

Chapter 5

With Friends like These Wilderness and Biodiversity Do Not Need Enemies



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The human footprint is growing at the expense of other species and the integrity of ecosystems (Ewing et al. 2009; Butchart et al. 2010; Brashares 2010). What poet of the wild Snyder (1990) called the growth monster remains not just unchecked but embraced in theory and practice by virtually all human societies (Wright 2004). There is nothing new in this situation—it has been accelerating for several millennia and especially the last few hundred years. Nor is there anything new in the arguments made by those who justify it (Czech 2013; Nadeau 2006). Although the expression of self-righteous greed is rarer and sounds extreme amidst claims by business and political leaders that biodiversity is important, human behavior has not changed much judged by its consequences—we take more and more and continue to squander a heritage that we can never replace. Each species humans destroy diminishes not only the Earth community, but all who remain.

Those leading the conversion and reduction of more and more life into profit have always had apologists. In the mid-1990s conservationists responded to a wave of attacks on wilderness and biodiversity (Burks 1994; Callicott and Nelson 1998). In the last few years concerted attacks have again emerged and although they are shopworn, riddled with factual errors and marbled with hierarchical values, they also appear well-funded, get lots of media attention, and are advanced with great energy, as if careers depended on them.

In this essay I address five criticisms of wilderness and biodiversity conservation: that wilderness and biodiversity protection goals must be curtailed and tied to human interests in order to be achievable; that humans have always been everywhere and there is no real wilderness left; that our effects on other species, and our efforts to dominate or turn the world into a garden, are natural and therefore acceptable (if not good); that protected semi-wild and wild areas separate humans from the world; and

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that human wants (as a whole or a group) should take precedence over the survival of all other species and entire ecological communities.

As a practical matter, factual assertions in arguments are entwined with the values, purposes, and meanings their proponents wish to further, but the distinction is important in analyzing arguments. Factual assertions about how the world works are generally subject to testing against reality. Individuals, groups and even whole cultures, may make factual assertions not based on testing for cause and effect but based on compatibility with the purposes and meanings they hold. The distinction between knowledge and mere belief is important and led Senator Daniel Patrick Moynihan to say that people are entitled to their own opinion but not their own facts (Hume 1995). Critics of conservation often have their facts wrong. But even values, meanings, and purposes—plainly human creations—may be subject to a kind of testing over the longer term: cultural orientations are more or less adaptive, serving the actual and long term’s needs of groups or undermining them. Rappaport (1976: 65) observed that economic and political institutions which undercut “biological well-being... may be considered maladaptive.” Many of the values and purposes advocated by critics of conservation are problematic from this perspective.

(1) *Wilderness and biodiversity protection goals must be curtailed and tied clearly to human interests in order to be achievable.*

Justly unhappy that the world’s governments are not meeting biodiversity protection goals for 2010 established by the Convention on Biological Diversity, a group of pre-eminent scientists write that it is “critical” that goals for protecting biodiversity “be grounded in the real interests that people have in benefits provided by biodiversity” (Perrings et al. 2010a: 323). In response to criticism that their view, if adopted, would leave much biodiversity vulnerable because many species or ecosystem functions might not clearly serve human interests, they state that because arguments on behalf of biodiversity’s intrinsic value have failed to sway policy-makers a new argument is needed based on human self-interest (Perrings et al. 2010b: 1745). Kareiva and Marvier (2007) make similar arguments.

Scientists are not street fighters though at least one editorial in *Nature* (Grantham 2012) encouraged them to learn the trade. Nonetheless it is disappointing that some scientists seem prepared to backtrack on goals that scientific findings point to simply because such findings and the values that make such findings relevant fail to persuade. Scientific research is critical—it describes how the world works. This knowledge is essential to maintaining and recovering healthy species’ populations and ecological integrity. But other kinds of “argument” are needed to persuade societal decision-makers—arguments that hinge on the capacity of groups seeking a policy to reward and punish decision-makers more effectively than opponents. Carrots and sticks include campaign contributions or the equivalent (Duffy 2007; Kamieniecki 2006); bringing media resources to bear to define issues and acceptable solutions (Duffy 2007; Kamieniecki 2006; Layzer 2007; Libby 1999); economic leverage—such as that possessed by banks too big to fail or by mass popular unrest (Kamieniecki 2006; Lindblom 1977; Grover 1989; Gonzalez 2001); control of information (Cogkianese 2007); and personal relationships often based on long-shared interests (Gonzalez

2001; Dye 2014; Domhoff 1998, 2012; Furlong 2006). These “arguments” help or hinder decision-makers in gaining or keeping the power they desire and therein is their persuasiveness.

The intrinsic value argument has not failed conservation; it is conservationists’ failure to organize enough people willing to act on behalf of biodiversity that has limited realization of conservation goals. The consequences of biodiversity loss for various human groups are important in organizing groups to act, but so are moral arguments (Kelman 2001; Stern 2000), emotionally compelling stories (Polletta 2006), the creation of a strong community around biodiversity (Staggenborg 2011), and other factors including transcending narrow notions of self-interest (Johns 2009; Rodman 1977).

Justifying biodiversity protection based on narrowly conceived human well-being (essentially cost-benefit analysis) ignores that benefits are often difficult to quantify and that invoking future generations is not the same as political pressure in the here and now: the future does not organize and bring political pressure.

There is no escape for conservation from the need to organize a strong political force.

(2) *Humans have always been everywhere, have fundamentally changed virtually every place on Earth, and so there are no pristine lands (wilderness) to protect.*

There is no question that the collective human impact on other species and ecosystems is significant and has been accelerating rapidly since the availability of huge quantities of energy that magnify our actions (Rands et al. 2010; Goudie 2005). We have been causing extinctions since we left Africa 60,000 years ago (e.g. Barnosky 2008; Rule et al. 2012; McGlone 2012), although once the initial and significant large-animal extinctions accompanying human arrival had occurred the impacts were much more limited (McKee 2012; Alroy 2001). Low population, low population density, stone technology, and a largely egalitarian social order which checks aggrandizing schemes of conquest, accumulation, and other sorts of domination (Johnson and Earle 2000; Boehm 1999) probably contributed to this. With the transition to agriculture humans began a more systematic conversion of ecosystems to human use, reducing species’ populations and range, causing extinctions, and generally simplifying ecological interactions. The fossil-fueled industrial revolution further ratcheted up the reach, intensity, and pace of human colonization and exploitation of ecosystems and other species (for overviews see McNeill 2000; Goudie 2005; Simmons 2007). If large mammals have been particularly hard hit because of their range needs or perceived threat to humans, then forests have been the hardest hit ecosystems over the longer term (Williams 2003). But the oceans’ biota has also been seriously depleted from overfishing and other destructive fishing practices and many areas have been damaged by the marine equivalent of clearcutting, i.e. bottom trawling (Halperin et al. 2012; Brewer and Peltzer 2009; Norse and Crowder 2005). A review article (Jones 2011) about whether the human impact on the Earth merits the designation of a new age—the Anthropocene—notes that humans have significantly altered just over half of the ice-free land mass. About 25% remain wildlands, another 20% or so are “semi-natural,” and the rest are in crops, grazing range, or heavily settled. And even wild

lands and the oceans are affected by global forces such as climate change, airborne pollution, human noise, and the like.

The human impact is not only significant but negative: humans have diminished biological diversity and disrupted, degraded, and in many cases simply destroyed ecological function. Yet critics of the existence of wildlands and waters are mistaken on two major points: that wildlands no longer exist in any meaningful way because of human influence and that this state of affairs is long-standing, uniformly pervasive, and no restoration is possible.

Critics of the existence of wildlands usually posit a red herring: that wilderness by definition means pristine or completely without human imprint. The U.S. Wilderness Act of 1964 (PL 88-577 §2(c))—the product of over a decade of work by conservationists—does not use the term pristine, but instead deliberately uses the term untrammeled (Scott 2001); a term very close to the original meaning of wildlands as undomesticated or self-willed land but not necessarily “pristine” (Vest 1985). Many conservation groups around the globe do focus on protection of largely intact lands and waters, often high in biodiversity, from further damage including loss of native species, but they are not concerned with purity (Noss 1991; Soulé and Terborgh 1999), any more than civil libertarians cease defending the US Bill of Rights just because they are routinely ignored by governments. Such places are wild and biologically critical. They offer the clear opportunity for halting further degradation, for healing, and for expansion and connection to other areas as part of a conservation strategy to hold the line against continued population and consumption growth—growth that has already overshot Earth’s carrying capacity (Ewing et al. 2010). These areas, moreover, are not the exclusive focus of conservation (e.g. Layzer 2011). But claims that humans are not simply destroying habitat but creating new habitat (e.g. Kareiva et al. 2011) are disingenuous and obfuscating—they ignore the comparative biological poverty of, for example, tree farms to forests and monoculture croplands to grasslands.

Largely intact places won’t solve every conservation problem but they are essential to preserving wildness, biodiversity, and ecological communities (Noss 1993). To work successfully, such places require good enforcement, size (bigger is better), the right location, good buffers, and appropriate connections (e.g. Jeffrey 2012; Laurence et al. 2012; Gilbert-Norton et al. 2010; Lester et al. 2009; Hilborn et al. 2006; Oates 1999). Two *Nature* editorials (2011, 2012) call for addressing outside effects on wildlands and protected areas, as have earlier scientific and strategic assessments (Noss 1993; Soule and Terborgh 1999). Conservation is not served by counseling surrender to further encroachment.

The notion that wilderness no longer exists and that substantial biodiversity losses must be accepted as inevitable is often accompanied by claims that people have always been everywhere and therefore nothing can be done. It is also often linked to the idea that significant human presence and impact means that humans are in charge—“already running the whole Earth” (Marris 2011: 2). Such literary imagination is coupled with massive denial about the overwhelming biological damage resulting from human management.

This view of perennial and ubiquitous human presence fails to discern the difference between a few million humans and seven billion, between dense and sparse settlement, and between differing levels of energy use, resource extraction, and technology; it also ignores humanity's short career compared to length of time other species have been present in places. Many areas of the Earth have been until recently relatively free of human presence, or were occupied only seasonally or transiently; and many areas were used only in a limited way, e.g. for sacred purposes (Simmons 2007; Diamond 1992; Denevan 1992; Klein 1989; Harris and Ross 1987; McNeill 1986; Ellen 1982). Claims, for example, that the Amazon is a human constructed garden are dubious; settlement has been sparse (McMichael et al. 2012). The same can be said for many other regions such as the boreal forests.

Although the cycle of intensification (population growth > more "resource" extraction to support more people > more population growth > more intense extraction) has its roots in the Neolithic (Johnson and Earle 2000; Harris 1977; Lenzen et al. 2012; Essl et al. 2011; Chew 2001), in the last few hundred years, with greater populations and densities, more intrusive technologies, more energy at human command, self-aggrandizing elites making ever greater demands, the vaster reach of population centers into distant areas, and denser trade networks, the effect on wildlands and biodiversity has been globally devastating (e.g.; Goudie 2005; Tucker 2000; Smil 2013). Globalization is not new but its reach and intensity is (Chase-Dunn and Hall 1997; Chase-Dunn and Anderson 2005). To argue that this extreme and relatively recent state of affairs must be accepted despite its biological destructiveness is like arguing that colonial domination and exploitation must be accepted despite their obliteration of other peoples and cultures.

That we will never, "return a substantial part of the Earth to a preindustrial state" (Kareiva and Marvier 2007: 56) is an example of either Occidental (Enlightenment) fatalism or an effort to rationalize the current grim biological trend in the interests of those who benefit disproportionately from degrading the natural world. The inertia behind the current human trajectory is tremendous. But apartheid was overthrown, slavery in most of the world has been abolished, and women in much of the world enjoy improved conditions. Major change *is* possible. In some parts of the world the restoration of species and ecosystems has increased the store of wildness.

Species can be repatriated. Biologically degrading influences such as industrial incursions, roads, pollution, and exotic species can be halted. Injuries can be healed. Processes that have been suppressed or disrupted (such as fire, migrations, and succession) can be re-established, enhancing resilience. Humans can try to cast their interventions to mimic natural healing, while recognizing the limits of knowledge and wisdom, and try to minimize the need for future intervention or intensive management, allowing for eventual self-regulation. That means restoring very large areas and/or linking them to mostly intact areas.

Such restorative intervention contrasts with the violence done to species and ecosystems by large-scale industrial or agricultural resource extraction—extraction based on the exercise of power and the object of control. Large-scale resource extraction refuses to acknowledge that other species are ends-in-themselves and not merely

means for human purposes, or that human well-being is antithetical to power and control over others. Humans have a place and it is not as lords of creation.

For all of the ink (soy-based included) spilled over the idea of wilderness the problem is plain: humans are inadequate to the task of managing nature. Humans lack the knowledge, intelligence, and wisdom. Though management has achieved goods, to rely on it to ensure the future of biodiversity it is like resting our fate on the failed Biosphere Project. Former American Association for the Advancement of Science President and US presidential advisor, John Holdren, noted that, “I’m a great believer in science and technology, but the notion that science and technology will ride to the rescue is a pernicious one. Believing in technological miracles is usually a mistake” (2007: 1068). A vibrant Earth requires large, intact, and connected places (including restored places), off limits to exploitation by industrial and agricultural peoples whose inability to control their numbers and wants has been more than amply demonstrated in the last 12 thousand years.

(3) *Humans are part of nature and so our effects on other species, our efforts to dominate, and to turn the world into a garden are all natural.*

How can human behavior be anything but part of nature? We are the products of evolution, we breath air, eat, and are otherwise dependent upon the Earth. Unless one invokes the supernatural then by definition everything we do is natural but that doesn’t get us very far. If we reflect on the use of *natural* and *unnatural* we see that they designate something as good or not good (a cultural judgment) and also seek to transform the designation into a property of the world rather than a human creation. Much human behavior is not genetically determined and is instead regulated mostly by culture (shared emotions, attitudes, and worldviews shaped by experience and transmitted from one generation or group to another). Where does this leave us? We must address the consequences for the living world of culturally shaped behavior.

For conservationists, behavior which converts, diminishes, or destroys the Earth’s biodiversity and ecological systems is morally wrong—we have no right to cause extinctions or take so much for one species anymore than we have a right to enslave others (once culturally right and considered natural). As a practical matter it is stupid (maladaptive, per Rappaport 1976) to destroy systems we depend on and may not be able to fix once broken. As Leopold suggested, it’s unintelligent to throw parts away when tinkering with something important (1993).

Acknowledging humans as part of nature does not and cannot justify our ever-growing footprint. Like the colonial domination of some peoples by others, the human domination of other species and ecosystems, although common in recent millennia, shares the same attributes as intra-human colonialism for its victims: visiting brutally stupid exploitation, displacement, and death. We might better ask whether the societal machinery that converts so much of the world into commodities for one species—and disproportionately for a few millions at the very top of social hierarchies—is adaptive, healthy, or just. For James Lovelock (1979: 145) the answer is clear: “(A)ll attempts to rationalize a subjugated biosphere with man in charge are as doomed to failure as the similar concept of benevolent colonialism. They all assume that man is possessor of this planet, if not the owner, than the tenant.”

Lovelock is certainly not alone (Ehrenfeld 1979; Rodman 1977). Brand's (1968) appropriation from another of the notion that we are "godlike" and should get good at it, and Marris's (2011) view that we can be competent gardeners, are just more examples of the same hubris that generates extinction, ocean dead zones, dust bowls, desertification and depleted soils, superfund sites, climate change, and nuclear power plants built in tsunami zones. We are about as godlike as a bull in a china shop (Wright 2004).

The human conceit of being godlike rests on assumptions that gained dominance among European elites in the Enlightenment and have since spread to most elites and others. These assumptions include notions that all problems are solvable by human reason, technology, or changes in social organization; that if humans face great difficulties we will rise to the occasion; and that resources are infinite or there will always be substitutes (Ehrenfeld 1979: 16–7). Ehrenfeld (1979), Peet (1992), Dietz and O'Neill (2013) and the Global Footprint Network (Ewing et al. 2009) have documented the mounting evidence undermining these assumptions. Our capacity to problem-solve is limited by the world's complexity. Our pretensions to divinity are belied by our limited ability to grasp how the world works well enough to manage it, even if we actually had the requisite wisdom, judgment, and political will. As a result our "solutions" are inadequate and generate new and more complex problems that take more resources to address, in part because there is more inertia to be overcome (Ehrenfeld 1979: 107).

Bad "choices" are the result of structural constraints not just limited wisdom and intelligence. The few thousands of decision-makers at the head of government and business institutions are heavily invested in the current order and generally resist changes that could undermine their positions of power. Their awareness is also constrained by the insulation that technology and hierarchy provides from the consequences of their actions (Johnson and Earle 2000; Jackson 1987; Harris 1977). When an elite is united it may effectively constrain societal choices by controlling problem identification, formulation, and the range of acceptable solutions (Guber and Bosso 2007; Layzer 2007; Lindblom 1977). Elites also influence or control the machinery of repression: laws, police, armies, prisons (e.g. Singer 2007; Klare 2002).

Societal structure constrains choices in other ways. Dorothy Dinnerstein argued that it is not just our psychopathology that leaves us unable to confront what we are doing to Earth and ourselves; the societal process is now too, "mindlessly complex, ...unwieldy and ... overcentralized" that even if we saw how bad things are it is questionable we could do much with the existing decision making apparatus. It is part of the problem; only relatively small groups can express healthy emotion and reason (1976: 254). Searles (1960: 78–101) and Shepard (1982) argue that a sense of self and a healthy identity depend on close contact with nonhumans and the broader ecology during development. Only with such contact can we connect with and be grounded in reality, recognizing, inter alia, that we are kin with the rest of the world. Absent such connection people are left with the experience of human hierarchy as the only model of order.

(4) *Humans are part of nature and reserves of various sorts separate us from the natural world.*

It is not the advocates of placing some lands and waterways off limits to human exploitation who have separated humans from the rest of the world. Agriculture and civilization did that (Lancy 2008; Berman 1989; Shepard 1982; Harris 1977; Searles 1960). Agricultural and industrial societies depend on the systematic effort to control and reshape ecosystems for the benefit of humans at the expense of other species. They enhance human carrying capacity by subjugating others, just as imperial Britain reshaped the Indian economy to serve British rather than Indian interests (Smil 2013; Chase-Dunn and Anderson 2005; Goudie 2005; Chase-Dunn and Hall 1997; Rodman 1977).

Colonization and concomitant exploitation divides humans from the rest of the world just as surely as it divides peoples and nations despite the effort to mask it under Orwellian terms such as “interdependence.” Colonization markedly ratchets up the intensification of extraction from and conversion of the natural world, generating ever larger-scale and more hierarchical human societies. Devaluing and distancing from what is conquered is a psychological necessity (Grossman 2009; Fromm 1964). The ability to love and the drive to control are opposites.

Modern conservationists are not the first to lament the changes from forager to conqueror. Roman poet Ovid (1990: 71) wrote that once the Earth gave, “crops from fields unfurrowed/And fruits, and honey from a hollow tree./And no one scored the soil with sturdy ploughshares.” Human cleverness changed all that, bringing tragedy. A few hundred years earlier Tsu (1972, Chap. 29) asked: “Do you think you can take over the universe and improve it?/I do not believe it can be done./The universe is sacred./You cannot improve it./If you try to change it, you will ruin it.”

The idea of wilderness (self-willed land) emerged from the dualism that characterizes agricultural societies and their successors in order to describe those places not yet conquered (Turner 1980; Shepard 1982). Humans initiated the divorce, not bears or birds or rivers. In seeking to conquer the natural world, humans set themselves at odds with the Earth just as the slave-master is with the slave and the colonizer with the colonized (Jordan 1968; Fanon 1963). Other creatures’ homes and necessities merely constitute space or food that we covet. To merely stop thinking in terms of the wilderness/civilization dichotomy—as the wilderness debunkers ask us to do—cannot resolve the actual material separation resulting from the quest to dominate.

Calls to make wilderness and comprehensive biodiversity protection subservient to growth—as if more growth will solve inequality anymore in the future than it has in the past—is the language of conquest and colonization using different words. It rationalizes the death warrants of large, intact areas and of the species dependent on them such as large predators and wide-ranging species. Marginalizing wilderness and biodiversity protection negates the best insurance we have against human foolishness. Gardening can neither replace wilderness nor heal the self-inflicted wound of estrangement. Trying to make ourselves feel good about our overreach is like taking 19th Century nostrum for a life-threatening disease. To abandon wilderness

and large-scale restoration in the name of transcending dualism is to leave the Earth vulnerable to further impoverishment.

Those groups (e.g. Hopi, Hadza, Bushmen, Gwich'n) who seem to remain most connected with the Earth have small footprints and share some obvious attributes: they are few in numbers, lack dense settlements, and do not rely on industrial technologies and vast inputs of materials and energy (Johnson and Earle 2000). Most have been pushed to the margins of habitable land by more powerful societies and states. Can 7 billion adopt these attributes? Humans first went from foraging to agriculture despite poorer diet and increased disease because of population pressure (Cohen and Crane-Kramer 2007).

What, then, is the path toward healing our separateness if there is no return to the pre-Neolithic? This essay is not the place to set out a detailed vision or strategy to contain the machinery of control that separates humans from the world that gave them birth. But if wilderness is destroyed healing will become impossible. We cannot expect the path to reconnection to be led by those heavily invested in the status quo as some have suggested (Kareiva et al. 2011). The path forward is not about sacrifice. It is about recovering what we have long ago sacrificed—our wholeness and our connection to other life and our deepest selves. We traded these away for hierarchy and distractions in a deal we did not understand.

(5) *Human wants must take priority over the needs of other species, even to the point of extinction.*

The belief that human wants should have priority over the survival needs of species and the integrity of ecological processes is variously expressed but the end is always the same: humans have the right to alter the world for their benefit at the expense of other species regardless of the consequences: suffering, death, extinction, or the destruction of entire ecological communities. The Great Chain of Being has fallen before the Rights of Man, but it remains alive and thriving in human relations with other species.

That the Earth belongs to us rests on notions that we uniquely possess some attributes other species lack. Why these attributes are a suitable basis for elevating us to godhood is never explained because it would reveal the contest to be rigged. It is difficult to know whether the claim of specialness is based on a genuine if misplaced sense of achievement, or arises from a deeply compensatory impulse: like Gilgamesh, we are frightened by our mortality, feel insignificant in a very large universe, or, having divorced ourselves from our wild home, we feel lost and so create grand narratives in which we can be the hero.

The delusion that Earth belongs to us is not harmless like the notion that lightning manifests the anger of Zeus. It is more akin to the inaccurate claim that tiger bone or rhino horn have medicinal properties. Such claims rationalize violence, disrupt ecological relationships, and carry a high risk of extinction; this harm obtains even if the claims are true.

Claims by powerful states in the last century that they had the right to control other states or nations have lost legitimacy even though exploitation continues in different

forms and carrying capacity continues to be transferred from poor to rich (e.g. Tucker 2000; Klare 2002; Lawrence 2008; Monbiot 2008). Today we see plainly that past exploitation was based on power not on the merit of the colonizer. Colonialism is always violent. We can also see today how the human need to feel good about ourselves causes us to dress up the theft and murder of conquest. In 1870 the Big Horn Association of Cheyenne Wyoming published the following:

The rich and beautiful valleys of Wyoming are destined for the occupancy and sustenance of the Anglo-Saxon race. The wealth that for untold ages has lain hidden beneath the snow-capped summits of our mountains has been placed there by Providence to reward the brave spirits whose lot it is to compose the advance-guard of civilization. The Indians must stand aside or be overwhelmed by the ever advancing and ever increasing tide of emigration....The same inscrutable Arbiter that decreed the downfall of Rome has pronounced the doom of extinction on the red men of America.

Colonialism is nowhere more apparent and thriving than in the relationship between humanity and the rest of the Earth.¹ Humans take what they want with limited restraint and dress it up like the Big Horn Association (Kareiva et al. 2011; Marris 2011). That there is any restraint at all is the result of conservation success: protected areas that are *actually* protected, laws that are mostly enforced such as the Convention on International Trade in Endangered Species or the US Endangered Species Act. This restraint is the exception and it must be constantly defended.

Rationalizing Nature's colonization does not hide the ugly realities. Remaking the Earth in the human image is violent: forests and grasslands are transformed into tree farms, pasture, subdivisions, and endless corn and soybean fields or rice paddies. Inconvenient species are persecuted. Ecosystems are altered for the benefit of one species and the community as a whole is discounted. Colonization diminishes the capacity of lands and waters to support diversity, replacing many species with a few or even one. Colonization means human numbers grow and consumption increases at the expense of other species' numbers, range, diversity, and even existence. The self-regulation of the community as a whole is replaced with control by a part for its own exclusive benefit; and spontaneity, liveliness, and biological integrity are diminished. The tiger is caged or dead and the oxen bred to plod endlessly before the plow. We do it because we can.

Most of the destruction inflicted by colonizing nature is unnecessary. We have long had the means to control our numbers though some have always had fears about who will fill the armies and workshops and support the old. Much collective human consumption is unnecessary as well—a vain effort to control our anxiety over mortality (Solomon et al. 2004). The world's poor do not simply aspire to full bellies, they want what the middle classes have.

There was a time when humanity was grounded enough to see ourselves as part of the cycle of things. We were troubled by killing (Shepard 1973). We could see ourselves in the other and sought reassurance in ritual that acknowledged the "sac-

¹I am indebted to Rodman (1977) who to my knowledge first used the analogy of colonialism to describe the post-forager human relationship to the rest of nature.

rifice” of the other. That insight and the imperfect restraint it brought is gone. The factory farms are invisible and death is not real.

No other animal is as behaviorally flexible as we are. We have choices. Other species do not. It may be that most humans will never be biocentric. But if we do not behave as if we were, if we continue on the current path, we will impoverish the Earth and at last become the “stewards” of a graveyard. We cannot degrade Nature without doing the same to ourselves. To call ethical rules which rationalize human lordship is to make the notion of ethics meaningless.

In the End...

...What matters is not endless blather over gardening, pristine wilderness, how long people have occupied a place, or how much damage they have done. What matters is this: humans are behaving like an asteroid hitting the Earth in slow motion. We are destroying what we could never create. The Earth did recover (after 10 million years) from the Cretaceous extinction 65 million years ago; it was not the end of the Earth. But it was the end of many creatures. Is being an asteroid the great purpose of our species? To steal the lives and homes of millions of species and billions of creatures?

Almost two centuries ago an astute observer of human behavior said that a person is wealthy in proportion to what they can leave alone (Thoreau 1964: 335). By that measure societies which enshrine striving for wealth, power, and fame are desperately poor and needy. Our stomachs are full but we are hollow in our souls. In separating ourselves from the world by trying to control it we have created a hunger that things can never fill, though we keep trying. We have wounded our souls and our capacity for empathy and love. “This is what is the matter with us,” D. H. Lawrence wrote (1968: 504). “We are bleeding at the roots, because we are cut off from the earth and sun and stars, and love is a grinning mockery, because, poor blossom, we plucked it from its stem on the tree of life, and expected it to keep on blooming in our civilized vase on the table.” This is the great sacrifice we have made and it need not be.

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