Book Reviews

Jane Bennett
Vibrant Matter: A Political Ecology of Things
Durham and London: Duke University Press, 2010
ISBN 978-0-8223-4633-3 (PB) £14.99. xxii + 200 pp.

What happens if we stop thinking of matter as 'passive stuff, as raw, brute, or inert', and instead think of it as vibrant, lively and vital (p. vii)? This is the task Jane Bennett sets herself in this challenging and never less than interesting book. As such she joins a growing band of theorists seeking to overcome the assumption that social action consists in active humans operating on passive nature. Often these theorists come from the discipline of geography (Nick Bingham, Steve Hinchliffe, Sarah Whatmore) or from social theory (Bruno Latour) and it is rare indeed to see a professor of political science seeking to make sense of this point of view.

It is hard to overestimate the challenge that Bennett's thesis makes to political theory, to political science, and indeed to the social sciences more generally. For if we ask ourselves what the role of nature in political theory has been through the ages it is as a passive backdrop to the human drama. Humans act and nature is acted upon. Humans speak and nature doesn't. Human beings are political beings – and other beings are not – because they are speaking beings. Ever since Aristotle decided to divide the world into two spheres – the sphere of politics and the sphere of nature – we have wrestled with the implications of a) the division and b) dividing the spheres in this particular way. In this regard Bennett is setting her face against the dominant strain in 2000 years of political theorising. It is worth pointing out, though, that the environmental movement and those who theorise it are by no means agreed that this division is a bad thing. Bill McKibben, for example, argues that nature's independence (from human beings) is its meaning, while deep ecologists, in contrast, offer an ontology which implies that human beings are a part of, rather than apart from, nature.

There is no doubt that Bennett is closer to the deep ecologists than she is to McKibben, but she is keen to distance herself even from the former: 'in contrast to some versions of deep ecology, my monism posits neither a smooth harmony of parts nor a diversity unified by a common spirit' (p. ix). What deep ecology misses (and this is what makes it similar to McKibben's point of view, for Bennett) is any sense of the non-human natural world as an actor in its own right. She is closer to thinkers like Bruno Latour with his notion of the 'actant', which Bennett describes as: 'a source of action that can be either human or nonhuman: it is that which has efficacy, can *do* things, has sufficient coherence to make a difference, produce effects, alter the course of events' (p. viii). Much

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of her book is taken up with fleshing out what this means, giving examples, and explaining why she believes her view to be so important.

One example she gives of 'actants' at work illustrates both the power of her vital materialism and some of the questions that remain to be answered about it. This example is culled from Charles Darwin and his observations of worms. Darwin spent many long hours observing worms and the way they made topsoil and vegetable mould. This is what worms do, by instinct, and in doing so they make 'possible an earth hospitable to humans' (p. 95). Darwin then adds to this commonplace thought by saying that worms have 'played an … important part in the history of the world' (quoted on p. 95), and of course, in the sense that without them the soil would be less fertile than it is and crop-growing might be harder than it is, they do. But Bennett takes the point a stage further by referring to this wormy activity as '*making* history' (p. 95; my emphasis), and by going on to make the claim that worms are in some sense political beings.

In favour of the first point she enlists Darwin himself, and his observations that worms seem sometimes to be making choices as they go about their business, and that their activity can therefore be regarded as in some sense purposive – a prerequisite, it is generally regarded, for something to be making history rather than just being a part of it. Interestingly, the force of this point relies to some degree on granting worms human characteristics, or at least those characteristics possessed by humans which make them historical beings. In this sense, humans and their powers and capacities remain the measure of historical and political being-ness, and some might regard this outcome as less of a revolution than vital materialism seemed to promise.

This is balanced, though, by Bennett's use of John Dewey's notion of a 'public', which is 'a set of bodies affected by a common problem generated by a pulsing swarm of activities' (p. 101). These bodies, in Bennett's interpretation, are not necessarily human bodies and nor is their coming together necessarily a conscious affair. This leaves the way open for 'an animal, plant, mineral, or artifact' sometimes to 'catalyze a public' (p. 107). This is not so far removed from the potential situations described in Bruno Latour's *The Politics of Nature*, in which the House of Humans and the House of Nature are 'smeared together' and humans and non-humans are regarded as 'propositions to the collective'. Anything can be a proposition, in Latour's terms, just as anything can be a member of Bennett's 'public'.

At root, and as far as political action by human beings reading this book is concerned, the objective seems to be a shift in framing – a shift from seeing ourselves as 'human subjects who confront natural and cultural objects' to being 'one of many conative actants swarming and competing with each other' (p. 122). In Bennett's view this shift would make a profound difference to how we conceive and confront environmental issues. For example, maxims like 'tread lightly on the earth' would be replaced by case-by-case decision-making – but

on a basis that Bennett admits is here radically underspecified: 'I know more needs to be said to specify the normative implications of a vital materialism in specific contexts' (p. 122).

It would be wrong to characterise this book as impractical, though – at least as far as Bennett's intentions are concerned. Despite her differences with both Bill McKibben and the deep ecologists, discussed earlier, she shares a practical orientation with them. McKibben and deep ecologists want to heal the wounds between humans and their environment – to 'pacify' the relationship between humans and nature, to use a term coined by the Frankfurt School. In similar vein, Bennett wants the public to be more 'sustainability-oriented' (p. 111). In other words her intentions are very pragmatic. She refers us to a series of 'practical problems', such as Hurricane Katrina, unusual tornado activity, rising petrol prices, pathogens in food (p. 110) and says that in the face of these harms and disturbances the 'American public seems to be coalescing' (p. 110). But she is concerned that what she calls 'environmentalism' is not the best way either to frame these problems or to motivate people to do anything about them. So she asks whether a 'discursive shift from environmentalism to vital materialism enhance[s] the prospects for a more sustainability-oriented public' (p. 111). She might be right to say that the answer to this question must be empirical, but at a theoretical level this is perhaps the most underdeveloped part of an otherwise marvellous book, since it is hard to imagine how the public will be more engaged by the call to 'live as earth' rather than 'live on earth', especially when the former calls for alertness to 'the capacities and limitations – the "jizz" – of the various materials that they are' (p. 111). As so often there is no necessary connection between intellectual persuasiveness and political salience.

Vibrant Matter should be read by mainstream political theorists, but my fear is that it won't be. Like so many challenges to the mainstream it will likely – if taken in isolation – be marginalised. Fortunately, though, Bennett is one of a growing number of theorists seeking to unsettle our unexamined theoretical foundations. Who knows? One day *Vibrant Matter* may be regarded as a textbook. For now, it is no less than a pathbreaking excursus into virtually unexplored – and therefore endlessly fascinating – territory.

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S.M. Gardiner, S. Caney, D. Jamieson and H. Shue (eds.)
Climate Ethics: Essential Readings
New York: Oxford University Press, 2010
ISBN 978-0-19-539962-2 (HB) £55.00; 978-0-19-539961-5 (PB) £22.50. 350 pp.

Climate change is one of the most pressing issues of our times and presents fundamental political and social challenges to our societies. Despite the existence of extensive literature on various aspects of climate change, the ethical dimension of climate change has been relatively overlooked. This is rather surprising considering the nature of climate change and the questions it poses. This ambitious collection of essays by a range of distinguished scholars aims to capture the essence of existing work on climate ethics, and to spur further debate on the subject. In doing so, it consists of notable papers previously published elsewhere and three original contributions by Shue, Baer et al. and Gardiner.

The editors have brought together very different essays under five subheadings, each dealing with various aspects of the problem. This works fairly well in general, although some sections are stronger than others. The first part consists of an introductory overview by Stephen Gardiner, who successfully informs the reader of the central issues surrounding the politics and ethics of climate change. Gardiner makes the issue easily accessible to a wide readership not necessarily knowledgeable about climate change science, politics or ethics. Having informed the reader of the central issues surrounding the topic in part one, the second part engages with the nature of the problem, and contains three essays which offer different approaches to the problem. Stern introduces the reader to the economics of climate change, concluding that the cost of mitigating climate change now clearly outweighs the cost of mitigating and adapting to climate change in the future. Although the details of the economic arguments are slightly complex for a book of this sort, Stern does well in providing an overview. The following two chapters provide the reader with an interesting contrast to Stern's economic approach. For instance, in an enjoyable and inspiring chapter, Jamieson argues that it is almost unimaginable to economically aggregate the diverse impacts of global climate change in such a way as to dictate policy responses. Rather we should 'confront climate change as a fundamental challenge to our values and not treat it as it were simply another technical problem to be managed' (p. 85).

Part three brings together five papers which deal with the issue of climate change from intergenerational and global justice perspectives. Most of these chapters agree that the global burden of climate change should be predominantly borne by the more developed countries. Shue provides a compelling argument for why richer countries should bear the costs from an equity perspective, although he does seem to make an assumption that ethical considerations are the main driving force of international relations, unfortunately something that many, perhaps rightly so, would dispute. In another essay, Parfit revisits principles of

morality and clarifies well the fundamental principles involved when making choices with regards to energy policy. However whilst it is clear that Parfit makes a strong contribution to the debate on morality, the chapter does not relate that well to the overarching theme of the book, and is philosophically too complex for a general lay audience. Part three is concluded by a particularly noteworthy and stimulating essay by Caney arguing for a human rights based approach of thinking about climate change. In his essay Caney argues that climate change essentially undermines several fundamental and minimal human rights, such as the right to life, right to health and the right to subsistence, and that this approach has implications for who should bear the burdens of climate change and which policies are the most appropriate. He quite rightly concludes: 'any account of the impacts of climate change that ignores its implications for people's enjoyment of human rights is fundamentally incomplete and inadequate' (p. 173).

Part four brings together seven chapters which deal with the potential policy responses to climate change. Some of these are more practically oriented whilst others are more 'philosophical/theoretical'. These represent very different approaches to responding to climate change. An example of this is Singer, who argues that emissions trading is a good starting point for overcoming the fact that it is virtually impossible to drastically reduce emissions to an adequate level. Shue on the other hand makes a helpful distinction between subsistence emissions and luxury emissions, and what follows from this is that it is not equitable to ask some people to surrender their necessities so that other people can retain their luxuries. Baer et al. develop a 'Greenhouse Development Rights' framework for quantifying ability to pay and historical responsibility. This approach diverges slightly from more common approaches in that it touches upon inequality within nation states as well, which is something that is often overlooked in analyses. Gardiner, in an original contribution to the book, examines the 'moral landscape' of geo-engineering as a lesser evil and poses the question whether geo-engineering proposals are a solution or simply a part of the problem. He concludes that the lesser evil argument obscures important ethical issues and we risk 'tarnishing humanity' itself (p. 304).

Part five deals with individual responsibilities and consists of two chapters only. In the first chapter Jamieson discusses how utilitarians should be virtue theorists when it comes to global environmental change because utilitarianism is interested in achieving best goals, and that non-contingency is the best way of achieving this. By this he means that utilitarian agents should minimise their contribution to environmental change and this should not be contingent on other peoples' behaviour. This stimulating chapter clearly caters for a more philosophical readership, although it might at times be a challenge for other audiences unfamiliar with philosophical theories. Sinnott-Armstong discusses individual moral obligations using the example of a person going for an unnecessary Sunday 'joy-ride'. By going through several moral theories, he finds

no justification for why it is morally wrong for an individual to drive unnecessarily on a Sunday. However, he stresses that that does not necessarily mean that there is not one. According to Sinnott-Armstrong, individuals do not cause nor can they prevent climate change, but governments can. He argues that even if individuals have no moral obligations to fight global warming, governments do because they can make a difference. This line of argument is problematic, firstly because governments are a reflection of citizens' views, therefore if citizens are concerned with an issue, there is a high chance that governments will express similar concerns and vice versa. Secondly, if individual citizens cannot make a difference, it is difficult to see how individual governments can make a difference. No nation state alone can cause or stop global warming, ergo no one has any moral obligation to do anything about global warming. Therefore, the conclusions are quite disconcerting, and one could argue it is exactly these perspectives that make it so hard to address climate change. Overall this section is the weakest part of the book and it is difficult to see how two chapters only can do the complex subject of individual responsibilities justice.

On a general note, the book is written entirely from a western perspective. The authors' viewpoint is that of the richer nations, especially the United States. Considering the topic, some contributions from the perspective of less developed countries would clearly have been beneficial for the overall value of the book and its ability to stimulate wider debate on the topic. On a more stylistic note, consistent referencing between chapters would have been preferable. However, this is a very strong collection of essays from a range of eminent scholars. This volume is a good and crucial addition to the climate change debate. It would be of significant interest to researchers and students alike, but certainly also to policymakers and a more general audience seeking to gain an appreciation of the underlying principles of climate ethics.

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BOOK REVIEWS

Kevin J. O'Brien
An Ethics of Biodiversity: Christianity, Ecology, and the Variety of Life
Washington DC: Georgetown University Press, 2010
ISBN 978-158901645-3 (PB) £18.75. xi + 221 pp.

There have been a number of book-length philosophical treatments of the ethics of biodiversity conservation including Holmes Rolston, *Environmental Ethics: Duties to and Values in the Natural World* (Temple University Press, 1989) and Bryan Norton, *Why Preserve Natural Variety?* (Princeton University Press, 1990). And while there are a number of monographs by Christian theologians on the environment none specifically addresses biodiversity. This book is then the first book-length treatment of the conservation of biodiversity by a Christian theologian.

O'Brien organises the book around five defining questions. The first concerns the nature of biodiversity. O'Brien considers two kinds of answers. The first majors on numerical variety – of species, subspecies, organisms and habitats. The second more nuanced answer emphasises the relationship between biodiversity and place. Biodiversity for O'Brien refers to 'the variety of organisms in an array of configurations, measured within a specific area'. This is a valuable distinction and sets up one of the major concerns of the book, which is the issue of scale. Biodiversity cannot be globally banked like seeds or DNA. Biodiversity exists in relation to specific places. Saving species in captive breeding programmes or zoos is not therefore an answer to the loss of biodiversity. Biodiversity is presently in decline primarily because of destruction of habitats or places which are also communities of creatures. Only an ethics which addresses this destruction and its causes is sufficient to address the problem of biodiversity loss in the places where biodiversity *is*.

Second, O'Brien asks why biodiversity matters. First he considers the principal divide in secular discussion of this question, which is in essence between those who argue for the utility of species and those who argue for their intrinsic value. O'Brien does not disagree with the philosophical premise of either position but instead adds to them with a theological argument which suggests that biodiversity is sacramental: 'God is invested in the fate of life on Earth' (p. 66) and therefore biodiversity is 'a sign of and connection to the mystery and workings of God' (p. 71). Participation in the biodiversity of life is participation in God, just as participation in the sacrament of baptism is participation in God.

Third, O'Brien asks how we should attend to biodiversity and here he recalls his preference for a scalar definition of biodiversity. Thinking about biodiversity in terms of place requires attention to the communities of life that exist in place, and to the micropolitics of human interactions and relationships in place. While global processes and structures may drive destruction and interrupt local micropolitics, only careful attention to human–nature interactions and relationships

will address the particularities of species loss at the scale of each place. O'Brien suggests that Christian ethics, and more especially Catholic social teaching, has a valuable resource for scalar approaches in its emphasis on subsidiarity. In the principle of subsidiarity, as first promulgated in the encyclical *Quadragesimo anno,* Pope Pius XI affirmed that, while there is in the modern world a growth of large state and superstate organisations which do much that was formerly done by smaller bodies, 'true and genuine social order' depends upon moral formation of the kind that can only occur in small communities such as families, congregations or neighbourhoods (p. 95). O'Brien argues that a Christian ecological subsidiarity is well encapsulated in Michael Northcott's coining of the phrase 'parochial ecology' or 'ecology of the parish' (pp. 103–6). Seeing the world as a parish means attending to global processes that corrode local governance and ecological conservation in place, and to the need to regulate and restrain these processes. But the concept of parochial ecology involves the recognition that the conservation of species in place should attend to local knowledge and local governance of land and waterways in human communities.

Fourth, O'Brien addresses the question of how to conserve biodiversity. Here he sees the two options primarily in terms of politics and morality. While Christians value environmental laws that can restrain state agencies and economic corporations from habitat destruction and unsustainable extraction, people will only support laws that they feel morally invested in. If sufficient people do not respect spotted owls, or polar bears, then it will be hard to enforce laws that preserve them. Hence moral formation in respect for creatures is also essential, and O'Brien proposes that such formation can take place in religious communities; through rituals such as the annual blessing of animals conducted in some churches, through interpretations of scripture – such as the story of Noah's Ark – that emphasize human responsibility to care for creatures, and through theological teaching such as that which emphasises that human dominion over the earth is given not only for human flourishing but for the flourishing of all creatures.

Finally, O'Brien asks how the conservation of biodiversity might engage concerns for human diversity and justice. Here he surveys the work of a number of liberation and ecofeminist theologians and suggests that there is an intrinsic relationship between respect for the potential and powers of people in particular places and their capacity to justly share in and exercise responsibility over the particular places of the natural creation in which they dwell. Environmental justice is a key concept here, for when it was recognised that the majority of toxic waste dumps in the United States were close to communities of people of colour it became clear that environmentalism was not just a postmaterial occupation of the white and wealthy. Those processes that destroy species habitats are also processes that destroy habitable and relatively unpolluted human dwelling places.

This book is an excellent survey of Christian theological arguments for the conservation of biodiversity that also does a good job of introducing scientific

and philosophical arguments. It will work very well as a textbook, while it also makes distinctive and original contributions, in particular around the issue of multiscalar approaches to biodiversity and the importance of moral formation in communities of place. If I have a criticism, it is that O'Brien rarely disagrees with anyone. Instead his style is to add argument to argument, which gives each of the five sections an accumulation of layers on which the Christian argument is then overlaid. However at many points there are clear contradictions between the layers he puts down, and these are not pursued. I like an argument, but this book gives the impression O'Brien prefers ecumenical accord.

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Felix Rauschmayer, Ines Omann and Johanes Frühmann (eds.)
Sustainable Development: Capabilities, Needs, and Well-being
London: Routledge, 2011. Studies in Ecological Economics
ISBN 978-0415586528 (HB) £80.00. 192pp.

This book is concerned with normative aspects of sustainable development (SD). It sticks to the most common definition of this concept, put forward by the World Commission on Environment and Development according to which development is sustainable if it 'meets the needs of the present without compromising the ability of future generations to meet their own needs'.

The volume's aim is twofold. On the one hand, it strives for a better understanding of the theoretical bricks implicit in this definition, asking whether SD should focus on satisfaction of needs, enhancement of capabilities, or on achieving well-being. Thus, its 'conceptual aim' is to clarify and interlink these different normative and basic concepts and to interpret them in a way fruitful for the debate about SD (p. XI). On the other hand, the editors pursue the 'political aim [...] to restimulate the discussion about SD' (ibid.). To this end they focus on accessible concepts such as capability and need rather than on technical aspects of SD such as the differences between strong and weak sustainability, or the ecological, economical and social dimensions of SD. Thus, the book considers the most urgent questions about SD: what is SD's conceptual core, and how can SD be implemented more successfully. The examination reveals that SD is a deeply value-laden concept whose realisation depends on our personal values and self-conceptions. Reflection on these normative aspects of SD is a challenging and indeed needful task that has been neglected for too long. Hence, the authors of the book set a respectable though not easy to reach objective.

The collection is structured around a paper by the editors: 'Needs, capabilities and quality of life: Refocusing sustainable development'. This paper proposes key definitions regarding needs, capabilities, well-being and quality of life as well as SD. The authors present a complex 'process-based understanding of quality of life' which interconnects the different concepts at issue (p. 11). According to this integrative concept of quality of life, the available capability set determines the different strategies to meet our basic needs (for the concept of needs the authors refer to the theory of Manfred Max-Neef). This, in turn, leads to well-being including subjective and objective aspects. Importantly, the authors argue that 'not all policies that increase people's capability sets contribute to SD' (p. 13). They conceptualise SD as a valuable way to satisfy our needs, that is, to achieve human flourishing in its most fundamental dimensions, with a special focus on the needs of protection and affection. However, it would have been interesting to read more about how policies are restricted by the concept of SD and how the restrictions can be conceptually linked to the applied normative concepts.

The essays that follow draw more or less explicitly on this opening paper and offer alternative ways of constituting and relating the concepts of needs, capabilities and wellbeing to each other and to SD. The first six mainly concentrate on the conceptualisation of SD's normative basis: They highlight the importance of the concept of needs (John O'Neill), focus on capabilities (Ortrud Leßmann), and discuss the concept of life-chances (Paul-Marie Boulanger). While O'Neill shows that the concept of needs is theoretically and practically more adequate than the concept of preferences in capturing the core ideas of SD, Leßmann opts for a capability-based approach, but recognises several challenges SD poses to it, especially its neglect of intergenerational concerns and of the role of ecosystem services in the production of capabilities. As a remedy, Leßmann suggests broadening the allegedly individualistic perspective of the capability approach, as SD 'takes the well-being of people all over the world, now and in the future, into focus' (p. 57). The contribution of Sophie Spillemackers, Luc Van Ootegem and Gerben J. Westerhof considers capabilities and human flourishing in the light of economic and psychological theories to develop an account to measure well-being in the context of SD. Ivonne Cruz considers the role of needs in SD policymaking.

The last two essays reflect upon the transition of SD into practice and thus tackle the political aim of the book. In the seventh essay, Felix Rauschmayer, Tell Muenzing and Johannes Frühmann distinguish external context and internal roots of behaviour and suggest that the latter have been neglected in scientific and political efforts towards SD transitions. They present a four-layer model (behaviour, thinking and feeling, values and priorities, needs) to relate behaviour to needs and argue that successful SD transition should take needs into account. Furthermore, they conceive of sustainability research as value-driven and ask how sustainability researchers can effectively engage in transition processes.

The essay would have benefited from a critical discussion of the role of the sustainability researcher qua researcher as opposed to the sustainability researcher as a concerned citizen among others. The final contribution by Ines Omann and Felix Rauschmayer follows the arguments of the previous essay in asking about their own personal motivation for seeking SD and tracing if and where tensions might arise in this pursuit. Unfortunately, the link to the conceptual aim of the book in general and the process-based understanding as discussed in the introductory chapter remains rather weak in this closing essay.

Altogether, the volume gives a broad and instructive overview of conceptual links between the concepts of need, capability and wellbeing themselves and between them and certain dimensions of SD. However, the distinguishing element of the WCED-definition, compared to approaches aiming at development as such, lies in the combination of the developmental debate with the discourse on worldwide environmental damage. This is why the majority of sustainability research focuses on the importance of nature/natural capital for a good human life. It would therefore be interesting to see the conceptual distinctions regarding human needs, capabilities and wellbeing as given here linked to this dimension of sustainability research. Only with regard to such conceptual conjunctions are we able to answer the following important questions: Which specific policies increase people's capabilities? Can these policies be conceived of as contributing to SD? Broadening the perspective on capabilities by considering Nussbaum's work could perhaps contribute to such analysis. However, this book provides an informative first step to a hopefully very lively debate of relevance for sustainability science, developmental politics, ecological economics and (environmental) ethics alike.

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Allen Carlson and Sheila Lintott (eds.)
Nature, Aesthetics and Environmentalism: From Beauty to Duty
New York: Columbia University Press, 2008
ISBN 978-0-231-13886-4 (HB) £55.00; 978-0-231-13887-1 (PB) £20.50. 472 pp.

Because our aesthetic appreciation of nature so often impinges upon the environmental and conservation policies that we adopt toward it, the questions of what it means to appreciate nature aesthetically and how this appreciation relates to environmental ethics and activism become pressing. For those curious about the answers given so far, this collection of 24 essays is a *tour de force*. The editors

have not only made a careful selection of some classical and contemporary writings on the relatively new discipline of nature aesthetics, and its connection with environmental ethics and environmentalism; they have also arranged them to read as an engaging dialogue between differing positions.

After an informative introduction, the book is divided in four parts. Part 1 gives an overlook of some seminal texts by American writers and early environmentalists in the field of nature aesthetics. Part 2 develops the theoretical framework for an aesthetic appreciation of nature, and Part 3 explores the support that a particular model of the former –namely, the positive aesthetics of scientific cognitivism– can offer to environmentalism. From a more interdisciplinary perspective, Part 4 introduces culture as a key factor in both nature appreciation and environmental activism, and suggests ways in which to shape our aesthetic values to the benefit, and not the detriment, of environmental goals.

The iconic figures of Emerson, Thoreau and Muir open the volume with a theistic reverence toward nature that underlines the peculiar phenomenological experience of multi sensorial appreciation (as opposed to the standard mono sensorial appreciation of art). In order to go past a shallow appreciation of natural beauty, one has to see it with the innocence of a child (Emerson); tread through it like a saunterer through Holy Land (Thoreau); and give it time to reveal itself (Muir). Against these rather mystical views, Burroughs and Leopold highlight the role of science in nature appreciation, and the need to expand the common taste which finds beauty only in postcard landscapes. The link between the natural sciences and the arts in the early development of nature aesthetics is further explored by Hargrove, who presents the main historical categories for nature appreciation: the beautiful (harmonic and orderly), the sublime (vast and fearful), the picturesque (half-tamed, half-wild), and the 'interesting' (as judged by science).

Wherein lies the aesthetic value of nature, what is the attitude or knowledge needed to appreciate it and how it is different from the aesthetic value of art objects? These are the questions tackled in Part 2. To appreciate nature "on its own terms" (as Saito puts it), two kinds of model are proposed. On the one hand, cognitivists claim that nature appreciation requires a special sort of knowledge or information, which can be scientific (Leopold, Carlson, Callicott, Matthews) or cultural, in the form of bioregional narratives (Saito). On the other hand, non-cognitivists claim that nature appreciation requires a special kind of attitude; for example, a sense of mystery in the face of its ineffability (Godlovitch); or an 'appropriate' emotional arousal (Carroll). Although it is arguably the most developed non-cognitive model, Berleant's engagement theory – which advocates an attitude of total immersion as opposed to the traditional aesthetic disinterestedness – is unfortunately absent from the anthology.

Leopold's scattered writings are systematized by Callicott in what he deems to be the first aesthetics of nature based on the natural and ecological sciences.

Leopold has to be given credit for diagnosing the problems of extrapolating the categories of pictoric art to nature (reduction of the aesthetic experience to two dimensions, over-emphasis on the visual). But his land aesthetics poses its own problems, which have been largely inherited by his followers. To name a few: how to decide which information is relevant for aesthetic appreciation, how to deal with paradigm shifts in science (i.e., should they also lead to paradigm shifts in nature aesthetics?), and how to preserve the independence of this discipline from ecology.

One prominent follower of Leopold is Carlson, whose natural environmental model is perhaps the most developed science-based model today. As most of the theoretical discussion in the book is conducted around it, either to expand or criticise its main points, it is worth presenting it summarily. Adapting Walton's theory of art appreciation of nature, Carlson starts from two basic premises. First, to appreciate nature aesthetically one has to do it under the right categories; and secondly, these categories are given by science, which provides the appropriate boundaries, foci of attention and ways of appreciating.The outcome of this is a 'positive aesthetics', whose motto could be summed up in Constable's famous words: "I never saw an ugly thing in my life." (p. 212) As opposed to artworks, then, all virgin nature has an essentially positive value.

In Part 3, the central question is whether such a positive aesthetics can give good support to environmentalism. Saito, for example, acknowledges that science can help us appreciate 'unscenic' nature and uncharismatic species, but stresses that we have a moral duty not to judge all nature in positive aesthetic terms, especially when it causes human suffering, as in the case of floods or earthquakes. Similarly, Thompson warns that an aesthetics of nature can only serve as a guide for making environmental decisions insofar as it provides means for ranking between natural objects; and Parsons advances a modified version of Carlson's account, whereby the right category to appreciate nature and natural objects aesthetically is one that maximizes its aesthetic merits. Godlovitch and Budd, on the contrary, question the relevance of positive aesthetics for environmentalism and signal some recurring problems for this approach. Among them: how to delimit its object (natural objects, or landscapes, or ecosystems, or the biosphere as a whole?); how to interpret the claim that all nature has positive value (is it equal value, or merely not negative, or 'in balance'?); and how to settle the ontological status of this claim. Budd proposes a freedom model instead, where each valuator can choose aesthetic categories and sense modalities as he sees fit.

How the aesthetic appreciation of nature influences practice, and how environmentalists should use this in their favour by 'correcting' cultural aesthetic attitudes toward the environment is the topic of Part 4. In 'From Beauty to Duty', which inspired the title of this collection, Rolston advocates a participatory aesthetics deep enough to generate ethical imperatives. Eton, Nassauer and

Brady, meanwhile, all emphasize the importance of education and the support that practices like landscaping and design can give to environmentalism, when rightly directed. Such an 'eco-friendly aesthetics' (Lintott) should be aware that a community's aesthetic values can be as detrimental for the environment – for example, perfectly mowed lawns that consume large amounts of fuel and water – as they can be beneficial – as when the public's preference for certain charismatic species helps protect the whole ecosystem they inhabit –, and should seek to shape those values accordingly.

Although it could constitute a separate volume altogether, the comparison between art and nature appreciation is also touched upon transversally across the book, especially the debate over the objectivity or subjectivity of aesthetic judgments (Hettinger), and whether these demand moral neutrality (Godlovitch) or active engagement (Rolston).

The most complete anthology so far on this nascent field, this book is surely a welcome contribution both for those interested in the expanding field of aesthetic appreciation, and those looking for a relatively novel source of arguments of why we should care about nature. Whether the latter will satisfy the reader remains, however, an open question.

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Books Received

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