

How has Nature Been Conceptualised in Modernity?

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LUKE GODFREY, DEC 4 2012

The key influence of modernity has been in striving to emancipate the capabilities of the individual, the objective being the autonomous individual free from restrictions. This conception of modernity refers to the period of modernity, with its particular dynamics, as outlined by Wagner (2001: 4), and influenced by the religious legacy of the West. The physical world, under the label 'nature', has been treated marginally in the discourses of some of the key figures in the philosophy of modernity, although we are reliant on natural capital and processes and our relationship to nature is a cornerstone of modern society. Although capitalism is also important to this, there is not the space here to address both in a comprehensive fashion, and so we have chosen to focus on the ideational construction of modernity.

The conception of nature in modernity has important implications for the structures and processes of social life, and despite its mention in passing, can be seen as a central but often unacknowledged part of these dynamics. In the varied political projects of Hobbes, Descartes and others, the discourse of modernity, combined with capitalism, has had a clear influence on the ways in which we conceptualise nature. This essay will first address how nature has been conceptualised through modernity, arguing that this has propagated an instrumental-rational approach that has done tremendous harm to both human and non-human communities. It will then move on to how conceptions of technology relate to the construction of nature, and finally attempt to de-construct the dominant discourse.

Predominantly, nature is conceptualised as an obstacle to be overcome or utilised by human capabilities, whether humanity is situated within or outside of it (although there are many other conceptualisations of nature, for which, see Phelan, 1992). A key aspect which permeates the following discussion of modernity is the concept of anthropocentrism, referring to the position of preferential treatment for human interests. Dobson (2000: 51) discusses a human-instrumental position which entails the subjugation of nature for the purposes of humanity, and it is the argument here that this is the type of anthropocentrism which configures the tenets of modernity.

The structure of modernity has been determined by the historical Judeo-Christian context of the West, with important implications for the relationship of man to nature. Western religion has a long history of strong anthropocentrism, although the term itself is more modern, and the scientific revolution inherited this tradition from theology (Wolloch, 2009: 46). Gillespie's (2008: 15) nominalist revolution recreated the world in terms of threat, with events in the fourteenth century contributing to a God conceptualised as powerful and capricious, and a world that was fundamentally insecure. Nominalism rejected teleological ends in nature as restrictions upon an omnipotent God, freeing humans from teleology as well (Gillespie, 2008: 24), and so placing greater emphasis on the individual human will and the need for creating security in this world where God was no longer a caretaker for humanity (Gillespie, 2008: 27). The nominalist revolution had implications down the decades: tearing down scholasticism, influencing humanists, the Reformation, and ultimately paving the way for modernity (Gillespie, 2008: 33). Out of conflicts between these theological strands of thought arose "Modernity *proper* [own emphasis], aiming to develop a science that will make man master and possessor of nature." (Gillespie, 2008: 35). In this we can see nature being posited as a separate space, as a threat, and as something to overcome or exploit.

Modernity dominates the metaphysics of how the world works, and the basis of ethics/morality (Dobson, 2000: 50). It can be seen as disconnecting us from the physical spaces which we inhabit, or as re-inventing it to suit our preconceptions. The definition of self in terms of time, which Gillespie (2008: 2) identifies as at the heart of being modern, allows for the possibility of genuine progress after the cyclical conceptions of time which underpinned

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previous eras. The conception of progression, influenced by the scientific revolution and the possibilities for empirical understanding of nature, is understood as primarily technological, in extending humanity's mastery of nature through its understanding and manipulation by technology. The science promoted by key intellectuals including Rene Descartes, Isaac Newton and Francis Bacon separated nature from society as a mechanistic and divisible space (Dobson, 2000: 38-9). The corollary of this progress was the domination and control of nature; in contrast to today's conception of nature as almost tame, ecological processes posed continual meaningful threats to society such as through plagues and natural disasters (it should be noted here that such threats are still very prevalent, but have been marginalised for the most part to the poor and the vulnerable), which can be seen as giving impetus to the desire for mastery of nature once its possibility had been made necessary theologically, and later as a possibility through secularisation. The Enlightenment is a general term for the 18th century body of thought which further promoted this objective, the command of the forces of nature in service to progress and the betterment of humanity forming a key plank of the political project (Wolloch, 2009: 46). In this, the intellectuals of the Enlightenment were carrying on a divine tradition of strong anthropocentrism, attuned to the new criteria of the rational sciences which positioned nature as an objective reality free of value.

The conceptualisation of nature in modernity throughout the period follows from what Wagner (2001: 7) calls the epistemic problematique, the search for knowledge such as natural laws, through which it is hoped to attain security. For Bacon, this could be through acknowledging Man as a part of nature, and so, in a limited sense, master the natural world. A second strand of modern thought led by Descartes conceptualises Man as transcending nature and as capable of challenging or dispossessing God (Gillespie, 2008: 40). Hobbes differs once more, viewing Man as governed by the laws of nature, which remains on a course unless it comes into conflict with another (Gillespie, 2008: 41). Different intellectuals in modernity had different conceptions of the role nature played, but the commonality between them has been the placement of nature as a subject of humanity. Overall, a degree of human freedom is emphasised, and the objective of the modernity project has been to enhance this. This could be achieved through the autonomous individual, with human capabilities viewed as unlimited (albeit if they can be emancipated from the state of nature, the bureaucratic state, or the processes of power), allowing the manipulation of nature in service of this objective, ". . . the Promethean project to which the Enlightenment gave birth in its modern form is substantially intact" (Dobson, 2000: 10-11). These social constructions of modernity are viewed as the immutable and lasting achievements of humanity, fundamentally failing to recognise the starting point and eventual return to nature which gives meaning to enterprise (Leopold & Schwartz, 1966: 201). The basis of this emancipatory project relies upon making humanity, at least to an extent, the master and possessor of nature, facilitating individual autonomy (Gillespie, 2008: 42). The striving for full security results in taking command from nature over ecological processes which are poorly understood, and in the process may undermine them (Leopold & Schwartz, 1966: 132), such as by removing apex predators from a food web, resulting in an imbalance.

This reinforces nature as subjectively valued based upon its utility. The prioritisation of rationalism within the scientific framework regards nature as a means to an end, preserving the ecological processes and natural capital which underpins the systems of modern life (Dobson, 2000: 18). If anything, this attitude has grown as humanity's understanding of, and manipulation of, ecological processes has grown. By the same note, moral consideration is limited to the anthropological world, as by extension of the mechanistic science of modernity, the biosphere is devoid of ethics. The threat of wolves and bears, or the utility of chickens and cattle have shaped both society and landscapes across the globe as a virtue of their exclusion from moral standing within the modern state. Although it is unlikely, or desirable, that everyone subscribes to a vegetarian diet, the consideration of animals as value only in terms of instrumentality has led to an exclusion of other values, and considerable negative impacts on ecosystems and processes as the processes of industrialisation have gone unchecked. The point made here is that modernity does not consider or value such questions, as faith in technological progress and rationality overshadowed them (Gillespie, 2008: 7). Within this framework nature takes on a particular role as the basis on which instrumental rationality can be exercised and capitalist production systems operate (Escobar, 1999: 7). This operates through enlightened self-interest, limiting the incorporation of the ecological systems around, beneath and above us where they do not impinge on this criteria (Leopold & Schwartz, 1966: 208).

Similarly to how faith in progress was shaken by the destructiveness of WW1 & WW2 (Gillespie, 2008: 8), today's increasingly severe environmental problems and climate change point to the inadequacy of the discourse of

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modernity, which placed nature as subservient to other objectives. The failure of rationalism to address these issues further points to the limits of modernity as being unable to control the interactions between society and nature which assumed the complexity of the biotic community may be understood and manipulated (Leopold & Schwartz, 1966: 205). Modernity is disconnected from its technology, despite its fetish for the sciences. The material functionality of technology is treated as wholly separate to the moral realm of humanity (Latour, 2002: 248). If technology is seen in terms of its heterogeneous temporalities, the technical item itself defines the scope of action, and influences the direction of that action through its shape (Latour, 2002: 249). The destructive wars which came as such a shock to those who placed their faith in benign progress failed to take account of the interactions between and around technologies. Increasingly the neutrality of technology as understood in modernity is subject to challenge, with the critique of technology being led in some ways by the Frankfurt School and its practitioners, as well as those within the environmental movement (Feenberg, 1999: 151). To an extent the social construction of technology is acknowledged in theoretical circles, but rationalism and technical control remain the primary driver with regards to the construction of nature.

This is illustrated by the rapid development of the field of 'fracking' within the last few years; "The process of fracking (hydraulic fracturing) involves pumping water and chemicals into shale rock at high pressure to extract gas" (BBC, 2012). The advance of technology which has made fracking possible, and lowered the costs of its processes, has played a role in re-defining shale rock under our feet as a commercial resource, informed by the anthropocentric framework of modernity. The same point may be applied in reverse to the landscapes of nature, which, far from being the passive reservoirs for instrumental use by humanity, in actuality define the scope and direction of the action. Leopold (1966: 205) traces the interactions of American pioneers with the land, in some cases having positive outcomes for the pioneers and in others negative. Overall the land had a greater say in the outcome than is acknowledged by shaping what was possible for the pioneers to construct. The lesson, which is still largely unrecognised, is that society and ecosystems are far from separate spaces as conceived in modernity, but the ecosystems and processes around us are constitutive of anthropocentric spaces, despite the apparent capabilities of humanity to transcend the ecosphere.

This illusion receives its most cogent exposition through the prism of 'Technological Optimism', asserting substitutes can be made and alternatives found on the basis of a past record of human ingenuity (Salmon, 1977: 705). It can be argued that although the contribution of ingenuity may be substantial, ultimately the gains are transitory as continued modernisation is liquidating natural capital which underpins society at a faster rate through displacement rather than substitution. The distinction between the two is unrecognised as defenders of contemporary ways of living point to the liquidation of different resources as examples of substitution; if the process does not replace the original resource in nature then it is merely displacing endeavour to a different area. The technological optimism stemming from modernity and the Enlightenment commonly holds that human ingenuity will always overcome natural obstacles, but fails to take account of the ways in which it has facilitated displacement globally so that the degradation of nature is relegated to the margins.

The restructuring of society in accordance with the assumptions of modernity reaches its apex in knowledge systems such as that of the 'Green Revolution' in agriculture, heralded in the Punjab (India) as " . . . a political and technological achievement, unprecedented in human history. It was designed as a techno-political strategy for peace, through the creation of abundance by breaking out of nature's limits and variables" (Shiva, 2002: 11). The Green Revolution is based around the substitution of technology for nature and intensive exploitation, in line with a modern conception of how agricultural systems should operate for maximum output. The continuing violence is the Punjab goes against the conception of conflict as based around material scarcity, and the strategy to ameliorate that scarcity has had little effect (Shiva, 2002: 14). Instead, social relations were accordingly restructured to suit the technological and commercial structure of the Green Revolution, exacerbating conflict. Ecological, political and cultural costs have resulted from the Green Revolution, but the objective science which supported the nexus of processes that comprised the Green Revolution were absolved of the consequences of their implementation (Shiva, 2002: 33).

Modernity, with the prioritisation of economics, determined a way of 'improving' the land that had devastating impacts on traditional small-holder farming, which along with resilience strategies and alternates to capital intensive mono-cultures held no value for the dominant political order (Shiva, 2002: 45). The process can be characterised as

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one of disciplining nature, both to fulfil human needs but also to act as a discursive representation of the modern society (Oliver, 2000: 228). Both waterscapes and agriculture are subjected to these processes of discipline and control, to make a particular contribution to modern society, whether that is to the economy or aesthetically, and are permitted no function or representation beyond this purpose (Oliver, 2000: 229), an ambition enhanced by the capabilities of modern technology.

The state provides the key organising framework for humanity and, through the modern period, has facilitated the exploitation and domination of nature more thoroughly than any other society in history: "The constitution of the modern state was closely connected with the rise of the human sciences and the production of knowledge about the population and individuals" (Lemke, 2007: 6). Whilst the emancipation of modernity has focused on the individual, it has neglected the non-human. Critical political ecology is an approach that fills this gap, taking aim at the processes of domination explored through the classical Frankfurt School in relation to human *and* non-human communities (Eckersley, 2004: 9). The instrumental rationality of the 'administrative state' attempts to exercise control over both people and territory: "The results has been the development of a centralised and hierarchical system of depersonalised and increasingly specialised bureaucratic power" (Eckersley, 2004: 89). The processes through which the state subjects people to domination has been thoroughly explored through the work of intellectuals such as Foucault, but 'territory' and the non-human communities this entails rarely receive moral consideration.

The end result of these approaches to nature in late modernity has been environmentalism, a closing of the schism between society and nature as its impacts become tangible, but also a co-option of ecological critiques to reinforce the managerial approach to nature that had been present in modernity from its inception; "*environmentalism* argues for a managerial approach to environmental problems, secure in the belief that they can be resolved without fundamental changes in present values or patterns of production and consumption" (Dobson, 2000: 2). This comprises the dominant approach to ecological problems through the 20th and 21st centuries, but is not an approach to nature in itself, determining the fundamental principles and values around it. Instead it is an approach informed by the dominant conceptions of nature, which in this account it is argued are dominated by the tenets of anthropocentric and instrumental-rational modernity. Rather than revolutionary, environmentalism is conservative, attempting to contain the pressures arising from an unmitigated anthropocentric approach to nature, failing to recognise the root cause and its substantial history: "At the center of this problem lies the unmitigated anthropocentric ethos of western culture" (Welloch, 2009: 59). The key advance of ecologism and its kin has been to throw the Earth into sharp relief as a holistic basis for conceptualising society and nature (Dobson, 2000: 15), and in this way challenging the limited, disconnected and local conceptions of nature in modernity.

The modern state has predominantly been associated with coercion, domination and ecological degradation, but these aspects are not inevitable (Eckersley, 2004: 91). Instead it is possible to argue that the violence of the state towards nature is a reflection of the processes of domination exercised over people, such as Foucault's processes of power in guiding conduct (Foucault, 1982: 789). The processes of power rely on this normalising of conduct towards nature, privileging the anthropocentric instrumentalism we have traced through modernity. Foucault's historically-specific concept of government can be used to reflect on the ways in which nature contributes to the modern states conditions of existence, given its 'transactional reality' (Lemke, 2007: 6). The interactions under the rubric of modernism we have with nature are instrumental and commodified, and do not take into account the value generated by natural processes independently of anthropocentric ones.

In this transactional reality, nature is constituted under the terms of a knowledge regime and discourses which maintains a modern dualism of human/non-human, with the former placed in a position of dominance. As was outlined in the paragraph on the Green Revolution, this inequality in the relationship can do violence both to people and to ecological processes, but the dominant discourse does not allow the 'facts' of progress to be questioned, and displaces the effects of modernisation and our relationship with nature onto other factors (Shiva, 2002: 20). The constructed form of nature is open to re-definition and challenge to widen what is subject to moral consideration; Eckersley (2004) provides a strong argument for a community inclusive of the on-human through the lens of political ecology. The conception of nature as outlined in modernity fails to recognise that nature is not an unmoderated interaction between human knowledge and an objective reality (Eckersley, 2004: 122). Without this acknowledgement, it is not possible to challenge the systems of domination which are driving ecological degradation.

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It is necessary to move beyond the instrumental-rationality of the modern political economy as the anthropocentrism that this embodies is at the root of the problem in our relationship to nature.

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Date written: May 2012