How to Build an Eco-Functional Planet: the Paradoxical Assumptions Behind the Pervasive Belief that Market-Driven Managerialism is the Key to Our Ecological Future

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Abstract

The most recent World Conservation Congress in Barcelona revealed the power of a powerful emerging worldview in biodiversity conservation. This worldview is premised on the idea that biodiversity conservation and for-profit are naturally compatible and in fact are mutually supportive of one another. Market expansion is essential to biodiversity conservation, and biodiversity conservation is essential to market expansion, as long as both are carefully managed and co-ordinated by highly trained experts using the latest science and technology. Ultimately, this worldview imagines a global project in which the economic and ecological functions of our planet are optimally synchronized and human needs will be met through market mechanisms. In this essay I highlight the paradoxical, and frequently unstated, assumptions that inform this managerial market-driven worldview, while highlighting the ways in which it informs and represents specific conservation and development interventions. I then turn to the types of problems and obstacles these assumptions present to finding equitable and viable solutions to our current socio-ecological dilemmas.

By What Alchemy Indeed?

> One must ask by what alchemy have the names of those who see themselves as the defenders of the planet's biological heritage come to be linked in the same breath with the names of those who are more appropriately seen as its degraders.
>
> **Arjun Agrawal and Kent Redford**[2]

Over the past decade I have become part of a global networks of scholars, conservation practitioners, and community activists concerned about the commoditization of nature and culture in the context of biodiversity conservation. During this time there was a significant proliferation of protected areas around the world, which in many places entailed a corresponding intensification of protected area displacements (Brockington et al 2008). Though this process has not been thoroughly or systematically documented (Brockington and Igoe 2006), it has been accompanied by a visible and vocal presence of community-activists and their supporters at conservation venues, accompanied by a small explosion of journalistic and scholarly literature (Shahabuddin and Shah 2003; Chapin 2004; Dowie 2005 and in press; Cernea and Schmidt-Soltau 2006; Rangarajan and Shahabuddin 2006; Schmidt-Soltau and Brockington 2007; West Igoe and Brockington 2007). Thus displacement has become increasingly difficult to ignore in

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[2] From the introduction to Wildlife Conservation Society Working Paper #29, Protected Areas and Human Displacement: A Conservation Perspective. http://www.wcs.org/science, accessed December 15 2008.

conservation circles.[3] As Agrawal and Redford (2007: 16) point out, " If conservationists are unwilling to go where their moral compass should take them, their political future will drive them there." Indeed a number of conservation organizations have hired and/or collaborate with social scientists on questions of displacement and related issues (e.g. Brandon 2007, Grazio and Arroyo 2006 and Springer 2006).

These transformations can be seen as important advances in the realms of human rights and human livelihoods. However, I fear that we have focused too much on the question of displacement, while neglecting the larger political-economic contexts of these displacements and what these might help us to understand about the environmental, economic, and social dilemmas that we currently face. Such questions have hardly been addressed in the context of policy forums like the World Conservation Congress other events and venues related to transnational conservation. Instead we have allowed ourselves to be drawn into discussions and debates about what are essentially rhetorical questions. Do indigenous people really care about conservation? Do conservation organizations have an obligation to help alleviate poverty? How can we define not doing harm? Do anthropologists talk about controversial things as a way of advancing their careers? Is community aversion to displacement a myth? Do parks really harm people or do they benefit people? Are the local costs of conservation worth the global benefits? What are displacements anyway and how can we really know they are happening?

As we have debated these types of questions, much larger and more disturbing transformations have been afoot. Both Chapin (2004) and Dowie (2005) have noted the increased influence of corporations and corporate agendas on conservation organizations, while scholars like McAfee (1999) and Goldman (2005) have noted increasing overlaps and synergies between biodiversity conservation and market expansion and how these are related to the commodification of nature and human displacement. We have barely begun to relate these disquieting observations to a larger understanding of what it going on around us (but see Brockington et al 2008).

At the most recent World Conservation Congress these transformations appeared as an aesthetic and discursive sea change. Corporate displays dominated the entrance, while the conservation theater ran films with titles like 'Conservation is Everybody's Business.' Conservationists who had publicly decried the idea of 'nature paying its own way' hosted sessions of conservation finance. A conservation organization whose CEO characterized local resistance to conservation-induced displacement as a 'stalking horse' for extractive enterprise (Sanderson 2004) participated in a session in which biodiversity conservation was explicitly linked to the spread of extractive enterprise through the practice of environmental mitigation. The overall tenor of the event is captured in a celebratory account from the New York Times (Kanter, October 8 2008), "as I write this morning the World Conservation Congress is abuzz with how the conservation movement will continue to fail to achieve the objectives it has been seeking for decades unless it engages business and embraces business management techniques to further its goals."

A pragmatic-realist perspective would hold that these changes are occurring because free-markets are the most efficient mechanisms for allocating money and managing resources. Thus it will be necessary for conservation to compromise with capitalism and to imitate capitalist

[3] An early and especially accessible presentation of conservation-induced displacement is the documentary film, *Suits and Savages,* produced by Zoe Young

models to get the job done. However, the values and agendas of conservation will remain distinct from the values and agendas of the capitalist system that it imitates and depends upon for an ever-growing share of its finances. Conservation will continue to value nature for nature's sake, even as it participates in the commodification of nature and the spread of extractive enterprise. In reality, however, the conceptual and institutional intertwining of conservation and capitalism is now so global that no alchemy could keep the values and agendas of these two world-making projects from becoming similarly intertwined (Brockington et al 2008).

One of the foundational assumptions of these intertwined world-making projects is that managerial and market-driven approaches to conservation can create a world in which market expansion and planetary ecology can be synchronized and harmonized in ways that maximize profit (often conflated with human needs), while minimizing environmental harm (often conflated with the well-being of particular charismatic species). As these world-making projects have profound implications for human-environmental relationships on a global-scale, it is essential that we begin to gain greater clarity on these assumptions, the types of things they ask us to imagine about the world, and the types of relationships and practices they imply. It is equally important to ask what kinds of relationships and practices they are asking us to overlook.

Conservation is Everybody's Business?

> User-Friendly Database Makes Conservation Easier for Business
> **Headline from New York Times Coverage of the World Conservation Congress**[4]

The idea of synchronizing the environmental and economic function of our planet has lately been rendered more credible by the emergence of new types of technologies and related forms of media representation. GIS models and predictive software models are used to maximize the conservation impacts of protected areas while minimizing their economic costs (Brockington et al 2008: 3). Increasingly these technologies are used to design and implement interventions premised on the idea that market expansion will facilitate biodiversity conservation by financing it, and biodiversity conservation will facilitate market expansion by creating new types of value (Igoe forthcoming and Igoe et al forthcoming).

Increasingly these types of technologies are also used in the production of media spectacle, which presents environmental problems in ways that make them appear most amenable to market-driven solutions. Thus user-friendly databases, produced by the UN and the IUCN, with input from companies like Exxon-Mobil, Cargill Seeds, and Rio Tinto Mining Group, will allow "companies to make biodiversity a first step in any investment decision" (Kanter 2009). The creation of KMZ files for Google Earth lets viewers see high-tech representations of how specific landscapes can be managed to maximize their economic and ecological functions (Igoe forthcoming). A rapidly proliferating smorgasbord of interactive media, often linked to products like McDonald's Endangered Animal Happy Meals, links consumption to environmental

[4] http://greeninc.blogs.nytimes.com/2008/10/08/user-friendly-databases-make-conservation-easier-for-business/, accessed December 16, 2008.

awareness and increasingly inform popular understandings of environmental problems. As such they represent an expanding worldview, which is derived from the following truisms:

-- Protect the Planet with Every Purchase

Green consumerism can be understood on many levels. First, and most obviously, there are products that are branded according to imagined relationships between the consumer and 1) the environment (Carrier forthcoming); and 2) specific communities in other parts of the world (West forthcoming). Thus, the global overlap between coffee growing regions and biodiversity 'hotspots,' is presented as evidence that coffee is good for the environment and that buying coffee can help protect the environment and help stop global warming while helping rural people prosper[5] and protect their farms from elephants.[6] Global eco-tourism, a multi-billion dollar a year industry, encourages consumers to believe that they are saving the environment by traveling in airplanes (Carrier and McLeod 2005 and Neves forthcoming). More abstractly, conservation credit cards promise consumers that they can help protect the environment with every purchase, the more you spend the more you save (Igoe forthcoming). Most abstractly, ecosystems, and indeed the entire planet, are portrayed as giant service providers: offsetting carbon emissions, storing valuable genetic information, and providing opportunities for emotional and spiritual renewal. Taken to its logical conclusion, this perspective holds that "nature is money, and it is only the correct attribution of financial value that stands between the conservation of desirable biodiversity and its conversion into undesirable alternatives" (Sullivan in press).

-- Lost There, Felt Here

Distance is essential to the idea that environmental problems will best be solved through consumption and spending. Popular ideas of conservation revolve around distant and exotic landscapes, which are presented as fundamentally separate from the viewer (Nugent 1993; Igoe 2004; Igoe 2005). These landscapes, which are often popular tourist destinations, are usually imagined as uninhabited wildernesses or inhabited only by 'traditional indigenous people.' Threats to these landscapes are commonly portrayed as dark-skinned people, though not traditionally indigenous, who poach wildlife, burn rainforest, or attack it with chain saws (Nugent 1993 and Tsing 2005). The most emblematic example of this perspective is Conservation International's Lost There, Felt Here campaign, which features an online video of Harrison Ford of Indiana Jones fame having his chest-waxed for rainforest conservation. In an accompanying video, Ford explains that the destruction of tropical rainforest is a greater source of global warming than all the trucks, cars, and airplanes in the world combined. Nature is lost there, but that loss is felt here. The campaign offers consumers a simultaneous opportunity to help stop global warming and protect exotic ecosystems, while implying that this is a viable alternative to reduced fossil fuel consumption and all the complexities it would entail.

-- High Tech Science is the Key to Our Salvation

A close corollary to the previous truism is the idea that environmental problems are managerial problems. Only highly trained experts using 'the latest science' are equal to the task of

[5] http://www.conservation.org/campaigns/starbucks/Pages/hotspots_and_coffee.aspx, accessed December 15th 2008

[6] http://www.awf.org/content/solution/detail/3372, accessed December 15, 2008.

synchronizing the ecological and economic functions of our planet. Economic experts can determine the most profitable uses and transformations of nature, while environmental experts can determine how to achieve these in ways that promote biodiversity conservation and healthy ecosystems. Claims that coffee is good for the environment or that tropical deforestation is a greater source of global warming than fossil fuel emissions are believable insofar as they are the pronouncements of experts. When we buy online carbon offsets to neutralize a flight or a holiday get-together, experts provide the necessary calculations as well as the institutional infrastructure to make sure that the offsets actually occur. Experts likewise design alternative livelihoods for rural people displaced by biodiversity and accompanying extractive enterprise. The very technology that putatively makes these managerial interventions possible also provides the media representations that make them appear credible. Through online videos and Google Earth mashups, viewers can see how experts determine the most valuable ecosystems and by what criteria, they can see how values are brought forth in ways that simultaneously promote biodiversity conservation and economic growth, how local people prosper as a result, and how their purchase and/or contribution is directly connected to these virtual outcomes.

-- Ownership and responsibility are essential to healthy ecosystems

Only as legal owners can local people zone and/or sell land for conservation purposes. Only as legal owners can they enter into conservation easement agreements. Ownership is also putatively the only arrangement whereby local people will be able to see the natural value of their assets by entering into conservation-oriented business ventures and becoming purveyors of ecosystem services. As owners they will directly experience the value of those assets and thus take responsibility for the continued value of those assets by taking care of them (Igoe and Brockington 2007; Igoe and Croucher 2007).

-- Human beings are essentially rational maximizers

People will take care of anything that is valuable to them, and the best way to make something valuable to somebody is by giving it a cash value. Dark-skinned rural people, commonly portrayed as the most direct threat to the environments most essential to our ecological future, will only stop if they can see that it is in their immediate interest to do so (Igoe forthcoming). The best solution to global warming is to make carbon offsetting a new commodity that people can buy, invest in, and give to other people as presents. In this perspective, the role of people in solving environmental problems revolves around buying, selling, investing, and exchanging (which these days is more often what we do with gifts that giving and receiving them).

-- Everything is essentially exchangeable

This truism is probably the one most essential to the conceptual viability of the managerial/market-driven conservation worldview. Thus, for instance, it is widely assumed that people can exchange lives in ecologically valuable places for lives in less ecologically valuable places and land-based livelihoods for market-based livelihoods. In the broader institutional context of transnational development and conservation, social exchanges are commonly calculated by comparing the average annual incomes of people using a particular ecosystem

versus the value of the resources if they were sold or preserved for the provision of ecosystem services and ecotourism (McAfee 1999; Goldman 2005; Sullivan in press). Most fundamentally, this perspective holds that the environmental and social impacts of consumerism and extractive enterprise can be offset through economic exchange. Environmental and social 'mitigating services' now accompany extractive ventures such as the Chad-Cameroon Oil Pipeline (Brockington et al 2008) and Laos' Nam Theun Hydroelectric Project (Goldman 2005). It informs new types of complex software models, which putatively allow for an optimal distribution of business and conservation around the world, while maximizing economic and social needs (Brockington et al 2008: 3). These make it possible to imagine the ultimate worldmaking project: a management regime that synchronizes the ecological and economic functions of the entire Earth (cf. Luke 1997).

-- Markets will absorb displaced people

Managerial approaches to conservation and economic growth entail reorganizing landscapes to optimize economic and ecological function, a process that often involves the relocation of people and animals.[7] It is usually assumed that relocated people will be absorbed by new types of market opportunities, which will make them more prosperous and less dependent on environmentally-harmful land-based livelihoods (McAfee 1999; Goldman 2005; Igoe and Brockington 2007; and Igoe and Croucher 2007).

Problems with this Perspective

> Our own survival depends on understanding not only are we coupled to our own conceptualization of ecosystems and ecological order, but also to embodiments of our own ways of thinking about and acting on them.'
> **Gregory Bateson**

While the managerial/market-driven worldview has doubtlessly raised people's awareness of environmental problems, while facilitating the global spread of conservation and development, it is nevertheless highly problematic. It is fraught with systemic concealments that make it difficult to see the complexity of environmental problems or to imagine alternatives to market solutions. Most fundamentally it conceals important relationships and connections that are the basis of most socio-environmental problems and essential to imagining their solutions.

-- Consumption, Conservation, and Commodity Fetishism

The idea of saving the world through consumption must be understood through the Marxist notion of commodity fetishism. Commodity-fetishism refers to a context in which people purchase and consume commodities without any knowledge of the social, political, ecological, and historical relationships that produced them. The social and ecological costs of these relationships are likewise hidden from view. Thus, Endangered Animal Happy Meals and

[7] Such as elephant relocation to help make way for the Nam Theun Hydroelectric project. http://www.independent.co.uk/environment/nakai-plateau-dammed-to-oblivion-531195.html, accessed December 15, 2008.

associated web-based products teach nothing about the socio-environmental costs of the global fast food industry (see Schlosser 2001). Most visitors to world-famous eco-tourist destinations will almost certainly learn nothing about the historical displacements of people and their livelihoods entailed in the creation of these wilderness landscapes (Igoe 2004; West and Carrier 2004). Their experiences are also likely to play down the deep ecological footprint of air travel in the tropics[8] and the global fossil fuel industry that made their spiritual renewal possible (Carrier and McLeod 2005). Even as carbon offsets become a regular feature of tour packages, consumers still see nothing of the social and ecological impacts of mono-crop agro-forestry regimes on rural communities living in rainforest ecosystems (Grandia 2007). In this day and age, even imagined relationships between consumers and the environment, as well as those between consumers and distant communities, are produced without reference to the relationships and processes that made it possible to experience them as real. Thus the certification of private parks for conservation (Brockington et al 2008) or the certification of fair trade coffee (West forthcoming) symbolizes that a product was produced and consumed according to a specified set of relationships and processes, but the certificate itself was produced through relationships and processes that are largely invisible and not understood by most consumers.

-- Distance = Detachment?

As Cronon (1995) wrote in "The Trouble with Wilderness," popular representations of the environment and environmental problems have western audiences wanting to 'get back to the wrong kind of nature.' Landscapes worth saving are imagined in terms of what Nugent (1994) refers to as eco-domains: putative a-social landscapes that loom large in the Western imagination such as the Amazon Rainforest, the Serengeti Plain, and the Himalayas. Western consumers will spend significant sums of money to escape the mundaneness of their everyday lives by visiting eco-domains. They will also purchase commodities and give away money in the hopes of protecting them. In imagining their relationships to the environment in these terms, however, western consumers are unlikely to develop direct connections to the proximate and mundane places in which they live their everyday lives. As such, they are also unlikely to develop an embodied sense of the connections between their lives and lifestyles and our current socio-environmental dilemmas (cf. Milton 2002; Carrier 2003; and Adams 2004). The reality of this disconnect is starkly visible in the American public's lack of concern with Post-Katrina New Orleans. The impacts of Katrina on the Gulf Coast of the United States is probably the most visible and visceral example of the socio-ecological mess that we have managed to get into (the other being 9-11). The event starkly revealed that the human and environmental costs of a fossil-fuel-based/free-market/consumer economy are profound and right at our doorstep. And yet, the question of Post-Katrina New Orleans was notably absent from the most recent presidential elections in this country, let alone any public reflection on lessons-learned from the event. Instead the people and places devastated by the storm have been consistently portrayed as not worth saving and undeserving of sympathetic assistance (Igoe 2006; Giroux 2006).

-- Verifying the Unverifiable

[8] http://www.newscientist.com/article/mg19826623.300, accessed December 15, 2008.

Another aspect of the managerial/market-driven worldview is that most of what it tells us is unverifiable. People buying fair trade coffee, conservation salsa, or carbon offsets have no way of making sure that the relationships and processes that the products promise actually operate in real life as promised by product marketing. The matter becomes even more complex when dealing with large-scale interventions. Thus World Bank experts assured an audience at the World Conservation Congress that the Nam Theun Hydroelectric Project was planned and executed according to expert understandings of the world, and thus on the whole a very positive thing. Economic experts had determined that the best way to bring economic growth to Laos was by building hydroelectric dams. These dams flooded rainforest ecosystems, but the bank made sure that new protected areas were created as an environmental mitigation. People were obviously displaced by both the dams and the protected areas, but they were resettled in new villages where their basic needs have been met and they are being absorbed by new livelihood activities such as commercial agriculture, agro-forestry, and basket weaving. According to World Bank social mitigation experts, all the relocated people were satisfied. If people in the audience knew a relocated person who was dissatisfied then they should contact the World Bank right away. Similarly, my work in Tanzania revolves around an African Wildlife Foundation's Heartland's Initiative, which has used experts to identify key conservation landscapes and determine the needs of key species within those landscapes. The organization has partnered with African Governments to manage these landscapes in to ensure that 'the needs of people and landscapes are balanced.' This entails getting people to move out of areas that are essential to wildlife migration while helping to foster new types of ownership and enterprise that will allow them to prosper from wildlife conservation. Media representations claim that these interventions will transform these landscapes so that they function 'ecologically and economically' (Igoe forthcoming). While such claims fit seamlessly with the logic of the managerial/market-driven worldview, they are ultimately unverifiable. For western consumers a purchase or donation is the only verifiable act in the complex web of socio-ecological relationships and processes in which they are participating. More concretely, interventions like Nam Theun and African Heartlands have all of sorts socio-ecological impacts that do not register in the ways that they are ultimately represented to the world. We currently lack any sort of systematic mechanisms for understanding their aggregate socio-ecological effects beyond what we are shown by the managerial/market-driven worldview. This is an especially alarming development, since interventions such as these come in all shapes and sizes and are proliferating on a global scale. Their socio-ecological effects are also proliferating on a global scale, and thus need to be understood.

-- *The Inherent Alienability of Private Property*

The idea that ownership is the key to successful conservation is informed by De Soto's *The Mystery of Capital*, which has profoundly influenced financial and social policy in the Global South over the past decade. De Soto argues that poor people actually control a great deal of wealth, but that they are unable to realize the value of that wealth due to the lack of legally guaranteed property rights. It is essential that these obstacles to the poor realizing the value of their capital be removed, so that they can join the global market economy by turning their property into collateral and capital. Conservationists extend this argument to say that rural people in the Global South will only value nature once they are junior partners in conservation-oriented business ventures (Igoe 2007; Igoe and Brockington 2007; Igoe and Croucher 2007). As

Mitchell (2008) points out, however, the value of property in the global capitalist economy is derived from its inherent alienability. I have also documented cases in which property, ostensibly owned by a community, gained new types of value because it could be re-zoned. Community-members remained the legal owners of the land in question, but they lost access to that land because of the ways in which it was rezoned (Igoe and Croucher 2007). What matters here are new types of legal mechanisms that render land and other natural resources either alienable or re-zonable. Thus Mitchell documents the ways in which people in colonial Egypt resisted the introduction of private property because more socially embedded forms of ownership prevented the alienation of natural resources by outside interests. By the same token, allotments, trust deeds, and other forms of reregulation have been the preferred mechanisms by which American Indians have been divested of their land since the end of the 19th Century (Biolsi 1999). Similar processes are currently occurring in northern Tanzania in the form of land trusts, conservation easements, and community-based Wildlife Management Areas (Igoe 2007; Igoe and Croucher 2007). It is also important to note that: 1) these types of property relationships consistently foster new types of exclusion and marginalization at the community level; and 2) poor people are most likely to a) lose capital due to poor opportunities at the bottom of the investment ladder, and/or b) consume capital in response to the contingencies that are part and parcel of their daily lives.

-- Redefined Rights and the Decline of the Social Contract

Images of happy prosperous rural people and pristine nature, combined with feel-good messages about socially responsible business and green-consumerism, do a great deal to conceal the ways in which the managerial/market-driven worldview is essentially undemocratic. Ideas about rights have changed in subtle, but crucially important, ways. Thus, when I expressed concerns about the Nam Theun Hydro-Electric Project at the World Conservation Congress, a World Bank economist stridently responded that "the people of Laos have the right to capitalist development, and we have no right to tell them that they cannot have it." The kinds of rights to which he was referring in this statement are obviously quite different than a traditional notion of rights guaranteed by a social contract between citizens and a state. In the context of managerial/market-driven conservation and development the role of the state as social-arbiter falls always, and individuals are increasingly recast as "self-governing actors operating within centrally prescribed frameworks and rules" (Castree 2007). Managerial interventions engage with rural people as stakeholders, guiding them through choices concerning relocation and other forms of difficult and highly complex socio-cultural transformations that usually appear to be driven by powerful forces beyond their understanding and control. These interventions usually require people to 'participate' in workshops and seminars, where trained experts use specialized techniques and technologies in guiding their perceptions of these transformations and the choices available to them. Choices on offer are commonly presented as preferable to the things that would probably happen if people chose to boycott the process. In order to avail themselves of these choices, people must have their 'capacities built' and their 'consciousnesses raised.' By these means they can become wage earners, investors, service providers, and micro-entrepreneurs. These types of interventions usually also require people to demonstrate new types of values and commitments, by taking responsibility for things like wildlife conservation, debt-repayment, business management, and the exclusion of 'outsiders' from natural resources. Of course, unlike the social contract they replace, these processes guarantee nothing. People can lose their property and make

bad investments. They can be taken advantage of by unscrupulous employers or lose their jobs during times of economic downturn. Others, often the majority, may simply be excluded altogether. These people are often displaced and criminalized as their lives and values stand at odds with the managerial interventions that seek to govern them and the natural resources on which their livelihoods depend. Significantly, these kinds of processes are often conceptualized and discussed in the language of exchangeability. As Alcorn and Royo (2007) point out, human rights are increasingly recast in terms of 'social tradeoffs.'

-- The Politics of Disposability

An essentially important question, though one that is rarely addressed, is what happens to the people who are excluded from these world-making projects. Local food production systems, both for subsistence and the market, are frequently seen and treated as an anathema to managerial/market-oriented biodiversity conservation and economic development. On the one hand, small-scale food production systems compete with wildlife and/or are aesthetically inconsistent with the production of conservation landscapes cum eco-tourist destinations. At the same time, they are often seen as an inefficient use of places that could be more profitably managed in terms of eco-system service (Sullivan in press), eco-tourism (McAfee 1999), and commercial agriculture. A common idea is that agricultural intensification will allow people to live in denser settlements away from landscapes that are essential to conservation. In all of these scenarios, markets will absorb people living in areas targeted for conservation and/or development, while also delivering food and other essential commodities that they previously produced for themselves. The problem here is twofold: 1) quite often market opportunities cannot possibly absorb the number of people displaced by particular interventions or transformations; and 2) consequently, people often do not have the money to purchase food that they previously produced themselves. This situation is complicated by current trends and shocks in the global capitalist economy, and the possibility that markets may (and often do) fail to deliver food and other essential goods. It appears, therefore, that managerial/market-driven world-making projects are contributing to the creation of transnational lumpen underclass that is essentially disposable to the world economy. These people and their lives are for the most part invisible to the ways in which these projects are presented at policy forums and in the media. Nevertheless, their material existence remains a fundamental problem for managerial/market-driven conservation and development solutions, one that stubbornly refuses to go away.

-- For Everything Else There's MasterCard

Another major pitfall of the managerial/market-driven worldview is its inability to recognize that the Earth does not take MasterCard. Thinking of the world as a giant service provider in which all things are exchangeable does not change this fact. The simple fact of the matter is that we cannot offset all the environmental damage we do because we will run out of space in which to do this mitigation. So for instance, economic/ecological projections suggest that if we use afforestation to offset air-travel carbon emissions at current rates of growth, we will run out of places to plant trees by 2050 (Brockington et al 2008: 177). At the same time, monoculture agro-forestry estates displace biodiversity in rainforest ecosystems. Land used to grow bio-fuels cannot be used to grow food. The use of oil to fight wars to secure more oil hastens the decline of the world oil supply. It is unlikely that markets and market signals will remedy these realities.

In fact, it appears that we may be entering an era of 'Disaster Capitalism,' (Klein 2007) in which the social and ecological impacts of late market capitalism simply present new opportunities for growth and investment in the realms mitigation, security, surveillance, bio-prospecting, risk management, humanitarian aid, and tourism to name a few. This state of affairs is made possible by what Tsing (2005) has labeled 'a global economy of appearances,' in which images of particular relationships and processes are increasingly mistaken for actual relationships and processes (for details see Brockington et al 2008: chapter 9). This economy makes it is possible to believe that our planet can be managed such that its ecological and economic functions are optimally synchronized and human needs will be met by the market. As long as people, especially policy-makers, continue to subscribe to this dangerous fantasy, it will be difficult to find solutions to these problems that move beyond the looming paradox of disaster capitalism. Doing this will require new social mechanisms and alternative systems of knowledge that will allow people to make decisions that put social needs and healthy ecosystems ahead of profits and institutional imperatives.

-- Other Values, Other Knowledge

In our 'economy of appearances' the total web of relationships embodied in our ways of thinking and acting about the environment is nearly impossible to discern (Harries-Jones 1995). Thus it is equally difficult to understand how the choices that we make impact on the material environment and other people's lives. As such it is possible, if not inevitable, for people to have 'green sensibilities' and a strong commitment to social justice while consistently doing things that are bad for the environment and that perpetuate inequality and human suffering on a global scale. This reality also makes it nearly impossible to see and understand the connection of our relationships in ways that would make it possible to learn from our mistakes. Unfortunately, this worldview also informs interventions that are rapidly displacing other value systems and other ways of knowing and interacting with the world.

These displaced knowledge and value systems are often grounded in more embodied and reciprocal relationships to the environment. This is not to say they exist perfect harmony with nature or hold the secret key to resolving our environmental problems. However, it is certainly the case that they are connected to ways of knowing and interacting with the world that have largely been lost in the global economy of appearances. Should we ever come to understand that managerial/market-driven approaches to socio-environmental problems often paradoxically exacerbate the kinds of problems they are meant to resolve, these other way of knowing and valuing the world will be essential to finding alternative approaches.

Creating contexts in which many ways of knowing and valuing the world can thrive will require much more democratic approaches to conservation and development than is currently the case. True democracy and diversity of values presents a level of uncertainty beyond what most managerial/market-driven world making projects are able to accommodate. As Charles Besançon, head of the protected area program for the UN Monitoring Center, recently opined about user-friendly databases, "companies are always talking about wanting certainty. We expect that these tools as they evolve and are continually updated will become the standard" (Kanter 2008). There is no question that knowing more about the ecology of our planet and how it works is indispensable to finding viable solutions to our current socio-environmental dilemmas. However we must always be mindful of the difference between knowing the world and seeking

to render it wholly predictable for the purposes of profit and centralized management. World-making projects informed by the managerial/market-driven worldview continuously displace and transform diverse forms of human-environmental relationships in the name of producing a more predictable, profitable, and eco-viable planet.

As the growing movement for bio-cultural diversity reminds us, diverse ways of knowing and valuing the environment are embedded in human-environmental relationships and cannot be maintained ex-situ. They are displaced, erased, and transformed along with local food production systems and other systems of human-environmental interaction in which they are embedded. Thus we appear to be making yet another exchange, though one that is rarely acknowledged: perceived certainty for the accumulated stock of human ways of knowing and interacting with the environment. In asking ourselves whether this is a fair exchange there are two things that are important to keep in mind: 1) the appearance of certainty is achieved through techniques and technologies that commodify culture and nature, while systematically concealing the considerable socio-ecological costs of these processes; and 2) healthy ecosystems are defined by diversity and complexity, and hence uncertainty. This applies to the human systems to which ecosystems are integrally and inextricably linked. In continuously drawing our attention away from this singularly important relationship, the managerial/market-driven worldview allows us to believe that it is possible and desirable to save the world through consumerism and capitalist expansion. Paying closer attention to the unstated assumptions of this worldview, and their inherent paradoxes, will allow us to make more informed and efficacious decisions about our relationships to the environment, as well as our relationships to other people and their relationships to the environment. This essay hopefully represents a small step in that direction.

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