

Debate

Nature™ Inc.: Changes and Continuities in Neoliberal Conservation and Market-based Environmental Policy**Murat Arsel and Bram Büscher**

ABSTRACT

Nature™ Inc. describes the increasingly dominant way of thinking about environmental policy and biodiversity conservation in the early twenty-first century. Nature is, and of course has long been, ‘big business’, especially through the dynamics of extracting from, polluting and conserving it. As each of these dynamics seems to have become more intense and urgent, the capitalist mainstream is seeking ways to off-set extraction and pollution and find (better) methods of conservation, while increasing opportunities for the accumulation of capital and profits. This has taken Nature™ Inc. to new levels, in turn triggering renewed attention from critical scholarship. The contributions to this Debate section all come from a critical perspective and have something important to say about the construction, workings and future of Nature™ Inc. By discussing the incorporation of trademarked nature and connecting what insights the contributions bring to the debate, we find that there might be what we call an intensifying dialectic between change and limits influencing the relations between capitalism and nature. Our conclusion briefly points to some of the issues and questions that this dialectic might lead to in future research on neoliberal conservation and market-based environmental policy.

INTRODUCTION

‘Nature is dead. Long live Nature™ Inc.!’ This rallying cry is the (unstated) inspiration behind many environmental policies today. It is argued that new and innovative methods are necessary to respond to the many environmental problems the world is facing, and capitalist markets are posited as the ideal vehicle to supply these. Indeed, market forces have been finding their way into environmental policy and conservation to a degree that seemed

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unimaginable only two decades ago. Payments for ecosystem services, REDD and carbon trade, conservation marketing and conservation finance mechanisms such as biodiversity derivatives and species banking are just some of the market mechanisms that have soared in popularity in recent years, despite — or perhaps because of — the ongoing financial crisis (Bücher and Arsel, forthcoming 2012). Moreover, several major market-based environmental policy statements have been developed that are likely to affect environmental conservation and social realities in many parts of the world in the coming years. Among the most prominent of these are the influential ‘The Economics of Ecosystems and Biodiversity’ study (TEEB, 2010)¹ and the recent United Nations ‘Towards a Green Economy’ report and initiative (UNEP, 2011),² which is slated to play an important role in the upcoming ‘Earth Summit 2012’ to be held in Rio de Janeiro.³ It is these types of activities, policy statements and their related ideologies in the context of contemporary capitalism that the maxim ‘Nature™ Inc.’ aims to capture and critique.

Following these developments, recent years have seen a major boom in academic debates questioning the neoliberal market panacea in environmental policy and conservation. The contributions to this *Development and Change Forum* Debate section offer a representative selection of some of the major arguments in these debates, while taking these further to present and uncover important new trends and insights. With one exception,⁴ they were presented at the ‘Nature™ Inc.? Questioning the Market Panacea in Environmental Policy and Conservation’ conference held from 30 June to 2 July 2011 at the International Institute of Social Studies in The Hague, which brought together nearly 250 scholars, activists and policy makers. Hence, we make no claim to cover all sides of the argument or all aspects of the issue. While the conference featured heated discussions on whether the application of market mechanisms to environmental problems is always and everywhere unwelcome, this Debate section features no paeans to the market and none of the contributors begin from an intellectual standpoint that considers markets as either inherently good or the (only) realistic option for policy making. Rather, they are united by their critical engagement with the neoliberalization of nature, yet build upon the premise that Nature™ Inc. is never one-sided or straightforward and that its deeper understanding necessitates multiple viewpoints, epistemologies and methodologies as well as their continuous cross-fertilization.

Acknowledging the tentative and refractory nature of ‘neoliberal capitalism’ and its relationship with nature, however, is no licence for

1. See also the paper by MacDonald and Corson in this Forum issue.
2. See the Assessment of this report by Dan Brockington in this Forum issue.
3. Obviously the list could be extended. The recent failure of the UNFCCC climate change Conference of Parties in Durban, South Africa in December 2011 to come up with legally binding reductions is also relevant here; see below.
4. The exception being Holly Buck’s paper on geoengineering.

open-ended, unengaged criticism and an ‘eye of the beholder’ attitude. We agree, alongside authors in this Debate section, with Jamie Peck (2010: 15) that ‘just because neoliberalism does not, indeed cannot, satisfy... absolutist, hyperbolic criteria [e.g. that neoliberalism is not even, logical, systematic, etc.], this does not mean that it is a figment of the (critical) imagination’. Rather, we have to dissect, and indeed embrace, the unevenness, the ‘ill logics’ and ‘unsystematics’ in order to come to a deeper understanding (Berman, 1982; Quarles van Ufford et al., 2003). This is what the overall Debate section and this Introduction aim to do. More specifically, in this Introduction we aim to highlight some important recent developments in the world of Nature™ Inc. and the critical political ecology critiques these have engendered to provide a platform for the other contributions. We ask what fresh insights they have produced and what new problems, trends or issues they have uncovered and pointed out.⁵

This is, we believe, a timely exercise. More than ever, we need dialogue and interaction regarding the ways in which Nature™ Inc. is being created by various actors or emerging, sometimes unwittingly, from their interactions as they seek to deal with urgent and interrelated crises of economy, finance and environment. To provide impetus to the debate, we have focused the Debate section on the theme of ‘change and continuity’ in order to tease out what new dynamics are occurring in the world of Nature™ Inc. and what new analyses and critical insights they have inspired. While this theme itself is well rehearsed and — in relation to capitalism — builds on important work by scholars such as David Harvey (2006) and Neil Smith (2008), amongst others, we believe it remains prescient for two reasons. First, the dynamics of extracting from, polluting and conserving nature are becoming increasingly intense and urgent with an ever-accelerating rate of change under contemporary hypercapitalism (Brockington and Duffy, 2010; Kovel, 2002). This rate of change, as is well known, leads to continuous institutional and organizational renewal, innovation and destruction (e.g. Harvey, 2006: 96–8): it therefore remains important to critically follow up on recent dynamics, such as the aforementioned TEEB study, the Green Economy project and other institutional and organizational forms of Nature™ Inc. Second, the capitalist mainstream — in response to these changes and their environmental and social contradictions — is frantically seeking ways to off-set extraction and pollution and looking for (better) mechanisms of conservation, while increasing opportunities for the accumulation of capital and profits. This leads to other massive changes in capitalism’s organizational

5. This is necessarily a partial exercise. The literature is by now so large that no introductory article can hope to cover all the nuances and insights, as evidenced by recent synthesizing pieces (Castree, 2008a, 2008b, 2010a, 2010b, 2010c and 2011; see also Brockington and Duffy, 2010; Büscher et al., forthcoming 2012; Dressler and Roth, forthcoming 2012). See also the influential earlier piece by McCarthy and Prudham (2004) for discussion of this problematique.

forms and institutional diversity, particularly as they relate to increasingly contested ecological and social limits.

It is in this vein that we want to call attention to what seems to have become an intensifying friction in the relation between capitalism and nature: that between change and limits. What we mean by this is that ecological and social limits, as well as the idea of limits, seem to increasingly — albeit inherently unevenly — shape contemporary changes (i.e. institutional and organizational forms) in global capitalism and, vice versa, that continuous and dynamic change in global capitalism seems to be responding to or thriving on (overcoming) ecological limits and the idea of limits. While the ideas behind this dialectic between change and limits are not new (see Benton, 1989; Burkett, 2005; Kovel, 2002, amongst others), we believe that giving it renewed and explicit attention can lead to new insights and questions for research. In the ensuing pages, we build up to this argument in two main segments. We start by delving into the evolving world of Nature™ Inc., specifically in order to tease out changing ideas about nature and its ongoing and trademarked incorporation into global capitalism. This discussion shows that a renewed attention to the dialectic of change and limits is necessary, a theme which we will then explore by discussing the changes and continuities in Nature™ Inc. uncovered by the contributions to the Debate section. The conclusion posits new questions for future research on neoliberal conservation and market-based environmental policy.

NATURE, TRADEMARK, INCORPORATED

Incorporated Change and Change Incorporated

Nature™ Inc. consists of three elements — ‘nature’, ‘trademark’ and ‘incorporated’ — that structure our discussion.⁶ Starting with the last element, Nature™ Inc. follows a long line of (seemingly) unusual dynamics, things, relationships and processes ‘incorporated’, from ‘Social Inc.’⁷, ‘Food Inc.’⁸ ‘Green Inc.’ (Macdonald, 2008) and ‘Ethnicity Inc.’ (Comaroff and Comaroff, 2009) to a more generic ‘Life Inc.’ (Rushkoff, 2011) — to name but a few. Karl Polanyi (1944) would not have been surprised. He long ago predicted that if social life were embedded within market transactions, life, land and nature, amongst others, would become transformed into fictitious commodities through their reoperationalization as ‘accumulation strategies’ (Smith, 2007). And this has become exactly the point. With many actors

6. We discuss each element separately for purposes of analytical clarity, which inevitably simplifies the complex and interdependent relationships between them.

7. See <http://socialinc.nl/>. This outfit has an interesting slogan: ‘join the market of conversations!’.

8. See <http://www.foodincmovie.com/> (accessed 17 November 2011).

pushing ‘nature’ to become ever more ‘incorporated’, the idea of ‘natural capital’ takes centre stage in discussions on how nature needs to be tweaked, changed and packaged to make it amenable to ‘a new breed of investor . . . [who] believe they can make money out of saving the planet’.⁹ The task for political economy/ecology is to decipher and interpret the relations and processes hidden, compromised and changed by the process of incorporation (Harvey, 2006: 83) while providing avenues for alternative conceptualization and practice. This task needs to be informed by the awareness that the process of incorporation, as well as other correlated ones such as ‘the conquest of nature, the domination of nature, the exploitation of nature are . . . derived from real human practices’ (Williams, 2005: 84). That is to say, the creation of fictitious commodities out of nature is not only made possible by unequal relations at every scale in human communities, but it also exacerbates them (see also Fletcher, this issue).

Despite the (warranted) indignation prevalent in the critical literature on neoliberal conservation, the creation of new (fictitious) commodities from nature and its services, as Peluso (this issue) argues, is not surprising or unexpected given the constant need for capitalism to expand its reach into new spheres of accumulation. What is worth investigating more closely, as argued by MacDonald and Corson (this issue), is the ‘striking reduction in the opposition to the idea of a natural world defined as capital’, at least by mainstream environmental policy initiatives. One prominent example of such a global policy initiative is the aforementioned TEEB study. Launched in 2007 during a meeting of the G8 + 5 environment ministers (see MacDonald and Corson, this issue), TEEB is built on a long history of the natural capital concept within ecological economics¹⁰ and recently launched a website called the ‘Bank of Natural Capital’ which ‘tries to communicate the core concepts explored in the study, including why and how we should value nature’.¹¹ Natural capital, the most important core concept, is explained as follows: ‘We all understand the concept of financial capital. We pay for things we find valuable. Natural capital is the extension of that concept to environmental goods and services’.¹²

While we doubt that ‘we all understand the concept of financial capital’, that is probably not a major concern for TEEB, which has moved beyond a ‘study’ to facilitate and stimulate those who agree that seeing nature as natural capital is essential for its salvation.¹³ The aim is to bring investors and (the conservation of) nature closer together so that the former can see the latter as a legitimate target for the deployment of business acumen. Obviously, this initiative is not original, and many of the contributions to

9. See: <http://www.natureinc.org/background.htm> (accessed 17 November 2011).

10. Costanza et al. (1997) was arguably the most influential study to popularize the term.

11. See: <http://bankofnaturalcapital.com/category/teeb-study/> (accessed 29 October 2011).

12. See: <http://bankofnaturalcapital.com/category/natural-capital/> (accessed 29 October 2011).

13. See: <http://www.teebweb.org/AboutTEEB/Personnel/TEEBStructure/tabid/1042/Default.aspx>, especially the remark about TEEB Phase III (accessed 11 December 2011).

this issue show that similar initiatives are fraught with contradictions and paradoxes (Bracking, McAfee, Clausen and Longo, Münster and Münster, Milne and Adams, amongst others), while Holmes argues that even these characteristics are themselves perverted through the act of ‘philanthrocapitalism’ which further ‘allows conservation to support capitalism by giving it legitimacy and new market opportunities’. In short, it is *Nature™ Inc.* — not nature — that appeals to ‘investors’, meaning all those ‘hard-headed types who view investment in sustainable development as good business strategy’.¹⁴

Converting nature into a form of capital and making it attractive to investors is of course only one step in a much larger, albeit uneven political economic project, that of establishing the supremacy of the logic of capital accumulation over society’s relationship with nature. Hence, it is no surprise that UNEP’s Green Economy report sees a basic commonality amongst many of the major problems facing humanity — it names ‘climate, biodiversity, fuel, food, water, and [finance]’ but it is clear that the list could easily be expanded — namely that solving these problems necessitates thinking in terms of ‘capital’:

The causes of these crises vary, but at a fundamental level they all share a common feature: *the gross misallocation of capital*. During the last two decades, much capital was poured into property, fossil fuels and structured financial assets with embedded derivatives. However, relatively little in comparison was invested in renewable energy, energy efficiency, public transportation, sustainable agriculture, ecosystem and biodiversity protection, and land and water conservation. (UNEP, 2011: 14, emphasis added)

Specifically, what is necessary is better (which the report basically defines as ‘more’) investment which could be channelled away from areas that have essentially distorted the idealized neoliberal logic of the marketplace — ‘property, fossil fuels and [derivatives]’ — towards the real need of the world, i.e. solving global environmental problems. However, in order for this to happen, nature needs not only to be converted to natural capital but also to become encapsulated within appropriate ‘enabling conditions’ (see also Bracking, this issue). Policies and regulations, according to the UNEP report, have long created ‘perverse incentives’ — those that benefit unsustainable activities — and thus need to change:

Existing policies and market incentives have contributed to this problem of capital misallocation because they allow businesses to *run up significant, largely unaccounted for, and unchecked social and environmental externalities*. To reverse such misallocation requires better public policies, including pricing and regulatory measures, to change the perverse incentives that drive this capital misallocation and ignore social and environmental externalities. (ibid.: 15, emphasis added)

14. See: <http://www.natureinc.org/background.htm> (accessed 17 November 2011). It is perhaps interesting to add here that these type of investments usually depend on public subsidies to liquidate markets. Thanks to Sarah Bracking for this addition.

Here, the incorporation of nature takes two meanings. First, nature needs to be rendered a distinct ‘corpus’, an ‘entity’ that stands outside of society and economy. This is necessary in order to correct ‘capital misallocation’ because effective allocation of resources requires the investor to know exactly — not in terms of quality but also quantity — what is being traded. Thus, echoing Adorno (in Graham, 2007: 92) who argued that anything that ‘cannot be counted and measured ceases to exist’, TEEB asserts that ‘you cannot manage what you cannot measure’.¹⁵ The implicit message is that the underlying logic of the current economic system is fine but that its practical operationalization — i.e. capitalism’s organizational and institutional forms — needs to change so that nature and nature’s components are ‘given value’. Second, and following, the acknowledgement of this distinct ‘nature’ as a separate entity which capital can devour requires its dissolution into ‘bite-size’ chunks in the shape of various goods, functions and services that nature provides. This reduction of complex ecosystems into tradable commodities is meant to simplify the complexity inherent in the task of measurement and valuation argued to be necessary for effective management (Burkett, 2005; McAfee, this issue; Milne and Adams, this issue).

The authors of the TEEB study acknowledge that even when reduced to various goods, functions and services, the valuation of nature is unlikely to be fully accurate. Yet, their belief in the price mechanism is so strong that they issue a bold warning to those who argue that the complexities of nature’s valuation are too great and who might as a result question the innately benign nature of the logic of capitalist accumulation. The message is clear: any price, even if flawed and inaccurate, is better than no price:

In general, however, one should not shy away from providing the best available estimates of value for a given context and purpose and seeking ways to internalize that value in decision making. Indeed, the TEEB study calls for assessing and internalizing such values wherever and whenever it is practical and appropriate to do so. *A failure to do so is unacceptable: namely, to permit the continued absence of value to seep further into human consciousness and behaviour, as an effective ‘zero’ price, thus continuing the distortions that drive false trade-offs and the self-destructiveness that has traditionally marked our relationship with nature.* (TEEB, 2010: 12, emphasis added)

This quote again emphasizes that contemporary capitalism’s logic is deemed to be fine, but that its organizational and institutional operationalization needs to (and can) be changed to focus on the issues that really matter to life on earth: the social and the environmental. These should no longer be treated as ‘externalities’ but internalized in the system itself. This strategy, we believe, can be described by the following metaphor: humans have over time created a complex political economic spaceship called capitalism, which has as its inherent feature that it colonizes, alienates and violates the basic stuff of life (social and environmental issues) by treating them as ‘externalities’ or

15. <http://www.teebweb.org/Home/tabid/924/Default.aspx> (accessed 29 October 2011).

mechanical ‘units of production’ (cf. Merchant, 1983). This, however, does not lead to the conclusion that the spaceship needs to come ‘down to earth’, but rather the opposite: the earth (the social and environmental) needs to be brought into this alien(ating) spaceship.¹⁶ The fundamental problem here becomes apparent: trying to solve inherent contradictions of a system by further bolstering that same system.

Trademarked Logics

The above discussion indicates, building on and extending Ben Fine’s (2009: 888) idea of ‘zombieconomics’, that current capitalism is starting to show signs of a zombie system, a system ‘both alive and dead at the same time’. Alive, because it ‘aggressively and crudely, if not savagely’ perverts and absorbs other logics and modes of production. Dead, because it has ‘nothing new to offer other than parasitic extension of its principles to new applications’, such as the further extension of its logic into nature conservation and environmental policies that are supposed to counter the negative environmental effects of that same logic. In turn, these logics are protected, legalized and institutionalized by particular systems of power and associated symbols, which leads us to the ‘™’ syntax in Nature™ Inc. Following Haraway (1997: 7), we are interested in this ‘trademark’ as ‘specific, asymmetrical, congealed processes — which must be constantly revived in law and commerce as well as in science — that give some agencies and actors statuses in sociotechnical production not allowed to other agencies and actors’. In other words, it marks particular power relationships and symbolisms that not only allow the system to further expand and remain legitimate, but that even celebrate the zombie element of the system by making it seem not perverse that serious global environmental problems become new (and exciting!) frontiers for capital accumulation.

For example, there was no perceived contradiction in the visit of the Dutch Crown Prince to Greenland in May 2011, at the invitation of WWF, to plead for ‘sustainable’ extraction of gas and oil when they come within reach once the ice-layer has melted due to climate change.¹⁷ And while there, he could have joined one of the new tourist companies specializing in ‘extinction tourism’. As noted by journalist Stephen Leahy: ‘tourism companies are now using climate change as a marketing tool’, so we must all ‘hurry’ to ‘see the polar bears, penguins, Arctic glaciers, small pacific islands before

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16. One might of course argue that a dramatic reduction of capitalism’s impact on nature could be made by establishing strict boundaries (i.e. caps) within which market forces (i.e. trade) could be used. Yet capitalist forces persist in escaping regulatory mechanisms that might produce meaningful results (Kovel, 2002).
17. <http://nos.nl/koningshuis/video/240009-duurzaam-naar-bodemschatten-groenland-zoeken.html> (accessed 29 October 2011).

they disappear forever due to global warming'.¹⁸ Yet, this logic can only be sustained so far. After all, the reason that capitalists pursue Nature™ Inc. in the first place confirms Castree's point that they do understand that 'the "constructed ecosystems" of capitalist countries "cannot be allowed to deteriorate or collapse without courting ecological disaster"' (Castree, 2001: 203, citing David Harvey, 1996: 185–6). Or perhaps more appropriately: capital's relationship with (natural) frontiers is a dialectical one in the sense that these frontiers are created both by undermining the conditions necessary for capital's continued expansion and by attempting to mediate this process through this same expansion (Büscher, forthcoming 2012).

Hence, the '™' after nature can partly be understood within the context of attempts to correct the 'second contradiction of capitalism' (O'Connor, 1998). In other words, the sociotechnical processes that Haraway refers to are part and parcel of capitalism's attempt to overcome its flaw of simultaneously overconsuming and underproducing the conditions which it requires to flourish. Thus, while Storm (2009) is correct that capitalism cannot be counted upon to correct its fundamental ecological flaws, there is evidence that there are genuine attempts being made (or made possible) at the interface of capital, advanced science and innovative technology. Trademarking nature and its constituent processes 'naturally' follow its incorporation, while both of these require continuous, massive reorganization and change to facilitate and create new avenues for capital accumulation (Harvey, 2006; Schurman and Kelso, 2003).

Thus we have entered an era where corporations can (so far unsuccessfully) seek trademarks even on human genes. Within this context, Clausen and Longo demonstrate how an 'improved' salmon can be marketed as a solution to ever-growing demand both for the 'body' (corpus?) of fish as nutrition and the population of fish as an indicator of a healthy ecosystem. Similarly, Buck discusses some of the far-fetched technical possibilities being theorized within the geoengineering literature that until recently would have been found only in science fiction. Yet, ideas that seemed to be at or beyond the limits only recently are now becoming serious Nature™ Inc. markets in their own right, which in turn provides one reason for postponing or perverting drastic action in relation to serious environmental problems.¹⁹ This, Kovel (2002: 81) neatly explains, is not merely a logical corollary of contemporary capitalist conditions but also inheres to the intractability of our contemporary ecological crisis and the 'limits' it presupposes: 'since no one in fact can predict the outcome of the ecological crisis, or any of its constituent ecosystemic threads, the way is left open for optimistic denial,

18. See: <http://www.ipsnews.net/news.asp?idnews=40837> (accessed 17 November 2011).

19. Again, the recent outcomes of the December 2011 Durban climate change negotiations are a case in point. See: <http://www.guardian.co.uk/commentisfree/2011/dec/12/durban-climate-change-conference-2011-climate-change> (accessed 13 December 2011).

in short, minimization of the dangers, and inadequate responses taken for opportunistic motives rather than from a real appreciation of the problem’.

But there is another reason, and it brings us back to the slogan which opened this Introduction: ‘Nature is dead, long live Nature™ Inc.!’. *For it is only when ‘nature’ is dead that a full scale Nature™ Inc. becomes a possibility.* In other words, the ‘death’ of nature — with which we mean the reduction of nature to an inanimate, technocratically manipulable object — is a *necessary* precondition for the production of Nature™ Inc. (see also Smith, 2007). This is no new insight. Merchant (1983: 193) argued almost thirty years ago that:

The removal of animistic, organic assumptions about the cosmos constituted the death of nature — the most far-reaching effect of the scientific revolution. Because nature was now viewed as a system of dead, inert particles moved by external, rather than inherent forces, the mechanical framework itself could legitimate the manipulation of nature. Moreover, as a conceptual framework, the mechanical order had associated with it a framework of values based on power, fully compatible with the directions taken by commercial capitalism.

More recently, Sian Sullivan (2009) similarly argued that a non-animated, trademarked nature must be seen as a profound manifestation of ‘cultural poverty’ through the seeming incapacity to think of nature in anything but capitalist terms. Yet again, the death of nature, like the broader ‘market society’ society that Polanyi talked about, can only be sustained so far since, as the next section will argue, nature itself, as well as members of society who suffer from this reductionist view of nature–society relationship, continuously act against and challenge this worldview (e.g. Polanyi, 1944).

Nature as Actant

Finally, then, we come to engage with the last term: nature. If we wish to counter the ‘death’ of nature, we must not only interrogate *trademarked* nature *incorporated*, but interrogate and deal with the ‘lives of nature’, as Amita Baviskar (2011) so beautifully phrased it. During her keynote presentation at the Nature™ Inc. conference she remarked that ‘our conversation so far on Nature Incorporated has mainly focused on the “incorporated” part and not very much on “nature” except as a site where capitalism does its business. But we must remember that nature is an actant’. This too is of course not a new idea.²⁰ In an oft-reproduced quote, Marx emphasizes the agency of nature in his definition of labour as:

a process between man and nature, a process by which man, through his own actions, mediates, regulates and controls the metabolism between himself and nature . . . Through

20. See various chapters in Goldman et al. (2011) for interesting discussions on nature as actant.

this movement he acts upon external nature and changes it, and in this way he simultaneously changes his own nature. He develops the potentialities slumbering within nature, and subjects the play of its forces to his own sovereign power. (Marx, 1976: 283)

It is possible to read this in two seemingly contradictory ways. One, perhaps simplistic, old-fashioned but not necessarily inaccurate way would be to emphasize the increasingly dominant position of society over nature. Indeed, development has long been built around the idea that the agency of nature *needs* to be first awakened from its slumber to reveal its ‘potentialities’ and then tamed so as to allow the flourishing of human welfare. This would in turn be possible through the equally rude awakening of the ‘productive power [that] slept in the womb of social labour’ (Marx and Engels, 1992; Berman, 1982) with capitalism and modernity prodding both nature and society. Such a view has long dominated development policy and planning and Marx’s critics were no less sanguine about what development implied for nature–society relations. For example, a defining characteristic of the ‘traditional society’ for W.W. Rostow was its ‘pre-Newtonian attitude to the physical world’ (1960: 4) which imposed relatively fixed limits to the expansion of economic output. It was with the Newtonian revolution that these limits could be lifted, with nature coming under systematic ‘productive manipulation’ (ibid.), paving the way towards economic development, which takes the ‘death of nature’ described above as a precondition for its ‘success’.

However, with the arrival of the 1970s, it became increasingly difficult to ignore the fact that nature was not really dead and was acting against the expansion of industrial development, which was previously envisaged as a self-sustaining process that could continue ad infinitum. While the Malthusian overtones of the *Limits to Growth* report (Meadows et al., 1972) are just as false today as they were some forty years ago, the notion that, as a recent contribution by Peet et al. (2011: 2) states, capitalism might be faced by certain environmental limits was indeed ‘prescient’. The flurry of political activity that has taken place since then shows that the international political economic system has not ignored the environmental problematique, giving rise to numerous international conventions, agencies, ministries of environment and related organizational and institutional forms, and culminating in the Brundtland Report (WCED, 1987). While this report, and the international political and economic response that included the Rio Conference of 1992, did not take the problem seriously enough to seek to diffuse the underlying cause of the escalating tension between capitalism and a nature that refused to play dead, it did create the hegemonic discourse of ‘sustainable development’, whose main accomplishment has been to paper over the growing cracks of the capitalist growth engine.

Growing environmental awareness was accompanied not only by social and political action to combat environmental degradation but also by a growing body of critical and increasingly prominent scholarship, which

demonstrated the possibility of an alternative reading of Marx's view of the relationship between nature and society. This reading focuses on the dialectical relationship between nature and society, suggesting that neither of them exist independently of the other and that both are socially produced. That there is little 'natural' about nature has for some time been common currency amongst critical political ecologists. Instead of speaking of a pristine nature 'out there', it is more accurate to speak of multiple natures that are continuously socially (re)produced (Macnaghten and Urry, 1998). Such critical thinking has enabled social scientists to dig deeper into the contested meanings of not only environmental problems but also solutions presented as universally acceptable and desirable by reference to such tropes as sustainable development and expert knowledge (Goldman et al., 2011).

In seeking to displace hegemonic understandings of sustainability (and its attendant technical and scientific expertise) that often perversely blamed 'overpopulation' and poverty for the growing ecological crises, critical social scientists have come to see 'limits' as a dirty word that can only be used by those who wish to perpetuate the unequal consumption patterns of the industrial West and its dominance over the developing world. Consequently, while paying lip service to certain distant biophysical limits (e.g. Mehta, 2010), social scientists have expended much energy attempting to reveal the multitudes of possibilities inherent in the concept of nature. In so doing, however, the fact that for capitalism to prosper, certain ecological preconditions need to be met has come to be neglected. Given the adaptability of capitalist production systems to external constraints and the ability of science and technology to deliver innovative solutions to capital's needs, it would be a mistake to see these preconditions in strict and clearly defined terms. Rather, following James O'Connor (1998), it is potentially fruitful to recognize them as 'conditions of production' which capitalism tends to 'underproduce'. Of course one of the ways in which nature has been forcefully acting on capitalism can be seen in the way it imposes limits to and forced change upon capitalist expansion.

Indeed, by the time the Johannesburg Summit of 2002 came around, these limits had become much more difficult to deny, revealing the ultimate futility of working with sustainable development, a concept that had become a 'buzzword largely devoid of content' (Esty, 2001: 74). The 'hyper-development' of China (Wen and Li, 2007) further signified the poverty of the concept, showing that if and when economic development did take hold in previously 'underdeveloped' lands, this would not follow the 'ecological modernization' route to decoupling of economic output and environmental impact. Most significantly, however, it is the unfolding of the global climate crisis that has shown capitalism's paradoxical relation with (the idea of) ecological limits. It wants to acknowledge and overcome these according to its own logic (e.g. by creating a more all-encompassing global carbon market within particular emission limits) but cannot do so in relation to the other, *social*

limits that it has engendered, especially massive global inequality (see also Fletcher, this issue, and McAfee, this issue). Hence, the justifiable demands of developing nations such as India for ‘space for basic development for its people and poverty eradication’²¹ clashes with the need for capitalism to continuously expand. The tension between these two dynamics has created an intractable situation as evidenced by the failure of the Copenhagen, Cancun and, most recently, Durban summits. The main outcome of Durban is an ultra-weak agreement that is very unlikely to either bring the environmental impact of global economic processes to within ecological limits, or help alleviate the prevailing poverty and inequality that characterizes contemporary capitalism.²²

Just as the growing alarm of the impact of industrial development in the 1970s led to the concept of sustainable development in the 1980s, the second wave of global alarm that has been building since the turn of the millennium has given birth to another catchy phrase that seeks to soothe global fears regarding the tension between economic growth and conservation. The Brundtland Report had not only refused to acknowledge that unlimited growth might not be possible but also posited further economic growth as the solution to the environmental crisis. Specifically, it argued, ‘[If] large parts of the developing world are to avert economic, social and environmental catastrophes, it is essential that global economic growth be revitalized. In practical terms, this means more rapid economic growth in both industrial and developing countries’ (WCED, 1987: 89). It is therefore not surprising that the UNEP Green Economy report takes a similar tack by inviting the world to further intensify economic growth in order to reach sustainable development. And this is done not in an apologetic manner, but through pronouncing absolute truths under hegemonic convictions (Igoe et al., 2010). The report states that by addressing the ‘misallocation of capital’ it tackles several ‘myths’, the most prevalent of which is the myth ‘that there is an inescapable trade-off between environmental sustainability and economic progress’, which it defines as ‘investments, growth and jobs’ (UNEP, 2011: 16).

This schizophrenic approach to limits is characteristic of the relationship between capitalism and nature. On the one hand, through ever-intensifying expansion of economic production and systematic underproduction of the conditions necessary for its reproduction, capitalism leaps towards

21. <http://cseindia.org/content/indian-environment-minister-jayanthi-natarajan-gives-hard-hitting-speech-receives-standing-o> (accessed 11 December 2011).

22. See: <http://mg.co.za/article/2011-12-11-landmark-roadmap-sets-climate-change-course-for-2015> and <http://www.ips.org/TV/cop17/agreement-for-new-global-treaty-to-reduce-emissions/> (accessed 12 December 2011). According to the latter article: ‘After two weeks and an additional 29 hours of intense and even bitter negotiations, the 193 nations participating in the United Nations climate talks agreed to a complex and technical set of documents called the “Durban Platform”. These include the continuation of the Kyoto Protocol, a formal structure for a Green Climate Fund, new market mechanisms, and more’.

natural limits. On the other hand, capitalism thrives on limits, seeing them as ‘frontiers’ to be overcome as well as opportunities for opening up new profit and accumulation avenues (Bücher, forthcoming 2012; Hartwick and Peet, 2003). Within this contradictory process, countless social movements have erupted across the developed and developing world to resist, firstly, capitalism’s violation of natural limits and their social consequences and, secondly, its conversion of the resulting ecological crises into new opportunities for the creation of fictitious commodities out of problems. This Polanyian societal response is an attempt to re-embed the economy within society and also natural limits, whose violation can be extremely damaging for societal welfare. But it is also important to include the ‘actions’ of nature in resisting the insatiable demand of capitalism for resources and sinks. In other words, the ecological limits placed on capitalism’s expansion can also be considered part of a Polanyian double movement. Nevertheless, growing concern and action in response to fear of ‘ecological collapse’ has only further intensified the commodification of nature (Brockington and Duffy, 2010). In fact, the bigger the fear of an ecological collapse, the stronger are calls to find ‘win-win’ scenarios by appealing to the logic of capitalist markets. And the more strongly nature responds to economic calculations by ‘acting’, the more necessary it becomes to incorporate it into capitalism by conceptualizing it as scarce natural capital. After all, the one thing capitalist economics is supposed to be good at is the management of scarcity.

This is often referred to in the broader literature about our contemporary phase of capitalism. Fredric Jameson (1991: 36) notes that the ‘purer capitalism of our time thus eliminates the enclaves of precapitalist organization it had hitherto tolerated and exploited in a tributary way. One is tempted to speak in this connection of a new and historically original penetration and colonization of nature and the Unconscious’. Yet, here we follow David Harvey (1996: 188), who, after discussing the production of nature, argues that ‘the point . . . is not to argue that there is nothing new under the sun about the ecological disturbance generated by human activities, but to assess *what exactly is new and unduly stressful*, given the unprecedented rapidity and scale of contemporary socio-ecological transformations’ (emphasis added). The specific phrasing here is important: despite the importance of historical transitions and continuity, there are (always) new dynamic changes happening and being triggered, as well as particular limits being reached (and overcome or displaced). The point is to give an intimation of what is duly and what is unduly stressful; in other words, what are the limits of the social and ecological stresses that can be endured in a process of ever-accelerating capitalist change? Our approach to start tackling this is by focusing on and framing what the contributors to this Debate section say about changes and continuities in the construction, workings and future of NatureTM Inc.

CHANGES AND CONTINUITIES IN NEOLIBERAL CONSERVATION AND ENVIRONMENTAL MARKETS

In investigating change and continuity we depart from Nancy Peluso's (this issue) question whether 'the contradiction of "selling nature to save it" . . . is a more powerful contradiction than the idea of anything in a capitalist world *not* being a commodity'. She thus challenges Jameson's idea of a 'new and historically original penetration and colonization of nature', while leaving space for MacDonald and Corson's point about the 'striking reduction in the opposition to the idea of a natural world defined as capital'. This is similar to Büscher's (2009: 91) argument that what is new about neoliberal conservation is that it:

has moved beyond opening up the natural realm to the logic of capital, and as such also beyond the more traditional Marxist political ecology emphasis that nature must be seen as a set of 'radically different environments that have been created under several centuries of capitalism' (Harvey, 1998: 332). It is the idea that nature can only be 'saved' through its submission to capital and its subsequent revaluation in capitalist terms.

Interestingly, this argument also seems to be supported by neoliberals, such as UNEP chief Achim Steiner in his foreword to the Green Economy report:

A green economy does not favour one political perspective over another. It is relevant to all economies, be they state or more market-led. Neither is it a replacement for sustainable development. Rather, it is a way of realising that development at the national, regional and global levels and in ways that resonate with and amplify the implementation of Agenda 21. (UNEP, 2011: 7).

This is fairly typical of neoliberal mainstream green thinking: no choices have to be made; no real decisions need to be taken. Green capitalism is beyond discussion because any political agenda can be accommodated, everybody can win. This point is of course criticized by many of the contributions to the Forum issue. In one way or another, all the contributions demonstrate that capitalism's response to its ecological limits is inherently a political process which can best be apprehended through a political economy approach that illuminates the winners and losers born out of neoliberalism's ongoing attempt to create fictitious win-win solutions out of real ecological limits and their uneven and unequal social impacts around the globe.

The contributions to this year's *Development and Change Forum Debate* section are wide-ranging but all say something important about changes and continuities in neoliberal conservation and market-based environmental policy. **Peluso** introduces the debate by providing an overview of the situated socio-natural histories of rubber in order to show how its split personality as both a fictitious commodity and a commodity produced for market helps demonstrate the 'entanglements of environment, commodities and subjects, as actors and contexts have changed over time'. Building on this analysis, she

argues that commodification of nature is ‘not a question of whether or why, but when and how’. This is a powerful argument, whose significance cannot be fully analysed here. One important upshot of it, however, is that rather than simply focusing on the commodification of nature *per se*, critical scholars and activists alike need to locate the process of commodification within broader political economic and historical dynamics to fully understand its ecological and socioeconomic significance since, as Peluso states, ‘Green is not an absolute, it is relational to time and place, situated’. As the case of rubber demonstrates, such an analysis is likely to highlight unpredictable results about the winners and losers from the commodification of nature and influence the decisions on how and where one might choose to oppose it.

Most of the critical work concerning environmental services markets, argues McAfee, has ‘focused on the technical and institutional obstacles to effective implementation’. However, what is also necessary is to pay attention to the ways in which winners and losers are actively produced through the exchange process itself, for the very act of trading has significant redistributionary consequences. Thus she further demonstrates the need for a political economy approach to neoliberalization and shows that its promises of a ‘win-win-win’ scenario for nature, business and development are unlikely to come true. In her paper, McAfee argues that the theoretical claims underpinning PES, REDD and other ecosystem service mechanisms are inherently contradictory, particularly in relation to the idea of ‘opportunity costs’. Her analysis shows that the depiction of a global ‘World is Flat’ type of market is only possible through the faulty assumption that the values of ES can be reduced to fungible quantities by means of market or quasi-market pricing.

In an argument with intriguing commonalities to those delivered by the structuralist Latin American economists of an earlier era, McAfee claims that the power inequalities inherent in market exchanges between rich and poor regions which arise not only from differing ‘preferences but also the relative purchasing power, bargaining power and degree of desperation of the buyers and sellers’, would inevitably (re)produce existing inequalities. This would further bolster the rather (neo-)colonial idea that ‘labour, land and lives are cheaper in the global South. In order for global ES markets to work . . . they must remain cheaper there’. McAfee therefore concludes that ‘the profits earned by buyers and brokers — the *primum mobile* of ES markets — depend upon this ongoing inequality’. This is an interesting conclusion that further complicates our point above that social limits pose particular challenges to capitalistic climate negotiations trying to deal with ecological limits. And this contradiction is not going to be resolved any time soon: just as Peluso shows that commodification of nature has surprisingly deep and resilient roots, McAfee’s analysis shows that failed development doctrines also keep returning in different guises. The idea of making poor peoples in developing countries into ‘environmental service providers’ ‘reinforces the failed paradigm of development by means of market-led,

export-based integration into global markets'. Indeed, the power of this paradigm is so strong that even in countries that have been hailed as bastions of post-neoliberal development policy making such as Ecuador (Escobar, 2010), payments for environmental services have been playing an increasingly important role (Wunder, 2005).

McAfee is not alone in pointing out that PES schemes do not *actually* function as markets. Markets are imagined and, in the words of Carrier and West (2009), 'virtualized' into being, providing a future-oriented platform on which to restructure lives and natures such that they contribute to capital accumulation. The paper by **Milne and Adams** deals with two important trends in (and institutional and organizational forms of) neoliberal conservation, namely REDD and especially PES. Importantly, the paper points out that PES 'cannot necessarily be described as neoliberal or market-based in a simplistic way'. What they mean by this is that the practice of PES reveals a complicated picture of market-based and non-market based mechanisms of rule and governance that is informed by a variety of discursive and practical strategies and performances. This is what they refer to as 'market masquerading': a variety of discursive and practical manoeuvres that are meant to make the *idea* of markets for conservation believable and workable. Milne and Adams provide a clear demonstration of some of the problems associated with PES's attempt at creating new technical and institutional formats to further bolster McAfee's point regarding the significance of neoliberal environment policies for development processes. Specifically, they argue that, contrary to 'conventional assumptions that PES creates and enables environmental markets... PES [functions as a] *form of intervention* that masquerades as a market, using market discourses and practices to shape human behaviour'. Thus it becomes clear that neoliberal conservation in general and payments for environmental services in particular relate to the actual changing of social realities in a deeply contradictory manner, one that is decidedly 'extra-economic' (Glassman, 2006).

One could, with Fletcher (2010: 173), refer to this in Foucauldian terms as 'neoliberal governmentality', which is 'to create external incentive structures within which individuals, understood as self-interested rational actors, can be motivated to exhibit appropriate behaviors through manipulation of incentives'. This, it seems, is the real meaning behind the rapidly popularizing idea of 'nudging' introduced by Thaler and Sunstein (2008: 3). According to them, many people are 'choice architects', who 'have the responsibility for organizing the context within which people make decisions'. Of course, in the case of Cambodia — as well as many other developing country contexts — notions of 'community choice' described by Milne and Adams do not simply 'nudge' people but actively push and shove them toward market-conforming behaviour, rendering the neoliberalization of environmental policies and conservation a less than 'peaceful' trajectory. As Milne and Adams demonstrate, the NGO behind the PES project they studied relied explicitly on choice theory (Samuelson, 1948) and its attendant

concepts of rationality and opportunity costs in articulating its approach. Such discursive moves aim to create the kind of world which they imagine: a type of power relationship that Callon (2007) has described as performativity (see MacDonald and Corson, this issue).

MacDonald and Corson apply the performativity thesis to the TEEB Economics of Ecosystem and Biodiversity study, which, as mentioned above, is one of the foremost recent attempts to stimulate the concept of ‘natural capital’ and so help create new markets and property relations with regard to (the conservation of) nature. This has been facilitated by the ‘striking reduction in the opposition to the idea of a natural world defined as capital’, as well as a variety of very deliberate actions by those supporting a further intensification of Nature™ Inc. MacDonald and Corson analyse these deliberate actions as processes of ‘continual (re)alignment of actors, labour and instruments around specific interests and ends’ as well as ‘substantive efforts of articulation, circulation and orchestration in attempts to enlist actors, institutions and instruments in the project of (re)producing what we once knew as “the environment”, or “nature”, as “natural capital”’. Interestingly, one could here argue that processes of ever-accelerating capitalist change provide the ‘enabling conditions’ within which continual alignment, articulation and orchestration are not only necessary but indeed lubricated, particularly if aided by the pressures of apocalyptic ideas about the limits of contemporary social and ecological stresses. In these conditions, MacDonald and Corson show that ‘virtual moments’ — spaces where the idealized visions of perfect natural capital markets are played out, represented and enacted — such as TEEB are crucial terrains upon which particular elite interests are conjoined or contested, in turn further structuring ideas about the possibilities for changes within, or of capitalism’s dealing with ecological and social limits.

But these elite interests are not merely conjoined or contested through organized ‘virtual moments’ such as TEEB. As **Holmes** demonstrates in his discussion of the neglected link between philanthrocapitalism and neoliberal conservation, rich philanthropists have joined the conservation cause *en masse* in the last decades, taking the seemingly converging interests between conservation organizations and capitalist elites to new levels. Conservation organizations, too, have embraced neoliberal strategies ‘because, in a neoliberal world, they are considered the most effective way of conserving biodiversity’. Yet, Holmes stresses that this is only one driver of the growing intimacy between conservation organizations and philanthrocapitalists. He claims that as wealthy post-World War II baby boomers are retiring and looking for purposes for their money, much of which goes into ‘good causes’, a ‘golden age’ for philanthropy will begin. This, Holmes argues, is not simple altruism. It in fact supports and strengthens capitalist accumulation processes by making entrepreneurship and capitalist enterprise ‘look good’ while investments in good causes can often help to stimulate returns in other ways. Nature conservation is one of these ‘good causes’ and Holmes argues that ‘conservation philanthropy can be a useful

way of making money'. Through, for example, land trusts and easements, conservation philanthropists increase the value of land while receiving tax benefits in return for their efforts (see also Morris, 2008). Obviously, philanthrocapitalism is not radically new, but it is the intertwining of these private interests, the ways in which the invested capital has been earned (the specific histories of accumulation that led to the concentration of wealth in the first place) and the particular ideas about nature and its conservation that signify important trends (see also Ramutsindela et al., 2011).

A closer reading of the involvement of philanthrocapitalists in conservation also highlights the shifting role of the state. Holmes notes that it increasingly seems as though philanthropists are better at doing good than governments, while they are also better at making good seem sexy (see Brockington, 2009; Richey and Ponte, 2008; Sullivan, forthcoming 2012). The ways in which the state has been implicated in the expansion of and transformed by neoliberalism has been a central concern of the neoliberal conservation literature. In many instances, neoliberal conservation is shown to emerge at the interface of global capitalist dynamics and domestic responses of nation-states, which manifest themselves in a process of reregulation which transforms the role of the state in relation to nature and society. **Münster and Münster**, however, show in the context of Kerala, India, that 'the neoliberalization of nature in Wayanad is a process driven less by new modes of regulation than by the agrarian crisis and new modes of speculative farming'. This is an interesting finding, especially in relation to a recent body of literature that defines neoliberalization basically as an 'open-ended and contradictory process of regulatory restructuring' (Peck, 2010: 7; see also Peck and Tickell, 2002; Brenner et al., 2010).

Münster and Münster argue that neoliberalization of nature, for which they use the rising prominence of eco-tourism as a proxy, has resulted from changes taking place within the agrarian sector and not the other way around. Specifically, processes such as a growing ecological crisis resulting from 'chemicalized cash crop farming', increases in domestic tourism, and rising real estate prices have opened up the way for the neoliberalization of nature without encroaching on the power of the state (in this instance embodied by the Forest Department). Their analysis concludes by noting that 'Wayanad is being restructured as a service provider of nature and wildlife for the growing cities of post-liberalizing India' which is developing an ever-intensifying appetite to consume a type of nature that is conveniently packaged, sanitized and presented for immediate gratification. This 'discovery' of Wayanad and subsequent appropriation for the marketplace is thus driving the transformation of the area and the livelihoods of its communities.

Salmon too has become a major consumer item and this has resulted in its dramatic transformation at the hands of technology and processes of 'trademarking'. **Clausen and Longo** discuss the interesting case around the AquaAdvantage Salmon®: a genetically engineered salmon that is supposed to help meet market demand for 24/7, year-round fresh salmon, while

saving wild salmon populations and contributing to the ‘dematerialization of production’ due to the fact that salmon can now grow twice as fast and thus require less feed. They narrate the historical move from salmon without streams (hatchery-born fish released into the wild) via salmon without seasons (aquaculture production without release) to ‘salmon without souls’ (transgenic fish geared towards improved productivity and thus lower industry costs and higher profits). The US Food and Drug Authority is about to approve the AquaAdvantage Salmon[®], which would make it the first approved ‘genetically modified animal for human consumption’ — a next step in the process of genetic engineering that has already been going on for a long time (see Schurman and Kelso, 2003).

Such accounts regarding the (in)ability of increasingly sophisticated scientific tools to solve global environmental problems perhaps explain the apprehensive response to the apparent increase in the popularity of geoengineering as a techno-fix to, among other issues, human-induced global climate change (Ruz, 2011). **Buck** approaches this question and makes a number of surprising arguments. She shows that geoengineering is indeed moving from a ‘fringe’ idea to more serious policy discussions. She also shows that geoengineering can perhaps be seen as an extreme form of neoliberal conservation and development. Buck argues that despite growing fears, the reality of geoengineering is still rather far away since neither the scientific community nor even powerful agents who would be interested in such a ‘silver bullet’ currently see it as a legitimate solution. Nevertheless, what arises from Buck’s discussion is that the increasing legitimacy of the *idea* of geoengineering could have far-reaching consequences, as it normalizes and legitimizes other ‘extreme energy’ ideas and interventions. She shows that this idea is particularly pronounced in two areas: to save/secure further rounds of capitalist accumulation, and for humanitarian intervention, or protecting those people likely to suffer most from climate change. Her analysis also suggests that geoengineering should not be written off automatically, not only because it could be necessary from a humanitarian interventionist perspective but also because it does not necessarily have to take the shape of a top-down, militaristic and corporate-led endeavour. How and under what circumstances geoengineering could take the form of a bottom-up and participatory (‘crowd-sourced’?) intervention that privileges humanitarian purposes rather than profit seeking are hugely important questions that deserve further discussion.

Tying together several strands such as performativity, regulation and management of environmental impacts, **Bracking**’s contribution analyses public/private networks of finance and their role in carrying financialization as a power relationship into the use and management of natural resource in Africa. After the recent financial crisis, the environment has obviously become one of the main foci of attention of global policy makers, politicians and private actors, which opens the floodgates for financialized activities in relation to natural resources (Büscher and Arsel, forthcoming 2012). In effect, Bracking

argues that private actors, especially equities, take part in this in two ways: by making investments in nature-based industries that are profitable, and by building the knowledge and evaluation systems around this that allow these processes to seem scientifically and politically legitimate. Financialization, she argues, has agency and is a ‘technology of power’ that influences how natural resources are accessed and managed. Importantly, this happens in a way that distances financiers from the spaces and places of profit production, as they are based in what Bracking calls ‘Secrecy jurisdictions’ or tax havens, which:

allow private equity funds to exist in relative non-relation to the social, national or political space where they actually invest. Using calculative technologies enabled by tax havens — transfer pricing, ‘tax planning’ mechanisms and ‘jurisdiction shopping’ — the firm can simultaneously remove itself from the consequences of the activities it invests in, by creating separate technologies for calculating profits, and for calculating and divesting of externalities (to other companies, and to a scorecard of environmental care).

Unlike Buck’s more optimistic tone regarding the possibility of managing geoengineering technologies and directing them towards democratic and humanitarian applications, Bracking’s analysis of the ‘technology of power’ paints a much darker picture. The concept of ‘technology of power’ is not merely a rhetorical flourish. She demonstrates that the operations of the financiers in question are just as inscrutable, closed to public accountability and consequential for environmental processes as the scientific processes discussed by Ulrich Beck (1998), whose description of the ways in which advanced science and technology is regulated in industrial democracies as ‘organized irresponsibility’ could also be applicable within the context of the financialization of the environment.

In the final paper of the debate section, **Fletcher** deals with a central question at the heart of much environment and development scholarship, namely the possibility of balancing economic growth with conservation. While acknowledging that neoliberal capitalism is not alone in emphasizing the centrality of economic growth in its conception of societal development, Fletcher argues that ‘the ostensive tradeoffs between conservation and development priorities that many consider unavoidable . . . may be merely an artefact of capitalist markets and not an inherent feature of the world’. His argument develops from his analysis of an Integrated Conservation and Development Programme (ICDP) in the Osa Peninsula of Costa Rica, which indicts the failure of neoliberal conservation for ‘eschewing questions of resource distribution and instead depending on economic growth to address social inequality’. This argument closely parallels the discussion in the previous section regarding the concept of sustainable development and its attempt to solve the environmental problems of development by further deepening the processes of economic growth. Neoliberal conservation policies necessarily see economic growth as a solution to the problems created by development because the hegemony of neoliberalism rests on its putative

discrediting of ‘Keynesian and welfare state regimes’. Whether capitalist dynamics can indeed be regulated by Keynesian and welfare state regimes to universalize the material benefits of development without undermining the ability of global ecosystems to thrive remains a fundamental question facing policy makers and social scientists alike.

CONCLUSION

Clearly, the contributions to this Debate section all have something important and new to say about changes and continuities in the construction, workings and future of NatureTM Inc. At the same time, they do not lend themselves to being shoehorned into a single coherent message. Nevertheless, an interesting point which has manifested itself through the foregoing discussions points to what seems to have become a dominant dialectic in the relation between capitalism and nature: that between change and limits. Capitalist change and ecological limits are inextricably bound up together, in manifold and complex ways. As such, a political ecology critique of NatureTM Inc. is similarly bound to this dialectic, although it seems to find it hard to deal with. Nevertheless, with Rio+20 around the corner, this might be an interesting idea to come back to from a critical perspective and within the framework of the ‘zombie logics’ generated by dominant capitalist actors. These are already clear from the rhetoric around the upcoming megaconference: ‘Rio+20 can mark the start of an accelerated and profound, world-wide transition towards a green economy — an economy that generates growth, creates jobs and eradicates poverty by investing in and preserving the natural capital offers upon which the long-term survival of our planet depends. It can also launch the needed reform of international sustainable development governance’.²³

It is familiar rhetoric, and one that continues to celebrate the adage ‘Nature is dead. Long live NatureTM Inc.!’. Yet, as we and the contributors have shown, the processes of incorporating and trademarking nature run up against myriad limits — ecological, social, economic, political. At the same time we have shown that ecological limits, as well as the idea of limits, seem to increasingly shape contemporary changes in global capitalism and that continuous and dynamic change in global capitalism seems to be responding to or thriving on ecological limits and the idea of limits. Again, this ‘dialectic between change and limits’ is in itself not new, following up neatly from work by David Harvey (1982) and others who argue that capitalism solves its contradictions merely by bringing them to higher levels and scales, or displacing them geographically and/or temporally. A renewed and reinvigorated attention to these arguments, we argue, can lead to

23. See: http://ec.europa.eu/environment/international_issues/rio20_en.htm (accessed 12 December 2011).

new and pertinent questions that could provide important starting points for future research on Nature™ Inc. In conclusion, we enumerate a number of these which seem to logically emanate from the foregoing discussions. How do limits inspire and underwrite social resistance against capitalist forces? How does contemporary capitalism respond to attempts to re-embed nature and economy back into society by creating new organizational and institutional forms? How are these organizational and institutional forms operationalized in specific places and contexts, and how, in their turn, do these places and contexts influence global discourses and policies that link capitalist change to (ideas about) ecological and social limits? These are big questions, of course, but we believe it is vital that we (continue to) ask them in future political ecologies of Nature™ Inc.

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