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## Commentary

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### **Neoliberal nature, ecological fixes, and the pitfalls of comparative research**

The entanglement of markets and nature has become the focus of a rapidly growing body of scholarship. The urgency of this debate arises from the recent proliferation of marketized forms of nature—from carbon emissions markets to debt-for-nature swaps to water privatization. The fierce controversies which ensue make for complicated analytical and political terrain. The ideological differences run deep, as evidenced by the array of terms deployed: free market environmentalism, liberal environmentalism, (marketized) environmental governance, green neoliberalism, to name just a few.

An increasingly substantial portion of the literature on this topic is produced by critical geographers (Heynen et al, 2007; Himley, 2008; Mansfield, 2008a). Their ‘neoliberal nature’ approach generally adopts a critical stance towards the doctrine of neoliberalism, underpinned by a theoretical commitment to Marxian analyses of nature, in which institutional political economy is frequently inflected with insights drawn from political ecology. Scholars of ‘neoliberal nature’, almost without exception, conduct fine-grained case studies of the effects of neoliberalization on conventional resources (eg fish, water, forests) in site-specific contexts. The combination of a critical conceptual stance with powerfully detailed empirical analyses is the hallmark of this ‘nature’ approach.

Yet it is precisely these aspects of the neoliberal nature research agenda which, Noel Castree has recently argued, are characterized by serious shortcomings (2008a; 2008b; see also 2005, 2006). Castree’s comments are in line with other recent critiques (see Bakker, 2005; Braun, 2008; Harris, 2009; Himley, 2008; Littlefield et al, 2008). But his work stands out for its attempt to inject a degree of analytical precision into the debate. My critique, as developed below, is predicated upon broad agreement with Castree’s goals, but disagreement with some of his suggested strategies.

Let me preface my critique by summarizing key aspects of Castree’s arguments. Castree identifies three interrelated ‘analytical traps’ to which he argues the neoliberal nature literature, as a whole, is subject. First, Castree argues that the literature is characterized by a failure to sufficiently articulate the relationships between neoliberalization and the environment. Second, he asserts that many analyses are guilty of conceptual conflation of different types of neoliberal practices. Third, he contends that scholars of neoliberal nature are guilty of methodological myopia, as evidenced by a lack of commitment to synthetic, cross-sectoral studies, compounded by a lack of rigour with respect to the criteria upon which comparative analyses might be based. The result is that the neoliberal nature research agenda is hobbled, both conceptually and politically.

In response, Castree’s first paper (2008a) addresses the first analytical trap identified above, and presents a conceptual framework which explains why nature is being neoliberalized (his second paper, to which I will refer below, deals with the last two traps). Castree’s primary goal in articulating this conceptual framework (which he terms a “comprehensive and integrated Polanyian–Marxian explanation of nature’s neoliberalisation”) is to demonstrate why neoliberalism is *necessarily* an environmental project which has “the nonhuman world as a key part of its rationale” (Castree 2008a, page 143).

Here, Castree sets himself a difficult task, because conventional political economy does not provide insight into what is unique, or uniquely new, about neoliberal nature, much less an explanation of why it might have recently proliferated. The challenge for Castree is that political economists have long recognized that capitalism is predicated upon our metabolism of nature (eg Benton, 1996; Burkett, 1999; Foster, 2000). Neil Smith's (1984) framing of 'second nature' produced under capitalism captures this argument. And the parallels between contemporary accounts of 'accumulation by dispossession', for example, and historical enclosures are well recognized (eg Perelman, 2000; see also Glassman, 2006; Harvey, 2003). The observation that neoliberalism is *necessarily* an environmental project (cf McCarthy and Prudham, 2004) is thus somewhat of a truism.

Castree revisits this well-known territory, focusing on the neoclassical concept of 'externalities', a term for which political economists have used a variety of synonyms: 'environmental conditions' (O'Connor, 1996), 'ecological fixes' (Bakker, 2004), or territorial effects (Swyngedouw, 1992). Of course, the proliferation of externalities is, from a mainstream perspective, central to the putative environmental crises which daily confront us. The key insight of political economists is that negative externalities are at times useful to, and at other times a barrier—both material and political—to capital accumulation.<sup>(1)</sup>

Why? The answer is twofold: (i) externalities devolve costs elsewhere, thereby enabling the profit rate to be increased (eg via pollution); and (ii) externalities create new opportunities for capital accumulation through their subsequent internalization (eg pollution mitigation). Companies which engage in pollution clean-up activities are a classic example of the profit potential in the internalization of negative externalities. An 'ecological fix', simply put, refers to strategies of externalization and internalization of socioenvironmental conditions, in search of profit, both by states and by capitalists. Vandana Shiva's characteristically pithy description of 'sustainable development' captures the logic nicely: an 'ecological fix' is a means of turning a potential threat into an opportunity. Castree follows this line of argument in defining 'environmental fixes' as a set of strategies adopted by fractions of capital (or the state) in order to combat barriers to accumulation, and foster continued economic growth.

The core of Castree's conceptual innovation within this framework consists of four subcategories of 'environmental fixes': the first three of which are means by which "fractions of capital [use]... specifically neoliberal measures to gain commercial advantage in and through the domain of the physical environment"; and a fourth through which "state bodies using neoliberal environmental measures to solve problems arising within the state apparatus or the wider economy and society" (2008a, page 146). Briefly, environmental fixes 1, 2, and 3 pertain to strategies whereby fractions of capital profit from environmental conservation, accumulation by dispossession, and environmental degradation, respectively. Environmental fix 4 pertains to two strategies adopted by governments: mediating tensions within a regime of accumulation by deregulation/devolution or adopting a 'minimalist' stance.

There are three critiques that one can make of Castree's categorization.

First, his attempt to reframe environmental fixes broadens the concept to the point where it is analytically unhelpful. Where Castree innovates is also, in my opinion, where he errs: specifically, in his attempt to enlarge the definition of 'environmental

<sup>(1)</sup>This insight is, of course, not unique to political economists. Environmental economists' attempts to price and thereby 'internalize' externalities, and ecological modernization theorists' portrayal of environmental crises as a source of opportunities for scientific and technological innovation speak to the same concerns (albeit with very different ideological commitments).

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fixes' to include 'accumulation by dispossession' and state governance strategies of deregulation and reregulation. The former is not an ecological fix per se: accumulation by dispossession is an act of appropriation which creates new opportunities for profit, but which does not necessarily internalize or externalize costs. Similarly, deregulation and reregulation are inscribed within logics of state governance, but do not necessarily occur in order to internalize or externalize costs. Labeling all of these strategies as ecological fixes leads us to misread the reasons why they might be occurring.

Second, Castree fails to explain what is unique about 'neoliberal nature', and why it is proliferating. If the production of negative externalities—notably the depletion of natural resources and the degradation of environmental services—is inevitable under capitalism, then what is really new about neoliberal nature? And, if it is new, then the question of *why* the neoliberalization of nature has intensified in scale and scope remains unaddressed in Castree's analysis.

Here, I think that Castree's stated assumption that the only drivers for the adoption of putatively neoliberal policies are the desire to maximize profit or contain tensions within a mode of regulation leads him astray. This stance occludes a broad array of goals—political, social, cultural, and environmental—which both drive and mediate the neoliberalization of nature. For example, the alienation and desacralization of socionatural relationships which often characterize state-led governance strategies in 'developing' countries stem in part from the (contested) pursuit of a particular vision of modernization inscribed within developmental strategies—which often have a tangential and uneasy relationship with neoliberal projects. In other words, the reasons why it might be, as Castree puts it, "'rational' for many different fractions of capital to take a neoliberal approach to nature with the backing of state institutions, pro-business political parties, and advocacy groups" (2008a, page 146) extend well beyond mere profit maximization or mediation of tensions within a regime of accumulation. In failing to account for these other factors, Castree falls short of his promise to provide "an overarching critical account of why nature is being neoliberalised" (page 135). The diverse (and often competing) logics at play when the market encroaches upon new socionatural frontiers are simply ignored (eg Mitchell, 2002).

Nonetheless, I would agree with Castree's call for more analytical precision with respect to the targets and strategies of neoliberalizing nature. This brings me to my third critique: Castree fails to articulate his concept of an ecological fix with the typology of neoliberalization he presents earlier in the paper, thereby failing to explore the degree to which 'environmental fixes' are indeed a driver of neoliberalization processes. The difficulty of doing so becomes apparent when we try to marry Castree's conceptual framework of environmental fixes with his typology of neoliberalization (enumerated as: privatization; marketization; deregulation; reregulation; public sector market proxies; and the construction of flanking mechanisms in civil society). Not all of these processes can be explained by one of Castree's four 'environmental fixes'; nor do his four 'environmental fixes' correlate with the list of possible strategies of neoliberal nature.

I present an alternative approach in table 1 (which is not exhaustive, nor definitive, but merely an attempt to suggest *how* we should go about constructing a conceptual framework). There are several substantive differences with Castree's approach: my constrained definition of ecological fixes; my specification of four broad types of 'targets' of neoliberal reforms; my attempt to map tactics onto targets; and my inclusion of a broad range of targets which extend beyond the conventional resources with which much of the neoliberal nature literature, and Castree's compilation of studies, is concerned.

**Table 1.** Neoliberalizing nature: targets and tactics.

Target	Tactic
<i>Institutions (rules, norms, laws)</i>	
Property rights	Marketization
Trade rules	Liberalization
Pricing	Commercialization
<i>Governance (decision-making practices)</i>	
Regulatory frameworks	Deregulation and reregulation
Resource management	Private sector participation
Decision-making authority	Devolution to nongovernmental actors
Accountability mechanisms	Client–provider substitutes for citizen–representative relationship
<i>Sociocultural actors</i>	
Environmental pollution	Ecological fix
Human bodies	Alienation
Government agencies	Corporatization
Conventional resources	Privatization, accumulation by dispossession

Adopting such an approach is potentially useful for several reasons. It demonstrates why conceptual conflation of terms (eg using the term ‘privatization’ as a blanket term) is unhelpful. One can privatize property, but not governance (decision-making processes). This sort of typology is also helpful because it enables us to avoid misleading comparisons: Chile’s water markets, for example, have very little to do with the asset sale of Britain’s water supply industry, although both are often labeled as ‘privatization’.

### **The limits of comparison**

This last point leads me to suggest that table 1 provides an answer to the three questions posed in Castree’s second paper, broadly aimed at the methodological myopia and conceptual conflation to which the neoliberal nature literature is subject: “what are the principal ways in which nature is neoliberalised in practice?; ... what are the effects of nature’s neoliberalisation?; and ... how should these effects be evaluated?” (Castree, 2008b, page 153).

Let me expand, beginning with a reformulation of Castree’s call for comparative research in more structured terms. Table 1 suggests two broad strategies for comparative research: first, an exploration of the full range of liberal environmentalist strategies applied to a specific resource (the vertical axis); second, a comparison of a particular liberal environmentalist strategy (such as privatization) across a range of resources. In the former case we could deploy comparative research to characterize the broad sweep of neoliberal reforms applied to a specific resource (eg the privatization, commercialization, and commodification of water). In the latter we could examine a specific type of reform as applied to different resources in different places (eg tradeable quotas in fisheries, forestry, and irrigation water). This frames analyses of the principal ways in which nature is neoliberalized in practice.

The caveats, of course, to the above comparative strategies are multiple: the full range of liberal environmental strategies may not be deployed with respect to a specific resource, or at least not in the same place; reforms may intersect with political processes beyond specifically neoliberal projects, etc, etc. Putting these caveats aside, I would argue that these comparative strategies offer the possibility of somewhat systematically analyzing the failures, barriers, retreats, and partialities

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of the encounter between neoliberalism and socionature writ large. They enable, for example, a structured comparison of the sequencing of reforms (in the water sector, for example, commercialization typically precedes privatization), as well as comparative assessments which assess the partiality of such reforms. This last point is particularly important in the context of a critical approach, which presumably seeks not merely to systematically analyze similarities and differences between actually existing projects of neoliberal nature, but also to analyze why neoliberal reforms fail to be implemented. This, in turn, might allow scholars to articulate three key vectors of resistance: oppositional social movements, ‘uncooperative’ commodities resistant to neoliberalization, and ‘noncapitalist’ modes of socionatural regulation.

Why haven’t scholars of neoliberal nature evolved these sorts of analytical frameworks? This is, as Castree notes, a relatively recent research agenda which is still maturing. But more fundamentally, it reflects the tenor of the discipline of geography, well aware of the perils of “overly universal understandings”, seeking refuge in an idiographic tendency that Castree characterizes as a “dead end”.

To underscore this point, one need only look to the decisive quelling of Garret Hardin’s ‘tragedy of the commons’ hypothesis by scholars of common property resource management regimes (eg Berkes et al, 1989). By demonstrating that these regimes can exist over time without depleting resources, the ‘commons’ literature has inserted a wedge into the public–private binary which characterizes much applied resource management, and provided leverage by which community resource management can be appreciated and defended. The implications have resonated across and well beyond the academy.

With this sort of example as inspiration, one hopes that scholars of neoliberal nature would take on Castree’s task. Yet one can anticipate refusals (and this pertains directly to Castree’s two final questions, about the effects of nature’s neoliberalization and their evaluation). Some will argue that ‘neoliberalism’ is constituted of a range of diverse, locally rooted practices, thereby justifying a sector-specific, case-study approach for which attempts at terminological systematization are of little utility. This is, as Castree notes, an evasion rather than a convincing response. A more compelling argument is that the biophysical characteristics of resources and associated resource economies differ so greatly that expedience (and analytical rigour) demands a high degree of specialization. But the most fundamental objection (and one that Castree overlooks) is that the chain of causality in the study of environmental impacts arising from projects of neoliberalization is so attenuated, and the confounding variables so numerous (particularly given the multiple scales of regulation and resource production involved), that it is almost impossible to prove that the environmental ‘impacts’ we might identify do indeed arise from a particular strategy identified as neoliberal.

But there is more to it than this. Specifically, I would argue that the tendency of scholars of ‘neoliberal nature’ to engage in resource-specific case studies arises from a rejection of analytical abstractions about ‘nature’ writ large. This stems from recognition of the enormous differences between those domains of socionature which we conventionally construct as ‘resources’. The biophysical distinctions between biotic and abiotic, flow and static, point source and diffuse resources have enormous implications for how socioeconomic projects of resource exploitation unfold, as do the sociocultural and symbolic dimensions imbued in the performance of resource production and consumption. This sensitivity to biophysical difference has allowed the neoliberal nature agenda to generate important insights: for example, the fact that different types of socionatures are amenable to very different types of liberal environmentalist strategies, and impose very different types of constraints upon human

action, some more so than others, as the characterization of resources as ‘uncooperative’, ‘recalcitrant’, or ‘unruly’ attests.

Here arises another trend that will complicate Castree’s call for comparative scholarship: engagement with the intellectual commitments of scholars of relational ontologies to the agency of nature (an admittedly slippery concept), to the status of nonhumans as political subjects, and to a revisioning (however tricky and partial) of the nature–society divide. Although Castree has explored these issues elsewhere, they are surprisingly absent from the papers critiqued here—a curious and regrettable omission, as some of the most original work on neoliberal nature is heading in this direction (eg Harrison, 2008). This suggests an interrogation and partial abandonment of the conventional framing of resources upon which the neoliberal nature literature is focused (fisheries, forests, water, minerals), and a move towards broader framings of socionatural actors in line with recent debates in cultural and environmental geography (eg Mansfield, 2008b; see also Braun, 2008).

In closing, let me sum up some key aspects of my critique of Castree’s framework. First, his concept of an ‘environmental fix’ is too broad, diluting its analytical utility. Second, his conceptual framework overlooks a range of other strategies through which projects of neoliberal nature are pursued. Third, he fails to articulate his concept of an ecological fix with the typology of neoliberalization he presents earlier in the paper, thereby missing an opportunity to deliver on his promise to provide an explanatory framework for *why* neoliberal nature is being produced. This, in turn, undermines Castree’s claim to help us understand what is unique about neoliberal nature, and to explore why neoliberalism specifically (as opposed to capitalism more generally) is necessarily an environmental project, that is, a project (whatever its other dimensions) that has the nonhuman world as a key part of its rationale. My countersuggestions to Castree are as follows: constrain ecological fixes to those strategies which internalize or externalize environmental degradation (his environmental fixes 1 and 3); expand our appreciation of the drivers for neoliberal strategies beyond the merely economic; and take a more structured approach to our conceptual frameworks through articulating the relationship between tactics of neoliberalization and an expanded set of targets.

One final point: if our conceptual frameworks remain solely or primarily reliant on concepts of neoliberalism (the case in Castree’s analysis), we cannot provide a tenable explanation of what is new about neoliberal nature, nor why it is proliferating, much less a convincing analysis of its effects. This being said, although we might disagree about the finer points, I suspect that Castree and I are in agreement in our characterization of a key challenge for the neoliberal nature research agenda: balancing the ontological imperatives and analytical implications of biophysical difference with the insights that can be generated by rigorous comparative and synthetic analyses. However, for the reasons outlined above, I doubt that scholars of ‘neoliberal nature’ will answer his call.

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