oil-spill_N.htm.
- 49 Teresa L. Ebert, *The Task of Cultural Critique* (Urbana: University of Illinois Press, 2009), 33.
- 50 Arturo Leyte. "Leaving Immanence: Art From Death." *Polygraph* 15/16 (2004): 15
- 51 Ibid. 29: Warhol's undertaking is the inverse of Picasso's Cubist rifling amongst the entrails of image. The empty geometric structures of the Cubist figure are rendered in repeated surfaces, as if such iteration announced that that is all that is, that there is no internal structure. Picasso may have more or less consciously continued to search for a truth, while Warhol knew no such truth was possible, or was only possible as the infinite or serialized reiteration of the same thing, since finally there is no such thing. If there is a thanatic impulse in Warhol's series of electric chairs it is no less present in the series of Campbell's soup cans...
- 52 Additional examples from *Running the Numbers* can be found at Jordan's website at <http://www.chrisjordan.com/gallery/rtn>.
- 53 See Burtynsky's website at <http://www.edwardburtynsky.com>.
- 54 Peter Koch, "Frame and Contiguity: On the Cognitive Bases of Metonymy and Certain Types of Word Formation," *Metonymy in Language and Thought*, eds. Klaus-Uwe Panther and Gunter Radden (Amsterdam: John Benjamins Publishing Co., 1999), 154.
- 55 Lawrence Buell, *The Environmental Imagination* (Cambridge, MA: Belknap Press, 1996), 285.
- 56 All eleven shorts, including "Plastic Bag," are available at <http://futurestates.tv>.