# Neoliberal Environmentality:
# Towards a Poststructuralist Political Ecology of the Conservation Debate

**Robert Fletcher**

Department of Environment, Peace, and Security, University for Peace, Ciudad Colón, Costa Rica

**E-mail:** rfletcher@upeace.org

## Abstract

This article proposes a Foucaultian poststructuralist framework for understanding different positions within the contemporary debate concerning appropriate biodiversity conservation policy as embodying distinctive 'environmentalities'. In a recently-released work, Michel Foucault describes a neoliberal form of his familiar concept 'governmentality' quite different from conventional understandings of this oft-cited analytic. Following this, I suggest that neoliberalisation within natural resource policy can be understood as the expression of a 'neoliberal environmentality' similarly distinct from recent discussions employing the environmentality concept. In addition, I follow Foucault in describing several other discrete environmentalities embodied in competing approaches to conservation policy. Finally, I ask whether political ecologists' critiques of mainstream conservation might be viewed as the expression of yet another environmentality foregrounding concerns for social equity and environmental justice and call for more conceptualisation of what this might look like.

## INTRODUCTION

Recent years have witnessed an explosion of debate concerning the appropriate approach to biodiversity conservation in locations throughout the world. While the venerable protectionist 'fortress conservation' model has been strongly criticised and replaced in many places by a seemingly more participatory community-based conservation (CBC) approach, the CBC model has itself been widely critiqued of late on a variety of grounds, including, on the one hand, its common failure to achieve substantial conservation and, on the other, its implication within neoliberal ideology. As a result, calls have arisen for a return to a protectionist paradigm, often grounded in a so-called 'deep ecology' perspective claiming to speak to an essential human need for connection with pristine 'wild' spaces. Meanwhile, social scientists advance their own critique of all of these competing conservation strategies as well.

In this article, I propose a novel framework for understanding these competing positions within the conservation debate as expressions of distinct 'environmentalities' that compete to define appropriate natural resource management strategy. In so doing, I adopt a poststructuralist political ecology perspective (Peet & Watts 1996), drawing on Foucault's (1991a, 2007, 2008) analysis of 'governmentality' as well as recent applications of this concept to describe environmental governance (Luke 1999a, 1999b; Agrawal 2005a, 2005b), to develop my analysis. In the process, I seek to expand upon recent critiques of the growing trend towards neoliberalisation within contemporary conservation practice by analysing neoliberalism not merely as a capitalist economic process but rather, following Foucault, as a far more general strategy of governing human action in a variety of realms. Thus, my analysis proposes a novel frame for understanding the increasingly remarked upon relationship between capitalism and conservation as well (Brockington *et al.* 2008).

I begin by outlining the growing literature addressing neoliberalisation within conservation. I then draw on Foucault's most recently-released work to describe a 'neoliberal environmentality' embodied in this approach. Subsequently, I again employ Foucault to introduce several different environmentalities that may also be observed in other competing positions concerning appropriate conservation policy described above. I suggest that recent social science critiques of conservation practice from a political ecology

perspective might be viewed as advocating a nascent environmentality concerned first and foremost with social justice, and recommend that the characteristics of this 'liberation' environmentality be more explicitly conceptualised in the future and its unique features vis-à-vis other approaches emphasised. Finally, I propose that future research might draw upon the framework I have developed to productively explore the interplay among different environmentalities operating within the conservation debate in order to analyse how conservation discourse and practice manifest within particular locales.

## NEOLIBERAL CONSERVATION

Critical social science engagement with natural resource management, and with biodiversity conservation in particular, has become increasingly focused upon an analysis of neoliberalisation (Sullivan 2006; Igoe & Brockington 2007; Castree 2008). Conservation policy, this analysis demonstrates, has over the past several decades become infused with a neoliberal economic philosophy, promoting, among other elements: 1) the creation of capitalist markets for natural resource exchange and consumption; 2) privatisation of resource control within these markets; 3) commodification of resources so that they can be traded within markets; 4) withdrawal of direct government intervention from market transactions; and 5) decentralisation of resource governance to local authorities and non-state actors such as non-governmental organisations (NGOs).

Within conservation practice, this neoliberalisation is identified in a myriad of trends, including the growing prominence and power of big international environmental NGOs (the so-called 'BINGOs') such as Conservation International and The Nature Conservancy (Chapin 2004); increasing partnership among these BINGOs and corporations and transnational institutions like the World Bank and the International Monetary Fund (Levine 2002; Chapin 2004); the promotion of economic activities (e.g., ecotourism, bioprospecting, and payment for environmental services) to commodify *in situ* natural resources and create a market for their exchange (West 2006); the spread of privately-owned and -operated nature reserves (Langholtz 2003); the devolution of resource control to NGOs and local community members; and the consequent decline of the state-centred command and control conservation approach termed 'fortress conservation' (Brockington 2002; Igoe 2004).

Critics consider these trends problematic for a number of reasons. First, rather than truly devolving control to community members, neoliberalisation may allow corporations and international agencies to increase their influence over local resource use though the decentralised governance structures in which community members participate (Levine 2002). Second, marginal communities may be further disenfranchised from their local resources as these become incorporated into extended market structures (Brockington *et al.* 2008). Third, commodification may alter local values and meanings ascribed

to resources in ways that impact overarching social and cultural dynamics within communities (Sullivan 2006; West 2006). Fourth, such commodification may actually accelerate rather than diminish resource degradation if revenues are used to buy extractive equipment (e.g., chainsaws and tractors) and/or if extractive potential exceeds *in situ* value (Langholtz 1999; West 2006). Fifth, even when conservation does in fact diminish resource degradation in one area, degradation may be merely displaced elsewhere through so-called 'mitigation' measures, resulting not in an overall gain but in a redistribution of the costs and benefits incurred (Brockington *et al.* 2008). Sixth, concerns have been raised regarding human rights issues (such as displacement) involved in various market-based conservation initiatives (Chapin 2004; Adams & Hutton 2007). Finally, critics take issue with the view of human behaviour upon which this neoliberalisation is often predicated, which describes individuals as self-interested rational actors who respond first and foremost to economic incentives (McCauley 2006; Sullivan 2006).

At the heart of the neoliberal conservation critique stands a deep-seated uneasiness with the relationship between conservation and inequality (Brockington *et al.* 2008). A majority of critics self-identify as political ecologists, a perspective arising from a Marxist tradition of concern for the means by which wealth, power, and resources are appropriated by the few at the expense of the many (Watts 2000). As with conservation practice generally (Adams & Hutton 2007), therefore, neoliberalisation is problematised most fundamentally for its creation or exacerbation of social, political, and economic inequality.

Political ecologists' critique of neoliberalism is grounded in large part, although certainly not exclusively (Castree 2008), on cultural geographer David Harvey's (2005) influential political economic analysis in his *A brief history of neoliberalism* (e.g., Brockington & Igoe 2007). Harvey's characteristically Marxist reading frames neoliberalism as a distinct form of capitalism fusing base and superstructural elements, with neoliberal economic theory serving primarily as an ideological smokescreen to disguise a class project of 'accumulation by dispossession'. He writes:

> It has been part of the genius of neoliberal theory to provide a benevolent mask full of wonderful-sounding words like freedom, liberty, choice, and rights, to hide the grim realities of the restoration or reconstitution of naked class power, locally as well as transnationally, but most particularly in the main financial centres of global capitalism (Harvey 2005: 119).

As evidence for this thesis, Harvey observes that "when neoliberal principles clash with the need to restore or sustain elite power, then the principles are either abandoned or become so twisted as to be unrecognizable" (2005: 19). He views instances of state intervention into market transactions, such as government bailouts of failing financial institutions, as particularly exposing the disjuncture between theory and practice in neoliberal policy.

Here, I explore a decidedly different approach to neoliberalism, grounded in the so-called poststructuralist perspective of Foucault. Despite the frequent application of a Foucaultian framework to analyse environmental governance in general, discussed below, a similar framework has rarely been applied to the study of neoliberalisation within natural resource management in general (Castree 2008) or conservation policy specifically (exceptions include Sullivan 2006; West 2006). Likewise, while a sizable literature has arisen around Foucault's discussion of 'governmentality' (Rose *et al.* 2006), his analysis of a specifically neoliberal governmentality has received far less attention to date (Lemke 2001; Peters 2006; Ferguson 2010). In what follows, then, I endeavor to bring these two lines of analysis together, employing the governmentality concept to analyse neoliberalisation and other trends within the contemporary conservation debate.

## NEOLIBERAL GOVERNMENTALITY

In the recently-released English translation of his 1978-79 Collège de France lecture series entitled *The birth of biopolitics*, Foucault (2008) offers his own distinctive analysis of neoliberalism at the moment that it first exploded onto the world stage (Harvey 2005). Foucault demonstrates that the central architects of neoliberalism, including Hayek and Friedman, never actually envisioned the *laissez-faire* free market that many critics describe (e.g., McNally 2006). Rather, Foucault explains, neoliberal economists claimed, to the contrary, that establishing and sustaining an ostensibly 'free' market in fact required pervasive government intervention and regulation. For these neoliberals, the market was not understood as a 'natural' phenomenon that could survive on its own, but as an artificial construct that had to be actively created and constantly maintained through diverse forms of governance. Thus, Foucault claims, "Neoliberalism should not be identified with *laissez-faire*, but rather with permanent vigilance, activity and intervention" (2008: 132).

This intervention, however, should occur not within the 'mechanisms' of the market itself but rather in the market's 'conditions'—not the game but the 'rules of the game', as Foucault (2008: 174) describes. In other words, the state must establish the market's parameters, monitor its outcomes, and consequently adjust these parameters to achieve the most optimal results. State intervention will thus take two forms, what Foucault calls 'regulatory actions' and 'organising actions', respectively. The principle aim of regulatory actions is to guarantee price stabilisation through control of inflation (i.e., manipulation of the discount rate). Organising actions, by contrast, operate on the conditions surrounding the market: The legal system, state of technology, the population's education level, and so forth. While regulatory actions are relatively few and hands-off, therefore, organisation actions entail heavy direct government intervention. Hence, Foucault describes neoliberalism as prescribing 'a minimum of economic interventionism, and maximum legal interventionism' (2008: 167). This intervention, however, is not planning; in fact,

Foucault calls it the 'opposite of a plan' (2008: 172). That is, the state does not seek to actively direct the market's outcome—this should be left to the interaction of market forces, which can ostensibly allocate resources much more efficiently than a monolithic state—but merely to create the proper structures enabling the market to operate freely and efficiently.

Harvey, of course, does not claim that neoliberalism renders 'the state or particular institutions of the state (such as the courts and police function) irrelevant, as some commentators on both the right and left have argued' (2005: 78). Nor does he deny the 'power of ideas to act as a force for historical-geographical change' (2005: 19). Yet Foucault's analysis goes much further. Far more than an ideological superstructure, an economic philosophy, or even a form of capitalism, in Foucault's view neoliberalism constitutes a 'new art of government' (2008: 176), or what he calls a 'governmentality' (1991a). Particularly in the US, Foucault maintains, neoliberalism is a 'whole way of thinking and being', a 'general style of thought, analysis and imagination' (2008: 218). As Lemke (2001: 203) paraphrases, neoliberalism is, in this view, a 'political project that endeavours to create a social reality that it suggests already exists'.

Foucault's governmentality concept has inspired a large body of research (Rose *et al.* 2006); however, it has inspired substantial confusion as well. This is largely due to the fact that the general understanding of the governmentality concept has derived for the most part from Foucault's classic essay of that name (1991a). This essay, however, was excerpted from the series of lectures that Foucault delivered at the Collège de France in 1977-1978, all of which have recently been published under the title *Security, territory, population* (2007). The subsequent lectures in this series reveal, as Senellart (2008: 388) observes in his commentary on the series, that Foucault's use of the term governmentality 'progressively shifts from a precise, historically determinate sense, to a more general and abstract meaning' as his lectures proceed. While, in first introducing the concept, Foucault situates it within his well-known 'sovereignty-discipline-government' triad (1991a: 102), by the end of his series he has begun to employ it as something of a generic term designating various particular modes of what he calls 'conducting conduct'.

Hence, whereas Foucault's initial formulation of governmentality stood opposed to discipline, subsequently discipline became one form of governmentality among others. In his next year's *Birth of biopolitics* lectures then, Foucault clearly distinguishes between 'disciplinary' and 'neoliberal' modes of governmentality operating according to quite different principles. While a disciplinary governmentality operates principally through the internalisation of social norms and ethical standards to which individuals conform due to fears of deviance and immorality, and which they thus exercise both over themselves and one another, a neoliberal governmentality seeks merely to create external incentive structures within which individuals, understood as self-interested rational actors, can be motivated to exhibit appropriate behaviours through manipulation of incentives. Neoliberal governmentality thus

constitutes 'an environmental type of intervention instead of the internal subjugation of individuals' characteristic of a disciplinary governmentality (Foucault 2008: 260). It is 'a governmentality which will act on the environment and systematically modify its variables' (2008: 271).

While neoliberalism is often described as a straightforward revival of the classical liberalism of the eighteenth and nineteenth centuries, Foucault claims that the two philosophies are in reality quite different. In the economy envisioned by liberal theorists such as Adam Smith, the state's main role was to intervene subsequently, in the market's *effects*, to ensure free and fair transactions (for instance, by punishing unscrupulous businesspeople). According to the neoliberal architects on the other hand, the state must intervene at the outset to *construct* the market itself. It must intervene, in other words, to 'make the market possible' (Foucault 2008: 146). In addition, whereas classical liberalism sought merely to carve an autonomous space for a market economy to operate according to its own unique laws within a society overwhelmingly dominated by sovereign authority, neoliberalism does something quite different: It prescribes the market as the model not only for behaviour within the economic realm but in the rest of society as well. That is, it seeks to extend the type of government rationality operating within the market into other realms (e.g., politics and social relations). All of these realms become viewed as spaces, like the market, in which rational actors compete to maximise their use of scarce resources, and thus governance in all such areas should entail the construction of appropriate incentive structures to direct actors' behaviour in beneficial ways. In this vision, then, 'the market is no longer a principle of government's self-limitation', as in liberalism; rather, 'it is a principle turned against it' (2008: 247).

Similarly, while neoliberalism represents a 'return of homo economicus', the neoliberal rational actor is conceptualised quite differently than that envisioned within classical liberal thought. Whereas a liberal homo economicus was seen to express her/his self-interest through exchange and consumption for maximum personal utility, the neoliberal rational actor manifests her/his own self-interest through enterprise and competition for maximum profit. Thus, while the liberal rational actor's self-interest naturally converged with others' to produce socially-desirable ends, the competitive neoliberal homo economicus, left to her/his own devices, will undermine social goals, and thus governmental policy must correct for this reality by encouraging, through the creation of appropriate incentive structures, the direction of individual self-interest towards socially-productive ends. Hence, whereas the liberal homo economicus should be left alone for the most part to pursue its her/his self-interest, the neoliberal subject by contrast is 'someone manageable, someone who responds systematically to systematic modifications artificially introduced into the environment' (2008: 270).

In Foucault's reading, then, the neoliberal state is, by design, profoundly interventionist, as noted above. This understanding may help to clarify what Büscher (2010: 656) characterises as the common academic depiction of 'neoliberalism's ambivalence towards the state—on the one hand, that the state is all that is 'bad' while, on the other hand, that the state is necessary as an 'enabling environment' (Moore 1999)'. Harvey (2005), as noted above, views the majority of state economic intervention as antithetical to neoliberal doctrine, yet as a necessary corrective to the ravages of neoliberal policy, the devastating effects of which require amelioration through state policy. This builds on Polanyi's (1944) earlier analysis of the so-called 'double movement' of free-market capitalism, in which the market's inevitable negative consequences inspire resistance on the part of those adversely affected by such consequences, thus demanding a response by the state in the form of social policies to support the dispossessed and quell the dissidence that would otherwise intensify. Similarly, Peck and Tickell (2002: 384) describe 'a shift from the pattern of deregulation and dismantlement so dominant during the 1980s, which might be characterized as 'roll-back neoliberalism', to an emergent phase of active state-building and regulatory reform—an ascendant moment of 'roll-out neoliberalism''. They view this transition to 'roll-out' policy as a response to the 'perverse economic consequences and pronounced social externalities' (Peck & Tickell 2002: 388) of the earlier 'roll-back' phase, describing the former as an 'aggressive reregulation, disciplining, and containment of those marginalized or dispossessed by the neoliberalism of the 1980s' (2002: 389). Foucault's analysis (advanced in 1979, long before 'roll-out' neoliberalism was ever conceived), by contrast, suggests that, notwithstanding contemporary neoliberals' common claim to practice a wholly technocratic 'antipolitics' (Ferguson 1991; Büscher 2010), neoliberal state regulation was not merely an after-the-fact reaction to free market excess but an explicit intention from the outset.

The profound difference between neoliberal governmentality and a disciplinary art of government can be clearly seen in one of the examples that Foucault provides, namely the two regimes' approaches to curbing criminality. Within a disciplinary governmentality, as Foucault famously described in *Discipline and punish* (1977), criminals are viewed as deviant individuals, possessing an aberrant morality that compels anti-social behaviour. Criminality must thus be addressed through efforts to replace these anti-social values with norms of proper, 'normal' behaviour, by means of which individuals will subsequently self-regulate, due less to fear of punishment than of being branded deviant or immoral. This, of course, is the essence of Foucault's (1977) well-known 'panopticon' model for how power operates within modern society in particular.

Within a neoliberal governmentality, by contrast, criminals are viewed not as abnormal deviants but merely rational actors like everyone else seeking to maximise their utility through the most promising avenues available within their subjective horizons. Addressing criminality, therefore, requires not intervening into subjects' internal states but merely altering the incentive structures within which criminals operate in order to make crime more costly than obeying the law. Hence, whereas incarceration within disciplinary governmentality is

a means (at least in part) to compel criminals to internalise societal norms, under neoliberalism it is merely an additional imposed expense intended to alter the cost-benefit ratio of the prospect of a future crime and thereby reduce the total quantity that criminals will elect to commit.

Foucault's different governmentalities have divergent implications concerning the exercise of 'biopower' as well. Biopower is, of course, Foucault's (e.g., 1978, 2003) term to describe a form of power, particularly prevalent within modern western societies, that seeks not merely to impose sovereign will upon a collection of subjects, but instead to legitimate authority through the claim that governance serves to enhance the health and vitality of the subject 'population'—for instance, by implementing programmes to reduce death and morbidity rates, increase birth and literacy rates, and so on. As Foucault describes, while 'sovereign' power claims the right to 'take life or let live', biopower claims the inverse authority to 'make live and to let die' (2003: 241).

In Foucault's (2003) analysis, governmentality (in the disciplinary sense) functions as one of the principle means by which the state (as well as other actors) exercises biopower. That is, the disciplinary techniques that constitute this governmentality compel individuals to internalise the social values and norms by means of which they will self-regulate their behaviour in ways consistent with the state's goals vis-à-vis the overarching population—reducing or increasing their fertility to alter the aggregate birth rate, visiting doctors and taking medicine to enhance their health and thus diminish the death rate, and so forth. Neoliberalism, by contrast, constitutes a novel approach to the exercise of biopower, prescribing very different methods of influencing subjects' behaviour in accordance with state goals vis-à-vis the population as a whole. While Foucault does not spend much time describing what a neoliberal approach to biopower would actually look like, at the end of his *Biopolitics* lectures [which ostensibly sought to address this question, but which instead were 'devoted entirely to what should have been only its introduction' (Foucault 2008: 317)—namely, the origins of neoliberalism] Foucault suggests this as a new area for future analysis. He states:

> What should now be studied, therefore, is the way in which the specific problems of life and population have been posed within a technology of government which, although far from always having been liberal, since the end of the eighteenth century has been constantly haunted by the question of liberalism (2008: 324).

How would the exercise of biopower in terms of a neoliberal governmentality differ from a disciplinary approach? First, a neoliberal perspective would likely focus less on subjects' internal states than on the external structures within which they act. Second, interventions would be framed less in terms of morality than cost-benefit characteristics. Third, a neoliberal governmentality would likely place less emphasis on nurturing and sustaining life directly than on supporting economic growth, which Foucault calls neoliberalism's 'one true and

fundamental social policy', observing, "Economic growth and only economic growth should enable all individuals to achieve a level of income that will allow them the individual insurance, access to private property, and individual or familial capitalization with which to absorb risks" (2008: 144). In neoliberal discourse, in other words, economic growth is the chief mechanism through which the aims of biopower are pursued. Limiting economic growth is implicitly construed as a threat to human life, and thus to the exercise of biopower as well.

The differences between disciplinary and neoliberal approaches to the exercise of biopower might be illustrated through a concrete example of how each perspective would likely address the same pertinent social issue. In the paradigmatic biopolitical effort to reduce population growth in response to concerns for 'overpopulation', for instance, a disciplinary governmentality might seek to lower the birth rate through a public media campaign aimed to frame extramarital sex and pregnancy as immoral and irresponsible. A neoliberal strategy, by contrast, might simply reduce the welfare benefits provided for children, thus altering the incentive structure within which reproductive decisions are made.

## NEOLIBERAL ENVIRONMENTALITY

This distinction between disciplinary and neoliberal forms of governmentality has intriguing implications for our understanding of conservation practice that have yet to be extensively explored (for preliminary applications to environmental governance in general see Oels 2005). Efforts to conserve biodiversity, of course, have been described as an exercise of biopower, in that: 1) interventions are commonly justified in terms of their role in nurturing and sustaining life, both human and that of other organisms (even the whole of life) as well (Luke 1999a); and 2) interventions' object is commonly 'populations' (both human and non-) as a whole, seeking to maximise the total area of protected forest and amount of land under forest cover minimise, the quantity of extinct species, etc. As Youatt (2008) observes, the United Nations Environmental Program's (UNEP) Global Biodiversity Assessment can be seen as a paradigmatic biopolitical approach to conservation, endeavouring to appraise the total health of global life according to a set of statistical indicators and thereby establish a baseline upon which to intervene in order to manipulate these indicators (reducing the rate of fish depletion, for instance) so as to augment and sustain this life-as-a-whole.

As with a more conventional, human-centred exercise of biopower, biopolitical conservation policy, while aimed at populations, is actually applied to individual human bodies, often through disciplinary techniques intended to alter their natural resource use (Borgerhoff Mulder & Coppolillo 2005). In this respect, conservation has often been described as a form of 'green' governmentality intended to inculcate an environmental ethic by means of which people will self-regulate their behaviour in conservation friendly ways (e.g., Luke 1999a, 1999b; Rutherford 1999; Neumann 2001;

Peluso & Watts 2001; Sundar 2001; Agrawal 2005a, 2005b). Agrawal (2005b: 162), for instance, building upon Luke (1999a, 1999b), describes an 'environmentality' aimed at the creation of 'environmental subjects—people who care about the environment'. Environmental education would constitute a paradigmatic example of this environmentality in action, whereby, through diverse decentralised institutions (state schools, NGO trainings, community workshops, ecotourism excursions, etc.), norms intended to encourage *in situ* natural resource preservation are advocated.

Agrawal's (2005a, 2005b) environmentality describes a disciplinary form of conservation governmentality. Neoliberal governmentality, as described above, implies a much different approach to natural resource policy. Rather than attempting to inculcate ethical norms vis-à-vis the environment, within a neoliberal framework conservationists would simply endeavour to provide incentives sufficient to motivate individuals to choose to behave in conservation-friendly ways. In this perspective as well, 'environmental problems cease to be discussed in moral terms and are now addressed as issues that require cost-benefit-analyses' (Oels 2005: 196). Finally, neoliberal policy would be directed first and foremost towards encouraging economic growth as the means to include concerns for social justice within conservation policy.

This, of course, is the essence of the approach termed neoliberal conservation described at the outset. Hence, we might describe neoliberal conservation as the expression of a novel 'neoliberal environmentality' in natural resource policy, an effort to combat environmental degradation in the interest of biopower through the creation of incentive structures intended to influence individuals' use of natural resources by altering the cost-benefit ratio of resource extraction so as to encourage *in situ* preservation.

## MULTIPLE ENVIRONMENTALITIES IN THE CONSERVATION DEBATE

The distinction among Foucaultian concepts such as governmentality, biopower, discipline, and neoliberalism outlined above may help to clarify previous analyses of environmental governance within a Foucaultian frame, in which various of these concepts are commonly conflated. For instance, in the introduction to their edited volume *Violent environments*, a political ecology critique of environmental security scholarship, Peluso and Watts (2001) describe governmentality and disciplinary power as interchangeable concepts (indeed, their index lists the terms interchangeably as well) (see also Neumann 2001; Sundar 2001 in that volume). Conversely, Li (2007: 5) distinguishes discipline and governmentality yet conflates the latter with biopower, writing that "the concern of government is the well-being of populations at large". Others describe governmentality and biopower interchangeably as well (Luke 1999a, 1999b; Rutherford 1999). Li also conflates disciplinarity and neoliberalism in her discussion of biopower, observing that "government operates by educating desires and configuring

habits" while quoting Bentham to describe governmentality as "artificially arranging things so that people, following their own self-interest, will do as they ought" (2007: 5). Still others, by contrast, distinguish disciplinary and neoliberal governmentalities yet conflate the former with biopower, describing biopower as the opposite of neoliberal forms of influence (Bäckstrand & Lövbrand 2005; Oels 2005).

These conflations are understandable, given that much of Foucault's discussion of these various terms occurs only in his most recently-released work. The larger context surrounding his famous *Governmentality* lecture only became available to Anglophone readers in 2007. Similarly, 2003 first saw the English-language publication of Foucault's earlier (1976-1967) lecture series *Society must be defended* (2003), in which he clearly distinguishes among sovereign power, disciplinary power, and biopower. In addition, in that work, Foucault suggests the possibility of articulating sovereignty and biopower. In his *Biopower* lectures, first available in English in 2008 (although commentary on the original audio recordings of these lectures dates back to at least 2001; see Lemke 2001), Foucault clearly describes neoliberalism as a possible vehicle for the exercise of biopower as well.

In addition to disciplinary and neoliberal governmentalities, Foucault (2008) also introduces two additional arts of government into his equation in the *Biopolitics* lectures. One involves the direct exercise of sovereign power through the construction and enforcement of codified rules. While in his lecture series of the previous year, Foucault (2007) seemed to describe governmentality as opposed to sovereign rule, as noted above, in his *Biopolitics* talks Foucault describes sovereign power as a form of governmentality in its own right, aimed at the rational governance of a territory through compelling subjects' obedience to sovereign will by direct threat of punishment (2008: 312). While these first three governmentalities are all seen to operate on principles of calculation and rationality, Foucault's fourth governmentality is different, what he calls the 'art of government according to truth', that is, 'the truth of religious texts, of revelation, and of the order of the world' (2008: 311). In this approach, authority and prescriptions for appropriate behaviour derive not from rules, norms, or even incentives but rather from the claim that such prescriptions accord with the fundamental nature of life and the universe (Foucault's main contemporary example of this approach is Marxism).

Foucault, of course, recognises that these different governmentalities, while distinct, are not mutually exclusive, but may coexist in any given context, alternately conflicting or acting in concert. For instance, neoliberal governmentality could be seen as reliant upon certain disciplinary techniques to facilitate its operation. That is, disciplinary governmentality would be necessary to construct the rational actors upon which neoliberal governmentality would then operate by inculcating subjects' self-perceptions as self-interested, competitive individuals through such mechanisms as schools and sports leagues encouraging these types of behaviours. The various techniques that Martin (1994) describes as serving to encourage

workers to embrace the uncertainties of a 'flexible' neoliberal global economy (e.g., adventure ropes courses) can be seen as examples of disciplinary governmentality in service of neoliberalism as well. Similar complimentarity could be found among other governmentalities.

On the other hand, different governmentalities may conflict as well, leading to debate concerning the proper approach to governance within a given situation. In short, Foucault (2008: 313) suggests that

> In the world we have known since the nineteenth century, a series of governmental rationalities overlap, lean on each other, challenge each other, and struggle with each other: art of government according to truth, art of government according to the rationality of the sovereign state, and art of government according to the rationality of economic agents, and more generally according to the rationality of the governed themselves.

It is this contest among incommensurate governmentalities, indeed, that Foucault sees as constituting the terrain of political debate.

Just as Foucault describes four distinct governmentalities operating within politics in general, we might observe a similar situation within contemporary conservation policy as well, viewing the conservation debate described above as embodying a variety of distinct environmentalities. First, we have the commodifying, market-based neoliberal environmentality outlined earlier. Second, we have the disciplinary environmentality described by Agrawal (2005a) and others, which is an effort to create 'environmental subjects' through diffusion of ethical norms. In addition to these, we might observe a third, sovereign environmentality in the 'fortress conservation' approach, wherein resource preservation is enacted through the creation and patrol of so-called protected areas (the 'fences and fines' strategy), usually on the part of nation-state regimes for the recreational use of societal (or international) elites (Igoe 2004).

Finally, one might add to all of this a fourth environmentality, corresponding with Foucault's 'art of government according to truth'. This 'truth environmentality' might be observed, for instance, in the perspective advocated by deep ecologists, who often argue for a particular approach to resource preservation based on claims concerning humans' essential interconnection with nature, an interconnection commonly understood as evolutionarily derived (Roszak *et al.* 1995; Fletcher 2009b). Alternative resource use regimes, such as those practiced by many indigenous peoples drawing on so-called traditional ecological knowledge (TEK), might be seen as variants of truth environmentality as well (Berkes 2008).

These various environmentalities may be mixed and matched in particular positions within the conservation debate. Community-based conservation might be seen to embody alternate strands of disciplinarity and neoliberalism, depending upon whether a programme emphasises ethics or incentives (or a combination of the two) in its efforts to motivate local participation. A disciplinary environmentality might be observed in some of the recent critiques of neoliberal conservation. McCauley, for instance, contends that 'market-based mechanisms for conservation are not a panacea for our current conservation ills. If we mean to make significant and long-lasting gains in conservation, we must strongly assert the primacy of ethics and aesthetics in conservation' (2006: 27).

Elements of a sovereign environmentality might be identified in the recent backlash to the CBC approach, calling for a return to a protectionist, fortress conservation model in which rules will be enforced and borders patrolled irrespective of the desires of local residents altogether (Wilshusen *et al.* 2002). While in Foucault's (2003) original formulation biopower was described as arising in opposition to sovereign authority, within contemporary conservation discourse a sovereign governmentality may be harnessed to biopower itself, with state-centred protectionism justified as the defense of non-human life. At the same time, in the neoprotectionist backlash sovereign governmentality may be decoupled from the state through the process that Ferguson (2006) calls the 'privatization of sovereignty'. We can observe this, for instance, in the creation of private protected areas (Langholz 2003) or those operated by NGOs, who may at times employ coercive means to secure these areas' preservation (e.g., Clynes 2003).

As I intimate elsewhere, the use of ecotourism as a conservation tool may combine disciplinary and neoliberal environmentalities, involving not only the promotion of economic incentives but also the use of various disciplinary techniques intended to condition local participants to an 'ecotourism discourse' (Fletcher 2009a). Neoliberal and truth environmentalities may come together in the charismatic authority exercised by 'conservation celebrities' who champion environmental causes on behalf of BINGOs and their corporate partners (Brockington 2006, 2009). Likewise, truth and sovereign environmentalities might be combined in certain strands of a fortress conservation approach. For instance, early advocates of fortress protected areas such as Muir and Thoreau self-consciously framed their advocacy in terms of an essential human need for connection with the sacred in nature (Igoe 2004). Similarly, Edward Abbey, one of the main sources of inspiration for the deep ecology group EarthFirst!, famously asserted "The wilderness once offered men a plausible way of life... Now it functions as a psychiatric refuge... Soon there will be no place to go... Then the madness becomes universal... And the universe goes mad" (2000: 63). In such views, truth may be harnessed to biopower as well (EarthFirst!'s central slogan, for instance, is 'No Compromise in Defense of Mother Earth').

In the framework proposed here then, governmentality, biopower, discipline, sovereignty, neoliberalism, and truth would all be viewed as distinct yet interrelated concepts that may alternately merge, divide, compete, conflict, or coexist within any given context (Table 1). Contemporary trends and debates within conservation policy might thus be understood as instances of the 'interplay' (Foucault 2008) among incommensurate though not incompatible environmentalities in which these various elements intersect.

**Table 1**
*Key Terms*

| Governmentality | Generic mode of 'conducting subjects' conduct' |
|---|---|
| Biopower | Exercise of power in the interest of nurturing and sustaining 'life' |
| Discipline | Governance through encouraging internalisation of norms and values |
| Sovereignty | Governance through top-down creation and enforcement of regulations |
| Neoliberalism | Governance through manipulation of external incentive structures |
| Truth (art of government) | Governance in accordance with particular conception of the nature and order of the universe |

Source: Foucault 2003, 2007, 2008

### TOWARDS A LIBERATION ENVIRONMENTALITY?

A final important question concerns the place of political ecologists' own critiques, both of neoliberalism and other aspects of conservation, within the interplay of environmentalities in the conservation debate. Do such critiques merely reiterate one or a combination of the four environmentalities previously outlined, in other words, or do they represent a novel contribution to the debate—even a new governmentality entirely?

As noted at the outset, the essence of the political ecology critique seems to concern conservation's contribution to various forms of inequality. The aim of this critique, then, is to champion democratic, egalitarian, and non-hierarchical forms of natural resource management in which local peoples enjoy a genuinely participatory (if not self-mobilising) role. Sometimes this aim is left implicit, while at others it is explicitly stated. Peet and Watts, for instance, describe an approach to political ecology they call 'liberation ecology', which seeks self-consciously to 'mark the potentially liberatory or emancipatory potential of current political activity around environment and resources' (1996: 2). Likewise, in his critique both of fortress conservation and a CBC approach that maintains that local participation is necessary for conservation to succeed, Brockington points out that "Conservation can be imposed despite local opposition and protected areas can flourish notwithstanding resistance to them" (2004: 411). He maintains, "We will have, therefore, to insist that these social injustices are addressed because they are unjust, not because they are inconvenient" (2004: 427).

Would it be too bold to suggest that the political ecology critique of conservation endorses a new art of government entirely? Could we suggest that this advocacy resonates with Foucault's own aims in his critical work as well? Foucault, after all, described critique as 'work carried out by ourselves upon ourselves as free beings', as 'a patient labor giving form to our impatience for liberty' (1984: 47, 50). Its goal, in his view, was

> not to recover our 'lost' identity, to free our imprisoned nature, our deepest truth; but instead the problem is to move towards something radically Other... we must produce something that doesn't yet exist and about which we cannot know how and what it will be (Foucault 1991: 121).

Concerning governmentality, Foucault raised this issue specifically in relation to the possibility of a distinctive socialist art of government, asking,

What governmentality is possible as a strictly, intrinsically, and autonomously socialist governmentality? In any case, we know only that if there is a really socialist governmentality, then it is not hidden within socialism and its texts. It cannot be deduced from them. It must be invented (2008: 94).

What Foucault appears or be advocating, in other words, is the creation of a wholly novel framework for human self-understanding and interaction—one we might term, in his parlance, something like 'an art of governance in pursuit of liberation'. Contrary to critics' common refrain that Foucault's understanding of power leaves no room for resistance (e.g., Williams 2008), in reality, I contend, Foucault envisioned a profound space not only for resistance but for a greater realm of freedom lying to some degree beyond power and resistance altogether (Fletcher 2007a, 2007b). Movement towards this freedom, in Foucault's vision, must be profoundly participatory; as he explains:

> And if I don't ever say what must be done, it isn't because I believe that there's nothing to be done; on the contrary, it is because I think that there are a thousand things to do, to invent, to forge, on the part of those who, recognizing the relations of power in which they're implicated, have decided to resist or escape them (Foucault 1991: 174).

A similar vision appears, by and large, to lie at the heart of political ecologists' critique of conservation practice as well—a vision, that is, of what we might term a 'liberation environmentality'. This vision, in turn, would seem to resonate with the Foucault-inspired critique of development, demanding an end to the dominant 'development discourse' in which a cadre of (white, western) 'experts' plan interventions on behalf of the world's poor and calling for a 'post-development' era emphasising genuinely participatory and collaborative processes for enhancing people's well-being within culturally-appropriate frames (Escobar 1995; Rahnema & Bawtree 1997). Similarly, could we describe political ecologists as proposing a 'post-conservation' perspective more concerned with social and environmental justice than biodiversity preservation? In his critique of the relationship between protected areas and indigenous peoples around the world, for instance, Igoe asserts, "The more I learn about mainstream conservation models, the more I am convinced that we need to develop alternatives, in the interest of both the environment and social justice" (2004:

xi). Likewise, Sullivan (2006: 128), in her own critique of neoliberal conservation, advocates "changing the parameters of the conversation regarding 'conservation'" by articulating "different possibilities for relationships with each other and the non-human world". Could the alternatives such authors envision be the seeds of a novel post-conservation liberation environmentality? If so, what precisely would this brave new environmentality constitute?

While we can find few concrete answers to such questions in the political ecology critique of neoliberal conservation *per se*, as thus far this critique has been primarily focused on analysing and elucidating the conservation practices it contests, we might turn for guidance to a related body of work devoted to the analysis of common property regimes (CPRs). In opposition to Hardin's (1968) classic 'tragedy of the commons' thesis, which asserts that common pool resources will be inevitably degraded if left to their own devices and thus require 'either socialism or the privatism of free enterprise' (1998: 682) to be sustainably managed, CPR research documents numerous situations in which individuals, under certain specified conditions, work collectively to manage common pool resources for the long-term benefit of the group (e.g., Feeny *et al.* 1990; Ostrom *et al.* 1999; Agrawal 2003; Neves-Graça 2004). One important component of the CPR perspective is an explicit call for greater democracy and participation in resource governance regimes, which are often hampered by authoritarian top-down structures (Ostrom *et al.* 1999). Ostrom and colleagues contend, for instance, that achieving sustainable resource management on a global scale

> will require forms of communication, information, and trust that are broad and deep beyond precedent, but not beyond possibility. Protecting institutional diversity related to how diverse peoples cope with CPRs may be as important for our long-run survival as the protection of biological diversity (1999: 282).

Similarly, Neves-Graça asserts that,

> *if* state institutions as well as nongovernmental organizations are truly committed to addressing dilemmas of common-access resources and developing effective ecological policies, they must let go of currently dominant managerial perspectives. That is, they must abandon the typical approach to environmental programs that follows a top-down linear cycle of assessment of environmental problems, definition of solutions, creation of environmental programs, implementation of these programs, and a posteriori follow-up of responses by those who are the target of these policies (2004: 299, emphasis in original).

At the heart of this call for deeper democracy in resource governance stands a fundamental debate concerning the nature of human motivation and behaviour (Neves-Graça 2004). Key to Hardin's thesis, as to neoliberal theory in general, is the assumption, noted earlier, that humans function as rational actors concerned first and foremost with pursuing their own

self-interest relative to (and at the expense of) others, and thus must be compelled by external agents to act in accordance with the common good. Central to the CPR perspective, by contract, is the contention that common property regimes' frequent success reveals the inaccuracy of this assumption, demonstrating that humans are in fact capable—again under certain conditions—of self-organising to achieve (relatively) harmonious cooperation in the absence of external authority. As Ostrom and her colleagues write:

> The prediction that resource users are led inevitably to destroy CPRs is based on a model that assumes all individuals are selfish, norm-free, and maximizers of short-run results... However, predictions based on this model are not supported in field research or in laboratory experiments in which individuals face a public good or CPR problem and are able to communicate, sanction one another, or make new rules... Reciprocal cooperation can be established, sustain itself, and even grow (1999: 281).

In engaging with the conservation debate, therefore, it might be useful for political ecologists to more explicitly frame their interventions in terms of the specific environmentality or environmentalities they wish to endorse and to clearly contrast this vision with the very different arts of environmental government expressed in the conservation models they oppose. In so doing, political ecologists might draw upon this explicit emphasis within the CPR literature on deepening democracy and contesting rational actor-centred views of human nature to clearly articulate, as Sullivan (2006: 128) proposes, the 'different possibilities for relationships with each other and the non-human world' implicit in their own visions of effective resource governance. What this would look like in practice is a compelling question for the future.

## CONCLUSION

In this article I have proposed a novel framework, inspired by a Foucaultian poststructuralist perspective, for understanding different approaches to biodiversity conservation as the function of distinctive environmentalities embodying contrasting strategies of governing both natural resources and their human users that compete to define appropriate resource management within any given context. I first outlined the growing critique of neoliberalisation within conservation policy from a political ecology perspective, highlighting the common foundation of this critique in a Marxist understanding of neoliberalism as a combination of ideological and material processes that may alternately converge or conflict. I then introduced Foucault's very different reading of neoliberalism as a particular 'art of government', contrasting this with the 'disciplinary' governmentality with which Foucault is more commonly associated. I described how these different governmentalities could be observed as distinct 'environmentalities' embodied in competing contemporary conservation practices. I then outlined two more governmentalities—concerned with

'sovereignty' and 'truth', respectively—and showed how similar environmentalities could be found within alternate positions within the conservation debate as well. Finally, I suggested that political ecologists' critiques of conventional conservation practice might form the basis of a novel 'liberation' or 'post-conservation' environmentality and proposed drawing upon themes emphasised in the related common property literature as one means by which this novel environmentality might be more explicitly articulated.

At present, of course, this framework is merely suggestive, requiring the superimposition, as Brockington (2006: 564) phrases it, of 'some empirical flesh on the theoretical skeleton I have sketched'. In the future, then, research is needed to test whether this model is indeed capable of parsing the various strands of conservation practice in concrete situations, and whether, in so doing, it is useful in highlighting aspects of the conservation debate currently obscured by the dearth of conceptual tools capable of clearly distinguishing among different approaches. The framework could be similarly applied to investigate international development work as well. Such research would seek to understand the particular environmentalities informing different stakeholders' positions concerning appropriate resource management within a given context; the differences among the environmentalities espoused by various stakeholders; the (potentially) multiple environmentalities that may articulate within any given position; and how all of this intersects to create the actual conservation practices operating on the ground. My hope is that by clearly defining the parameters of various stakeholders' particular approaches to conservation, the beliefs and assumptions upon which they are based, and the differences among competing positions, a space may be opened for more effective communication among conservationists of various camps towards facilitating constructive collaboration in the interest of a sustainable future.

### ACKNOWLEDGEMENTS

### REFERENCES

Abbey, E. 2000. *The monkey wrench gang*. Philadelphia: Lippincott.

Adams, W.M. and J. Hutton. 2007. People, parks and poverty: Political ecology and biodiversity conservation. *Conservation and Society* 5(2): 147–183.

Agrawal, A. 2003. Sustainable governance of common-pool resources: Context, methods, and politics. *Annual Review of Anthropology* 32: 243–262.

Agrawal, A. 2005a. *Environmentality: Technologies of government and the making of subjects*. Durham: Duke University Press.

Agrawal, A. 2005b. Environmentality: community, intimate government, and the making of environmental subjects in Kumaon, India. *Current Anthropology* 46(2): 161–190.

Bäckstrand, K. and E. Lövbrand. 2005. Planting trees to mitigate climate change: Contested discourses of market efficiency, planetary carbon control and civic participation. In: *46th Annual Conference of the International Studies Association*. Organised by ISA. Honolulu, Hawai. 2–5 March 2005. Available at http://www.isanet.org.

Berkes, F. 2008. *Sacred ecology* (Second edition). London: Routledge.

Brockington, D. 2002. *Fortress conservation: The preservation of the Mkomazi Game Reserve, Tanzania*. Oxford: James Currey.

Brockington, D. 2004. Community conservation, inequality and injustice: Myths of power in protected area management. *Conservation and Society* 2: 411–432.

Brockington, D. 2006. Powerful environmentalisms: Conservation, celebrity, and capitalism. *Media, Culture & Society* 30(4): 551–568.

Brockington, D. 2009. *Celebrity and the environment: Fame, wealth and power in conservation*. London: Zed Books.

Brockington, D., R. Duffy and J. Igoe. 2008. *Nature unbound: Conservation, capitalism and the future of protected areas*. London: Earthscan.

Borgerhoff Mulder, M. and P. Coppolillo. 2005. *Conservation*. Princeton: Princeton University Press.

Büscher, B. 2010. Seeking 'telos' in the 'transfrontier'? Neoliberalism and the transcending of community conservation in Southern Africa. *Environment and Planning A* 42: 644–660.

Castree, N. 2008. Neoliberalising nature: The logics of deregulation and reregulation. *Environment and Planning A* 40: 131–152.

Chapin, M. 2004. A challenge to conservationists. *WorldWatch* 17(6): 17–31.

Clynes, T. 2003. They shoot poachers, don't they? In: *The Best American Travel Writing 2003* (ed. Frazier, I.) Pp. 135–156. Boston: Houghton Mifflin.

Escobar, A. 1995. *Encountering development: The making and unmaking of the Third World*. Princeton: Princeton University Press.

Feeny, D, F. Berkes, B.J. McKay and J.M. Acheson. 1988. The tragedy of the commons: Twenty-two years later. *Human Ecology* 18(1): 1–19.

Ferguson, J. 1994. *The anti-politics machine: 'Development', depoliticization, and bureaucratic power in Lesotho*. Minneapolis: University of Minnesota Press.

Ferguson, J. 2006. *Global shadows: Africa in the neoliberal world order*. Durham: Duke University Press.

Ferguson, J. 2010. The uses of neoliberalism. *Antipode* 41(S1): 166–184.

Fletcher, R. 2007a. Introduction: Beyond resistance? In *Beyond resistance: The future of freedom* (ed. Fletcher, R.). Pp. vii–xxv. New York: Nova Science.

Fletcher, R. 2007b. Free play: Transcendence as liberation. In: B*eyond resistance: The future of freedom* (ed. Fletcher, R.). Pp. 143–162. New York: Nova Science.

Fletcher, R. 2009a. Ecotourism discourse: Challenging the stakeholders theory. *Journal of Ecotourism* 8(3): 269–285.

Fletcher, R. 2009b. Against wilderness. *Green Theory & Praxis* 5(1): 169–179.

Foucault, M. 1977. *Discipline and punish: The birth of the prison*. New York: Vintage.

Foucault, M. 1978. *The History of sexuality: An introduction*. New York: Pantheon Books.

Foucault, M. 1984. What is enlightenment? In: *The Foucault reader* (ed. Rabinow, P.). Pp. 32–50. New York: Pantheon.

Foucault, M. 1991a. Governmentality. In: *The Foucault effect: Studies in governmentality* (eds. Burchell, G., C. Gordon and P. Miller). Pp. 87–104. Hemel Hempstead: Harvester Wheatsheaf.

Foucault, M. 1991b. *Remarks on Marx: Conversations with Duccio Trombadori*. New York: Semiotext(e).

Foucault, M. 2003. *Society must be defended*. New York: Picador.

Foucault, M. 2007. *Security, territory, population*. New York: Picador.

Foucault, M. 2008. *The birth of biopolitics*. New York: Palgrave Macmillan.

Hardin, G. 1968. The tragedy of the commons. *Science* 162: 1243–1248.

Hardin, G. 1998. Extensions of 'the tragedy of the commons'. *Science* 5634: 682–683.

Harvey, D. 2005. *A brief history of neoliberalism*. Oxford: Oxford University Press.

Igoe, J. 2004. *Conservation and globalization: A study of national parks and indigenous communities from East Africa to South Dakota*. Belmont, CA: Wadsworth/Thompson.

Igoe, J. and D. Brockington. 2007. Neoliberal conservation: A brief introduction. *Conservation and Society* 5(4): 432–449.

Langholz, J. 2003. Privatizing conservation. In: *Contested nature: Promoting international biodiversity with social justice in the twenty-first century* (eds. Brechin, S.R. , P.R. Wilshusen, C.L. Fortwangler and P.C. West). Pp. 117–135. Albany: State University of New York Press.

Lemke, T. 2001. 'The Birth of Bio-politics': Michel Foucault's lecture at the Collège de France on neo-liberal governmentality. *Economy and Society* 30(2): 190–207.

Levine, A. 2002. Convergence or convenience? International conservation NGOs and development assistance in Tanzania. *World Development* 30(6): 1043–1055.

Li, T.M. 2007. *The will to improve: Governmentality, development, and the practice of politics*. Durham: Duke University Press.

Luke, T. 1999a. Environmentality as green governmentality. In: *Discourses of the environment* (ed. Darier, E.). Pp. 121–151. Oxford: Blackwell Publishers.

Luke, T. 1999b. Eco-managerialism: environmental studies as a power/knowledge formation. In: *Living with nature: Environmental politics as cultural discourse* (eds. Fisher, F. and M.A. Hajer). Pp. 101–120. Oxford: Oxford University Press.

Martin, E. 1994. *Flexible bodies: Tracking immunity in American culture from the days of polio to the age of AIDS*. Boston: Beacon Press.

McCauley, D.J. 2006. Selling out on nature. *Nature* 443(7): 27–28.

McNally, D.M. 2006. *Another world is possible: Globalization and anti-capitalism*. Revised edition. Monmouth: The Merlin Press.

Moore, D. 1999. 'Sail on, o ship of state': Neo-liberalism, globalisation and the governance of Africa. *Journal of Peasant Studies* 27: 61– 96.

Neumann, R. 2001. Disciplining peasants in Tanzania: From state violence to self-surveillance in wildlife conservation. In: *Violent environments* (eds. Peluso, N.L. and M. Watts). Pp. 305–327. Ithaca: Cornell University Press.

Neves-Graça, K. 2004. Revisiting the tragedy of the commons: Ecological dilemmas of whale watching in the Azores. *Human Organization* 63(3): 289–300.

Oels, A. 2005. Rendering climate change governable: From biopower to advanced liberal government? *Journal of Environmental Policy & Planning* 7: 185–207.

Ostrom, E., J. Burger, C.B. Field, R.B. Norgaard and D. Policansky. 1999. Revisiting the commons: Local lessons, global challenges. *Science* 284: 278–282.

Peck J and A. Tickell. 2002. Neoliberalizing space. *Antipode* 34: 380–404.

Peet, R. and M. Watts. 1996. *Liberation ecology: Environment, development, social movements*. London: Routledge.

Peluso, N.L. and M. Watts. 2001. Violent environments. In: *Violent environments* (eds. Peluso, N.L. and M. Watts). Pp. 3–38. Ithaca: Cornell University Press.

Peters, M. 2006. Neoliberal governmentality: Foucault on the birth of biopolitics. In: *Gouvernementalität und erziehungswissenschaft: Wissen–Macht–Transformation* (eds. Weber, S. and S. Maurer). Pp. 37–49. Wiesbaden: VS Verlag für Sozialwissenschaften.

Polanyi, K. 1944. *The great transformation*. Boston: Beacon.

Rahnema, M. and V. Bawtree. 1997. *The post-development reader*. London: Zed Books.

Rose, N., P. O'Malley and M. Valverde. 2006. Governmentality. *Annual Review of Law and Social Science* 2: 83–104.

Roszak, T., M.E. Gomes and A.D. Kanner (eds.). 1995. *Ecopsychology: Restoring the earth, healing the mind*. San Francisco: Sierra Club Books.

Rutherford, P. 1999. The entry of life into history. In: *Discourses of the environment* (ed. Darier, E.). Pp. 37–62. Oxford: Blackwell Publishers.

Sennellart, M. 2007. Course context. In: *Security, territory, population* (ed. Davidson, A.). Pp. 369–391. Picador: New York.

Sullivan, S. 2006. The elephant in the room? Problematising 'new' (neoliberal) biodiversity conservation. *Forum for Development Studies* 33(1): 105–135.

Sundar, N. 2001. Beyond the bounds? Violence at the margins of new legal geographies. In: *Violent environments* (eds. Peluso, N.L. and M. Watts). Pp. 328–353. Ithaca: Cornell University Press.

Watts, M. 2000. Political ecology. In: *A companion to economic geography* (eds. Sheppard, E. and T. Barnes). Pp. 257–274. London: Blackwell.

West, P. 2006. *Conservation is our government now: The politics of ecology in Papua New Guinea*. Durham: Duke University Press.

Williams, G. 2008. Cultivating autonomy: Power, resistance and the French alterglobalization movement. *Critique of Anthropology* 28(1): 63–86.

Wilshusen, P., S. Brechin, C.L. Fortwangler and P.C. West. 2002. Reinventing a square wheel: Critique of a resurgent 'protection paradigm' in international biodiversity conservation. *Society and Natural Resources* 15: 17–40.

Youatt, R. 2008. Counting species: Biopower and the global biodiversity census. *Environmental Values* 17: 393–417.