Conceptualising Nature: From Dasgupta to Degrowth

Mainstream economic thought has supported the idea of capital accumulating economies having imperfections that can be corrected by finding the right price. There have been repeated attempts to value the environment in order to claim it can be protected by being given a price in the market place. Pollution in particular led to arguments about measuring 'social costs', the public damages created by private interests, misnamed 'externalities' (Spash 2021b). Social costs have long been recognised as justifying calls for government intervention, planning and direct regulation (Pigou 1920; Kapp 1950). However, the rise of neoliberal ideology as a dominant political force has meant government being turned into an institution for protecting business, corporate and financial interests – those who benefit most from capital accumulating economies. In a line of thought going back to the Cold War, environmental regulation was equated to Soviet command and control, standing in opposition to free market liberalism. As environmental problems have become increasingly worse the rhetoric of 'getting the prices right' has become increasingly stronger and the lobbying from financial interests increasingly explicit – from corporate politicians to captured regulatory agencies to co-opted environmental NGOs. Economists have wilfully played their role in concealing the conflict between economic growth, claiming to increase human well-being, and the ecological destruction it entails, that removes the basis for that same well-being and threatens human and non-human survival.

Thus, for three decades or more economic modellers have attempted to weigh up the costs and benefits of human induced climate change to deliver the number representing the social costs of 'carbon' that will determine the optimally efficient level of Greenhouse Gas control. Perhaps the most notoriously *ad hoc* calculations have been those of William Nordhaus. In 2018 he was awarded the Sveriges Riksbank Prize in Economics in Memory of Alfred Nobel, despite decades of substantive, informed critiques noting the paucity and biases of his work (e.g. see Spash 2002, 2007c; Keen 2020). The UK Treasury entered the scene by sponsoring a review on climate change headed by Nicholas Stern, earning him a professorship and Lordship. This provided another cost–benefit justification for economic business as usual in the growth economy (Spash 2007a, b). Although it had no impact on slowing Greenhouse Gas emissions, the Stern review was hailed a great success and something to be emulated by others, who should likewise aim to monetise environmental impacts and show how economic growth is good for Nature. Biodiversity was then targeted with the UN TEEB project headed by financial futures market specialist Pavan Sukdev, with a shift in emphasis to instruments for 'capturing value' and promoting financialisation of Nature (Spash 2011).

Most recently, the UK Treasury re-entered with *The Dasgupta Review,* a 600 page biodiversity economics report by economist Partha Dasgupta (2021),

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aided by an advisory board including Stern. The British establishment (e.g. Prime Minister Boris Johnston, Prince Charles and Sir David Attenborough) turned out to support the launch, backed up by press releases from a range of environmental NGOs (e.g. RSPB, WWF) and business networks (e.g. Business for Nature, The Capitals Coalition, Finance for Biodiversity). Dasgupta's central argument is that a financial approach to environmental policy is necessary to save Nature. While headlined as a report about biodiversity, Dasgupta actually advocates a comprehensive view of the world as capital (produce, human, natural, social). In the process Nature is, once again, to be measured, quantified and valued in monetary equivalents to achieve optimal efficiency. Yet organisations like the RSPB and people like Attenborough seem to think this is a new breakthrough, with the latter hailing economists as now having a better understanding of the value of biodiversity than ecologists. Dasgupta's 'review', like Stern's before it, fails to address the critical literature on environmental values and offers a totally unreconstituted mainstream textbook approach to what has value in the world.

What might lead people astray in this latest 'review' is the expressed concern for Nature, including discussion of non-economic values (i.e., sacred values, intrinsic value, moral worth), apparent acceptance of the embeddedness of 'the economy' in Nature and limits to economic growth. Fifty years after Meadows et al. (1972) delivered their damming scenario analysis, the fact that a mainstream economist finally accepts there are limits is apparently to be celebrated as a major advance (*The Economist* 2021). Interestingly Dasgupta actually ignores that famous report (excepting one critical remark in a footnote) and the associated literature. Indeed, he celebrates the growth theorist Solow as a guiding light and presents economic growth models uncritically – even including perfect substitution of non-renewable resources (e.g. oil, gas) and potential for infinite growth via technology. He actually claims that there is no need to ever stop economic growth given a large enough stock of natural capital. Criticisms of using Gross Domestic Product (GDP) as a well-being measure are not a reason to remove it but rather for adding supplementary financial measures, and especially a measure of wealth (i.e. the aggregate monetary sum of produced, human and natural capital). There are numerous problems with *The Dasgupta Review* (Spash and Hache 2021), but the conceptualisation of Nature, and its value, is perhaps the most deceptive.

Prominence is given to Nature as a form of capital lacking investment compared to produced capital. The central role of these separate forms of capital investment implies some well defined and practical guide as to the distinctions. A major challenge would seem to be defining 'what is Nature?', 'what is natural and what unnatural? Usefully *The Dasgupta Review* has a glossary which states: 'The Review uses the term 'Nature' to refer to the natural world'. Perhaps not so useful after all! Never mind, let's just skip to natural capital, the

stock of which is so important and central to claiming the feasibility of everlasting economic growth is possible. This is defined as follows:

> 'Natural capital – The stock of renewable and non-renewable natural assets (e.g. ecosystems) that yield a flow of benefits to people (i.e. ecosystem services). The term 'natural capital' is used to emphasise it is a capital asset, like produced capital (roads and buildings) and human capital (knowledge and skills)' (Dasgupta 2021: 506)

In fact: 'In the Review, the terms Nature, natural capital, the natural environment, the biosphere, and the natural world are used interchangeably' (p.3 ft.nt.2, repeated p.36 ft.nt.31). If you were wondering where biodiversity fits in, well this is just a supporting asset class that helps natural capital produce services of value for humans. So no need to value that directly, because it is implicit in the value of natural capital. What counts is the optimal rate of return on investing in natural capital compared to education, health, roads and buildings and so on. This deceptively simple approach is in fact totally impracticable. For example, when is an ecosystem natural and meant to count as natural capital as opposed to an artefact that would count as produced capital? Is an oil palm plantation natural capital and equivalent to an old growth forest? Do biodiversity offsets create more assets or simply destroy what is natural and replace it with the unnatural? Is geoengineering meant to be investment in natural capital? What is this Nature that is being lost and needs capitalist finance in order to be valued and saved?

Dasgupta's neat mathematical equations with their arithmomorphic concepts of distinct, separable and isolated forms of capital is totally divorced from reality. He offers nothing to fill the void and so opens the door to blanket financialisation of Nature (e.g. biodiversity banking, trading, offsetting, green/blue bonds, species credits, extinction futures markets and climate catastrophe bonds). Clearly the entire financialisation of Nature, that is currently being framed and marketed under the heading of 'Nature Based Solutions', seeks to blur all lines of distinction; its aim is simply investment returns regardless of what is being invested in. The expressed concern over human intervention into Nature then appears totally rhetorical.

So what of those non-economic values? The ability to include a range of value categories contributing to an individual's utility extends to including: 'respondents' sense of a species' existence value – perhaps even its intrinsic value' (Dasgupta 2021: 304). The same approach to subsuming values under the standard economic model was employed by environmental economists thirty years ago (Pearce, Markandya, and Barbier 1989). The failures of the economists' existence value and their inability to address intrinsic values are also well documented (McShane 2017). In that same tradition, Dasgupta confuses concepts of existence value with sacred values, moral worth and intrinsic value, sometimes merging them together and then equating intrinsic with instrumental value, and ultimately places faith in stated preference methods

revealing all. There is no mention of lexicographic preferences, plural values or incommensurability. Economics in this 'review' fails to engage with or learn anything from thirty years of work in the field of environmental values.

In this issue of *Environmental Values*, in an identical approach to that found in the Dasgupta review, Lumsden describes sustainable development as promoted by Jeffrey Sachs and supported by the planetary boundaries concept of Johan Rockström, including their co-authored works. The value of Nature is again reduced to being an instrumental ecosystem service provider. The idea of planetary boundaries is simply to set side constraints on economic activity to avoid damaging basic system functioning for survival. The capitalist economy, along with its innovative invasive artificial developments, can then continue as normal, including unlimited economic growth. The maintenance of capital accumulating growth is unproblematic and appeals to decoupling are standard fare, while the rhetoric of abundance within planetary boundaries is something adopted widely from Dasgupta to Doughnut economics and other apologist for growth (Spash 2021a). Lumsden places the apparent concern for protecting Nature in a modernist ideology where he identifies the concept of self-determination as core. He uses a Hegelian approach to criticise sustainable development as a totally inadequate response to the failures of modernity in its relationship with Nature.

Lumsden's central argument is that anthropocentric instrumentalism services a relationship to Nature that maintains the belief that humans are in control of their own destiny to the extent of being self-transforming. Nature is then an externalised other and self-realisation is freedom through liberation from domination by Nature. Modernity replaced the external forces to which humanity must submit, along with ideas of absolute power and authority being imposed on the individual; as Lumsden puts it, 'in modernity the norms are willed and imposed upon ourselves because we are rational'. In contrast, materialism and heavy energy throughput of modernity is now widely recognised as out of alignment with a flourishing and self-sustaining ecology. Rethinking human–Nature relationships is essential for social ecological transformation, but instead 'the fundamental modernist assumption remains that human beings produce themselves independently of Nature, 'the other', over which they maintain mastery and control, as evident in Promethean discourses of Anthropocene advocates (see Pollini 2013). In contrast, Lumsden argues that the Hegelian concept of freedom entails being 'at home in otherness', and relating to our interconnections including what determines, limits or negates.

Arguments around concepts like the Anthropocene quickly move to concepts of hybrid-Nature as if there were nothing else, merge the synthetic and natural, naturalise long standing human practices that shape the environment and leave nothing of the intuitive concept of Nature as an aspect of the non-human. Vetlesen (2015) has pointed out how the non-human is repeatedly reduced down to human relations. In the second paper in this issue of *Environmental*

Values Deckers notes that the 'fact that many activities and things are mixtures of nature and human culture does not eliminate the distinction', but does leave the practical problem of the grounds on which the natural can be defined and distinguished. That species are becoming extinct on a massive scale and ecosystems functions degraded via conversion to monoculture (e.g. oil palm plantations) is common knowledge, but the response has been confused in terms of an inability to distinguish what is being lost in terms of naturalness.

Deckers offers an important contribution that aims to clarify the distinctions between the natural and unnatural. He employs an Aristotelian approach that recognises the internal teleology of an entity as the capacity to direct the development of its essence in contrast to direction by an external entity. Distinction is made between ontologically real individuals, having their own developmental processes and autonomy, and entities that are aggregations of individuals. He argues that neither ecosystems (contra Dasgupta), nor shopping malls (contra Vogel), nor computers are individuals. However, an individual's potentiality is limited, and contextual, depending on causal relationships with other entities and their own past. On this basis, change in the essence of an entity directed by humans becomes the determining factor in (un)naturalness, and allows for the distinction between direct human intervention in the essence of an entity and an indirect change in response to altered circumstances created by human action.

Deckers makes use of counterfactual reflection to operationalise his approach: asking how an entity might have developed in the absence of humans. In a form of what I would term dialectic, he presents a spectrum of (un)naturalness that moves from no human influence, through to intervention that might occur naturally, to the less likely, and ultimately scenarios in which only human influence could be imagined to have created the change in essence. Worthy of note here is that human intentionality is not required to create something artificial, and so pollution and nuclear fallout (e.g. from weapons or power station meltdown) create entities that are unnatural due to their significance in altering development of those entities. Useful distinctions can be made between human interventions, such as changing the opportunities for an outcome (e.g. traditional breeding) and directly determining the same outcome (e.g. cloning by somatic cell nuclear transfer). Deckers provides grounds on which to clear away much confusion over the meaning of naturalness and to counter claims that such distinctions have been eliminated by the pervasive influence of human culture.

This is not to deny that society, or rather social relations, and culture mediate understanding of the world, including Nature. How they do so is the topic addressed by Eversberg. In discussions of such mediation there is a tendency to overlook the unmediated reality and how this grounds any ability to create practical knowledge. Eversberg notes this as being 'concrete biophysical properties of the subjects and objects of economic activities'. However, while

noted, little attention is paid to this aspect or the importance of biophysical structure in ultimately restricting and delimiting the scope for human action, and so the validity and viability of any mediated conceptualisation. While biophysical realism is largely absent, what Eversberg focuses upon is social reality in the form of modern (flexible) capitalism and specifically its influence on individuals.

Cluster analysis was conducted on a data set with 2000 respondents to a German survey on environmental consciousness from 2016. Eversberg frames his analysis in terms of two central concepts: power and modernisation. The former becomes social status and appears to be empirically based on income, job/profession, education and domicile (e.g. rental or home ownership). The latter is not explained, but in some of his other work this appears as the ratio between cultural capital (educational degree) and economic capital (indexed by income and home ownership). Results are presented visually in two figures that reproduce the conceptualised social space, which is meant to correspond to ideas of Pierre Bourdieu.

Intuitively we might expect practices constitutive of a person's identity to be socially and culturally related, and there is evidence that sustainability related practices are no different (Groves et al. 2016). The hypothesis of Eversberg is that more specific social and economic groups can be identified by their standing and position within capitalist society and that this will enable understanding of stances and practices (e.g. meat consumption, car use, flying) that have negative implications for Nature and so need to change. The results, in terms of power and modernity being explanatory causal mechanisms, are at best mixed and far from straightforward to interpret. Indeed, the discussion of groupings and their similarities fails to correspond neatly with the Bourdieu inspired quadrants of social space in the figures presented. The attempted generalisation to four types of relationships both violates the initial approach and fails to match the actual cluster results, which are far more organic than the geometric shapes of figure two. Overall then there is 'no simple correspondence between social class and relationships with nature'.

What seems evident is that to further determine the causal mechanism behind behaviour, and its contradictions, would require qualitative research. The need is to identify what motivates different expressed and practised relations to Nature. Eversberg's concern in his work is to inform social-ecological transformation and explicitly degrowth. His findings show that blocks to social transformation are not merely found amongst those who actively accept and embrace capital accumulating, growth based, economic institutions and measure themselves accordingly (i.e. by income, property). An interesting aspect of his study is the contradictory positions held within social groupings in their relations to Nature, as exemplified by the flying behaviour of the otherwise most eco-socially minded group. The interaction of social structure and personal psychology would then seem important, and the latter is the concern of Koller.

Koller offers a psychological perspective on blocks to social-ecological transformation that relates inertia in the rejection of growth economies to a failure to accept limits imposed by Nature on society. She employs a dichotomous 'paradigmatic' framing based on the need to change attitudes away from what amounts to current capital accumulating techno-optimism and Western capitalism (termed the dominant social paradigm), towards an eco-friendly participation in and partnership with Nature (associated with the new economic paradigm of Dunlap and van Liere). While Kuhn is referenced, her referenced 'paradigms' actually have little, or nothing, to do with Kuhnian theories of science, nor does his concept of a 'paradigm shift' identify with the transformation under consideration here. Instead, the discussion concerns more general 'worldviews' held by members of the general public in Western society and how individuals might change these and so facilitate societal change.

Koller regards the transformation from economic growth, and more specifically Western capitalism, to a degrowth society as desirable and something that would be associated with the shift between the two worldviews, which are taken as synonymous with the two societies (i.e., growth and degrowth). We might question this correspondence of social and economic structure with behavioural attitudes, and certainly a simple dichotomy. However, the central point of reflection here is on existential angst as a psychological phenomenon and a causal mechanism that might be key to achieving transformation. Koller then appeals to ecopsychology for further explanation of inertia in rejecting growth and the failure of transformation to have taken place.

As in Lumsden's Hegelian approach, the aspect of 'being at home' in otherness comes to the fore here, along with the need to relate to what limits and negates, with the ultimate negation being death. Two responses are described when people are confronted by the finiteness of life and, by association, natural limits on human action. First is denial and defensiveness over existing practices and their unlimited potential to continue and increase. When confronted with death scenarios in psychological experiments, people in this group are noted to increase financial aspirations, consumerism and materialistic desires. Fear is a predominant motivator, and fear of 'others' extends from humans to non-humans and wild Nature, leading to attitudes justifying destruction of and domination over others and Nature. The second response is the opposite and involves becoming more mindful of connections that involve others, relationships of life and death, and considerations of what is left after death. Koller claims that developing such a reflexive ecological identity is necessary for social-ecological transformation to degrowth. In attempting to explain how this might involve a societal transition the concept of ecological modernisation is introduced, as if a necessary stepping stone, but why this should be a required intermediate stage is far from clear, and appears somewhat disconnected from the arguments related to individual psychology and existential angst.

Interestingly, Koller seems to assume the enlightened ecological position involving respect for others, including Nature and its limits on humans, is synonymous with degrowth. Actually, the degrowth literature has itself engaged little in giving meaning and content to Nature–society relations, with mixtures of post-modernist deconstruction of Nature conflicting with the type of realist limits to growth that her argument supports. For example, Schneider et al (2010: 513) regard limits as a 'social choice', not an external environmental imperative. In the definitional book, *Degrowth: A Vocabulary for a New Era*, D'Alisa et al. (2014: 8) repeat this and state that: 'Rather than *limits to* growth, the literature on [degrowth and] **autonomy** emphasizes collective *self-limitations*. […] not invoked for the good of nature or to avoid an impeding [sic] **disaster**, but because living simply, […] is how the good life is conceived.' (emphasis original). Whether this means Nature is purely of instrumental value is unclear, but it certainly appears totally anthropocentric. Others in the same book do invoke biophysical limits as an 'environmental imperative', while in the chapter on *Buen Vivir* Gudynas (2014: 202) states that: 'This involves recognising intrinsic values in Nature, thus breaking with the prevailing Western anthropocentric position in which humans are the only subjects of value. Furthermore, *Buen Vivir* rejects the instrumentalisation of nature by humankind.'

The confusion and contradictions of the degrowth movement are explored by Heikkurnen, who regards its coverage and conceptualisation of Nature as sparse and lacking. Heikkurnen frames the argument within perspectives of past, present and future in order to characterise the forms of and meaning given to alienation from Nature. Thus, past Nature is seen as a Romantic ideal based on the fact that human interventions were historically insignificant simply due to their limited number, but also minimal use of (exosomatic) tools, something which increased over time, and dramatically so in modernity. Reflecting a common understanding with Deckers, alienation from Nature is then the historical loss of places and spaces without human intervention. Future Nature perspectives are regarded as contrasting and opposing this position and seeking to create a techno-scientific hybrid Nature in which the distinctions of the concepts are totally lost. Latour is mentioned here as representative, and constructionist theories are noted to have had influence within the degrowth movement. In contrast Heikkurnen, like Deckers, notes the common lay experience of relating to Nature as evidence of its conceptual importance. Degrowth would also fail by going down this route because of the inability to explain the reasons for restricting material-energy throughput and for caring about the non-human. There is, however, no discussion of these points, nor is the ontological importance of structure raised, despite a passing reference to Soper (1995). The text also fails to clarify the important difference between Nature as 'separate' as opposed to 'distinct' from the human (Pollini 2013), which could have helped clarify the confused degrowth literature that Heikkurnen is

reflecting upon. That is, while humans are part of, not separate from, Nature, they remain distinct, as evident in the extensive use of exosomatic tools in modernity, cited by Heikkurnen.

In contrast to the past and future perspectives, Heikkurnen argues the core conceptualisation of Nature is better understood in terms of process, which is framed as being a present perspective. Here the central representative is given as Whitehead, with some support from Heidegger. The claim is that by focusing on 'the moment' a different understanding of the core of Nature appears, something that might connect to Koller's mindfulness. However, the outcome is far from clear. Whitehead is quoted as criticising the concept of an isolated event and advocating a form of holism, although this seems somewhat contradicted by the central concept of a 'moment' as an (isolated?) instant in time, that appears to have much in common with the apparently rejected concept of an event! The main conclusion is that neither past nor future perspectives are adequate and the claim is made that a focus on the present would mean identifying the core of Nature as being about 'balance'. Even if this were accepted, the concept of balance remains vague and the attempt to distinguish this from 'ancient ideas of the balance of nature' results in appealing to 'dynamic ideas of equilibrium'. Here another contradiction seems to arise because an ever changing, dynamic, equilibrium appears to be no equilibrium at all, while what is meant to be in balance remains undefined.

What Heikkurnen reveals is that degrowth needs a concept of Nature and has failed to address this adequately. As on many issues the movement is divided, and here the division highlighted is that between romantic appeals to the past and undefined techno-optimist futures. It has been unable to reconcile different positions and, most foundationally, recognition of material-energy flows as a biophysical reality with a cultural constructionist negation of biophysical reality. Whether romanticists and futurists could be brought into unison, especially by appeals to Whitehead, seems doubtful, but clearly, ignoring or trying to dissolve the concept of Nature is not an option.

Unfortunately, the degrowth movement then has something in common with growth advocates and apologists. Both fail to define and distinguish the natural from the unnatural. The mainstream economic approach subsumes Nature under capitalist concepts as a capital asset necessitating investment with ecosystems as production units supplying services in a conceptualisation that is the anti-thesis of natural. In the absence of all other valuation issues the failure to distinguish what is natural means a failure to identify what has value. In *The Dasgupta Review* promotion of saving biodiversity through asset management, and Nature by making it financial capital, is totally deceptive, because the essential requirement for the whole report is a well-defined concept of Nature, which can inform the central distinction between natural as opposed to produced and human or any other capital.

What this issue of *Environmental Values* reveals is that in the spectrum from the intervene heavily, pro-growth pro-capitalist *Dasgupta Review* to the tread lightly, anti-capitalist degrowth movement there appears a general paucity as to the meaning given to Nature and what is natural. This is also apparent in environmental policy debates and the social sciences more generally. What we see time and again is the attempted assertion of a narrow human perspective, reducing Nature to an instrument for human ends in a universe that denies the reality of our own limited form and existence. Yet, there are also advances and insights in the literature on environmental values available for those who wish to pay attention. Indeed, paying such attention is not even an option for anyone who is concerned to achieve a social-ecological transformation away from the divisive and destructive political economy of the present. Nature and what is natural invoke in us recognition of the distinct otherness of the universe of which we are a part and that we struggle to conceptualise. The failure of dominant conceptualisations to match reality is a major cause of the ongoing ecological crises, but the denial of the need to undertake such conceptualisation is just a damming.

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