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Conquering Nature: the implications of assigning monetary values to global commons

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The enclosure of the commons and translating natural capital into marketable goods is often portrayed as a solution to humanities ecologically destructive behaviour. The external costs of industry provide a hidden subsidy to this behaviour, and so by internalising these costs the distorting effects on production and consumption will be removed. The commons, resources useful to an array of groups and from which it is difficult to limit the benefits suffer the most from these external costs, and so a variety of mechanisms have been created to bring them within economic structures. By doing so the impacts and costs to ecological systems can be managed, if the price indicates the true damage done by a company dumping toxic waste into the ocean, by farmers using 'slash and burn' to clear peatland, by governments embarked on huge road building programs. These activities are encouraged by market distortions which make for short term gain at the cost of other communities or future generations. Whether these mechanisms can or should be used is what this essay aims to explore.

The atmosphere, forests and other forms of 'natural capital' come under the concept of the commons and increasingly these are being 'managed', through enclosure, carbon markets and other economic methods. What they have in common is that they are the production of a particular discourse which is almost hegemonic in it's dominance, a position which disregards or downgrades positions outside of a neoliberal and strongly anthropocentric framework (Devall & Sessions, 1985: 44). The strength of this anthropocentric position is one of the underlying causes of the ecological issues faced today, by placing nature in the wholly subservient categories of the environment or simply resources. The positions produced by this discourse act on the surface of humanity's interaction with nature, rather than looking at the causes; "To say the least – which is already very much – we must thoroughly understand the problem and begin to see the possibility of evolving a new life-style, with new methods of production and new patterns of consumption: a life-style designed for permanence." (Schumacher, 1973: 8). Sadly this looks unlikely. The current progress in developed and developing nations has been built on the liquidation of the natural capital which sustains us (Engel, Pagiola & Wunder, 2008: 663). This has been through the dominance of this economic and technologically progressive discourse which regards the land as a resource to be used however humanity sees fit (Leopold, 1949: 203). The social contract which governs relations within the community does not extend to ecosystems, and this conception of social structure narrows the scope of our morals when applied to nature (Ferry, 1992: 63). The 'biotic community' is only understood in a limited fashion, but we still assume control and knowledge of it's systems (Leopold, 1949: 205). Our understanding of ecosystems has advanced considerably in the last few decades, but the mechanisms used to manage it are still predicated on the same incomplete understanding. Although this is acknowledged through the 'precautionary principle' common in environmental discourse it is often disregarded on the ground.

Garrett Hardin identified the 'tragedy of the commons' over 30 years ago, where the self-interested logic of individuals would in aggregate maximise gain beyond the sustainable limits of the commons (Hardin, 1968: 1244). Hardin's view stems from a particular conception of human nature, of the rational and self-interested individual and from that start precludes notions of compassion or altruism. Nonetheless it is this concept which drives efforts to manage the commons, on the basis that each actor will only act in the general interest if made to do so by being embedded in social structures with a degree of coercion. These commons could range from agricultural land, and Hardin uses the example of herdsmen's pasture, to fisheries or virginal forests. As our understanding of ecological

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systems and climate change grows, more commons have been identified, in the forms of biodiversity which is threatened by over exploitation to an atmosphere threatened by pollution. The fallacy of inexhaustible commons is present in a wide range of contexts, and these commons will be destroyed by it unless access is regulated in some way (Hardin, 1968: 1245). In these cases, especially transnationally, regulation and legislation can only take you so far given the difficulty of enforcing them against self-interest and without substantial sanction (Hardin, 1968: 1246). Instead the responsibility for these areas must be the product of social arrangements, and today increasingly access to these public goods is regulated through economics. However globalisation distances production from consumption, and in doing so removes the processes from any moral or social context (Saurin, 1994: 49) and the specialisation of knowledge liberates rationality from ethical and normative frameworks leaving an instrumental rationality of which economics is the natural expression as the only valid framework (Saurin, 1994: 51).

Rather than romantic or spiritual interpretations in the dominant discourse over the global commons characterises them as 'ecosystem services', based upon natural capital. The natural sciences are essential to understanding the role that natural capital plays and also when it's capacity to provide services is reduced (TEEB, 2010: 7). Today most environmental degradation is driven by the functioning of the market, and is profitable because companies are able to externalise the wider costs of forest clearance etc. to natural capital and ecosystem services. This is because the market does not take account of the full value of ecosystem services (TEEB, 2010: 9). Although cultural values may be sufficient for action in particular contexts, being able to demonstrate value in economic terms is a useful term more widely and where a cultural context does not exist can provide incentive to act to conserve the ecosystem and to use resources effectively, correcting market bias towards a particular groups wealth (TEEB, 2010: 11). To implement this economic systems of incentives and price signals are necessary, however; "Valuation is seen not as a panacea, but rather as a tool to help recalibrate the faulty economic compass that has led us to decisions that are prejudicial to both current well-being and that of future generations." (TEEB, 2010: 3). The range of systems operating within economic valuation demonstrates that there is no universal template, and each has to be tailored to a particular issue and context, but valuation does provide an effective form of feedback. Whilst this addresses market distortions it seems self-evident that these systems of valuation will always be reactive to problems caused by the market. This avoids addressing the issue of modernisation creating destructive and unsustainable forms of industry, such as giant agribusinesses which cause upheaval in any alternative systems of production or social organisation (Sivaraksa, 2009: 25).

Increasingly a voluntary market is developing in 'carbon offsetting' outside of government initiatives such as the Kyoto protocol, comprising of the purchase of credits linked to projects storing or capturing carbon to offset the consumers own carbon producing behaviour (Environmental Audit Committee, 2007: 5). The primary consumers in this market are businesses rather than individuals, for a range of reasons including public relations such as being able to make the claim of being 'carbon neutral' (Environmental Audit Committee, 2007: 15). Friends of the Earth however characterise offsetting as a 'dangerous distraction' (FoE, 2009: 4), transferring responsibility for carbon cuts to the developing world with financial remuneration in lieu of any changes of behaviour in the developed world (FoE, 2009: 7). The complexity of the market, although allowing for diversity and innovation, also means that the claims of projects can be difficult to verify and projects may fail or have unintended consequences for the local environment (Environmental Audit Committee, 2007: 17). Offsetting acts to alleviate pressure on consumers to change their travel or shopping habits as well as that of companies. There is little drive to become carbon neutral or more efficient for the public good if the practices producing carbon can be 'offset' elsewhere by paying a small amount for a few trees to be planted in the third world.

Additionally such types of offsetting are unreliable – carbon sink projects typically involve foresting an area, and over the course of a tree's lifetime it may indeed capture carbon. However this takes little account of if the tree's should be used as fuel etc. (Environmental Audit Committee, 2007: 18) as well as if there is an impact on biodiversity. Offsetting delays the changes necessary in infrastructure for the move to low-carbon economies in both developed and developing nations, weakening pressure on companies and consumers to reform and locking them into a high-carbon path (FoE, 2009: 18). Projects have little benefit for the communities where they are situated, tending to be on a scale and of a type that contributes little towards sustainable development (FoE, 2009: 22). The funds involved in voluntary offsetting markets are small, and will not contribute more than a tiny proportion of the funds needed for a shift to low-carbon economies, but at the same time provide validation and suitable material for 'green washing' for

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governments, market actors and consumers (FoE, 2009: 28). The voluntary carbon offsetting market is a microcosm of wider conceptions of nature, in which the restructuring of political and economic institutions is held to be the preserve of a radical fringe rather than a valid alternative (Sivaraksa, 2009: 69).

PES, or Payments for Ecological Services describes a range of mechanisms used to translate on-market values of the environment into financial incentives (Engel, Pagiola & Wunder, 2008: 664). By doing so it is hoped that some of the distortions leading to the run down of natural capital can be corrected – for instance in the case of a farmer it may be apparently more productive to clear any forested land so as to increase the agricultural area, but in doing so she negatively impacts other communities reliant on the biodiversity and water filtration functions of that ecosystem. Through payments by the ‘service users’ there is more of an incentive to take account of these external impacts and provides resources for their management (Engel, Pagiola & Wunder, 2008: 665). For PES to work clear property rights are essential, as well as an analysis of the underlying market failure – this latter point however is rarely expanded on in academic or policy literature. Despite acknowledging that market failure is a problem, analysis is not taken to its logical conclusion, that of condemnation of a fundamentally unsustainable way of life which encourages the exploitation of natural capital. A range of goods and actors are involved in PES, from direct users of ES to a third party such as the national government (Engel, Pagiola & Wunder, 2008: 666). The PES approach is more targeted than that of top-down intervention, allowing for autonomous actors to make their own arrangements without the need for state intervention, but may additionally be used to complement regulation where it goes against the self-interest of those affected, as in Hardin’s dilemma (Hardin, 1968: 1244); however these systems are biased towards modern corporations and businesses, who can take advantage of financial markets and loans as well as the expertise of consultants (Sivaraksa, 2009: 26). In this way PES schemes continue to reflect the power imbalances between communities and big business or the international community – “When power is centralized, individuals lose control over their destinies. Community values are rarely honoured when remote institutions govern their lives” (Sivaraksa, 2009: 28).

PES must be verified against a consistent standard, but given that little is understood about ecosystems this can only be applied to a few salient features, rather than the accumulated benefits of the ecosystem. “Conditionality is critical to the definition of PES. For payments to be conditional, it must be possible to verify the existence of the ES and to establish a baseline against which additional units ‘provided’ can be measured.” (Engel, Pagiola & Wunder, 2008: 668). By picking apart the ‘useful’ features of ecosystems in this fashion the economic rationale ignores their interconnected nature, giving humanity the status of the ‘expert’ able to discern what is essential and what is not. By doing so a distinction between that with economic value and that without, the latter is doomed to extinction (Leopold, 1949: 214). In much the same way GDP is picked out in economics as the ‘salient feature’ to be measured and maintained in line with economic theory that human well-being increases with material well-being, acting to reduce well-being simply to economic position and pressures states to concentrate on this single indicator even if it generates harm elsewhere. Today increasingly states are beginning to look at ‘GNH’, Gross National Happiness (Sivaraksa, 2009: 64), but the subjective nature of this criteria sits ill at ease within the rationalist paradigm of modern life. Whilst well-being is still measured by and conducted as though GDP is an end in itself the interconnected nature of social life is marginalised, with consequences for the structures of society and the distribution of resources. Ecologically speaking the view of a focus on GDP as destructive in social and ecological settings is predicated on the notion that the material alone cannot fulfil human potential, and that the divide introduced by technology alienates humanity from itself (Devall & Sessions, 1985: 48). Enclosing the commons furthers this divide by fragmenting holistic systems.

PES suffers from similar practical issues of governance and verification etc. that are present in the voluntary carbon offsetting market. Where the range of autonomous actors involved is limited then there are fewer opportunities for free riding. In cases such as biodiversity the difficulty of delimiting and identifying users makes for further incentives to free ride and the same applies in reverse to more complex ES, where there are multiples ES overlapping (Engel, Pagiola & Wunder, 2008: 667). In the case of many conservation programs a lack of conditionality can result in the programs being abused or failing to achieve the intended change (Engel, Pagiola & Wunder, 2008: 669). Issues with PES may include that payments are too low to encourage the desired practices, or are not well targeted, encouraging opportunistic participants whose costs are low, and whether the project encourages ES above and beyond the ‘business as usual’ model. Leakage describes the displacement of ecologically damaging practices to other areas,

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and is a problem for most types of environmental schemes (Engel, Pagiola & Wunder, 2008: 670).

Reducing Emissions from Deforestation and Forest Degradation (REDD), is an example of a transnational PES program, sponsored by the UN. Emissions from deforestation and degradation contribute around 17% of greenhouse gas emissions per year, and REDD is an attempt to reduce this pollution of the atmosphere (UN-REDD, 2011: 2) via up front payments and assistance to build capacity and governance structures that will be able to respond when payments become conditional (UN-REDD, 2011: 5). One of the principal barriers to the project is the issue of governance on the ground, with land tenure, institutional capacity and transparency a few of the issues mentioned (UN-REDD, 2011: 10). The program takes into account wider features such as biodiversity, but focuses on the 'maximisation of benefits' (UN-REDD, 2011: 8) entailing losses in one area to maximise gain in another – "Thus, countries implementing REDD+ will need to decide which ecosystem services they wish to maintain and enhance, and what trade-offs they are prepared to countenance in a manner that transparently accounts for all environmental and social trade-offs." (UN-REDD, 2011: 12). The benefits of REDD are to be left in the hands of individual states, with a caveat that they will need to be used 'in part' for environmental and social development policies (UN-REDD, 2011: 13) and leaves open the possibility that programs will be used to fund ecologically degrading activity and growth. Although the scheme may reduce environmentally degrading practices it does so by rewarding those involved – a reversal of the polluter pays principle, so that they are rewarded for some mitigation of their behaviour. Additionally a key flaw in this scheme, as in voluntary offsetting etc. lies in the ambiguity of the definitions used. In REDD 'forest' includes destructive monocultural plantations, and so allowing that virginal forest may be replaced by these with their associated impacts on biodiversity as well as human welfare (FoE, 2008: 5).

These programs act only in a limited fashion on aspects of the social structure which create incentives to ecologically destructive behaviour (Jackson, 2009: 160) rather than the overall picture. The social and environmental safeguards set out in UN-REDD, 2011 strategy may not prove adequate to protect the rights and way of life of communities without formal documentation and land rights to the forest especially in competition with larger corporations or their governments (FoE, 2008: 6). In particular the programs outlined fail to take account of power relationships where one party may be able to dominate smaller ones through scale, finance or state influence etc. PES programs, including REDD do little to move away from the utilitarian framework which is the underlying cause of degradation. Even should indigenous communities be protected/included in the 'stakeholder' programs, their involvement in the global economy will slowly erode their way of life and increase inequality. The social structures surrounding communities pressures them to conform to the dominant discourse, revolving around an atomised individual and private property (Sivaraksa, 2009: 14).

Although the above programs all aim to make cuts in emissions and slow environmental degradation, the aim of 'reducing' the processes causing degradation amounts to stop-gap measures that slow the loss of biodiversity and the concentration of CO₂ in the atmosphere but still make this degradation largely inevitable (FoE, 2008: 5). These positions are focused on managing the negative impacts of continual capitalist expansion, but as long as the wider systems exist they will continue to absorb natural capital in the name of prosperity and growth; "True development must be in harmony with the needs of people and the rhythms of the natural world. Humans are a part of the universe, not its masters." (Sivaraksa, 2009: 32). The expansion of monetary value to the commons focuses programs and management on best economic value and a limited conception of human welfare. "This change [to sustainable lifestyles] has to proceed through the provision of real, credible alternatives through which people can flourish." (Jackson, 2009: 158). Measures bringing the commons into the economic structure are calculated to prop up ecological systems against a destructive model of growth, but cannot act as a substitute for real reform. Such measures continue parasitic interactions, where the real need is for a shift to symbiotic relations that does not reduce the natural systems humanity is reliant on (Ferry, 1992: 71). In the meantime the instrumental rationalistic paradigm that economic programs embody will continue to drive the exploitation of ecosystems. In this context the monetarisation of commons may act to slow their degradation, but the system behind these programs will slowly act to exhaust their resilience and buffers.

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