

Kopnina, H. and Washington, H. (eds) (2020) *Conservation: Integrating Social and Ecological Justice*. Springer, New York.

PART I: SOCIETY AND ENVIRONMENT: SOCIAL SCIENCE PERSPECTIVES

Chapter 1 Conservation and Justice the Anthropocene: Definitions and debates

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"Wilderness is not a luxury but a necessity of the human spirit, and as vital to our lives as water and good bread. A civilization which destroys what little remains of the wild, the spare, the original, is cutting itself off from its origins and betraying the principle of civilization itself."

— Edward Abbey (1968: 169)

INTRODUCTION: OUTLINING THE AIMS OF THIS VOLUME

As many in society work towards global sustainability, we live at a time when efforts to conserve biodiversity and geodiversity, and combat climate change, take place simultaneously with land grabs by large corporations, food insecurity, and human displacement through an ecological breakdown. Many of us seek to reconcile more-than-human nature and human nature and to balance intrinsic value and the current human expansion phase. These and other challenges will fundamentally alter the way people, depending on their worldview and ethics, relate to communities and the environment.

This book takes as its point of departure today's pressing environmental challenges, particularly the loss of biodiversity and geodiversity, and the role of communities in protected areas' conservation. In its chapters, we discuss areas of tension between local livelihoods and international conservation efforts, between local communities and wildlife, and finally between traditional ways of living and 'modernity'. The central premise of this book is that while these tensions cannot be easily resolved they *can* be better understood by considering both social and ecological effects, in equal measure. We believe that ecological justice and social justice must be entwined, as both are essential.

While environmental problems cannot be seen as purely ecological because they always involve people, who bring to the environmental table their different assumptions about nature and culture, so are social problems connected to environmental constraints. Similarly, social problems are fundamentally connected to environmental constraints and ecological health. While nonhumans cannot bring anything to this negotiating table, the distinct perspective of this book is that there is a need to consider the role of nonhumans as equally important stakeholders – albeit without a voice. This book develops an argument that *human-environmental relationships are set within ecological reality and ecological ethics*. Rather than being mutually constitutive processes, humans have

obligate dependence on nature, not vice versa. We argue that over-arching ecological ethics is necessary to underpin conservation in the long-term. This requires a holistic ‘justice’, where both social justice (for humans) and ecological justice (for nature) are entwined. However, given the escalating environmental crisis and major extinction event we face, and given that social justice has been dominant for centuries, we believe that in many cases ecojustice will need to be *prioritized*. This will depend on the situation, but we feel that under ecological ethics, holistic ethics cannot always allow social justice to dominate, hence there is an urgent need to prioritize ecojustice today. Accordingly, this book will deal with questions of both social and ecological justice, putting forth the idea that justice for both humans and nonhumans and their habitats can only be achieved simultaneously. This book will explore the following questions: What is the relationship between social and ecological justice? How might we integrate social and ecological justice? What are the major barriers to achieving this simultaneous justice? How can these barriers be overcome? What are the major debates in conservation relevant to this?

We hope that this volume will encourage discussion about the complexity and contradictions, as well as reconciliation, in regard to what justice *is*. This means reconciliation is needed for both research and policy, for instance by highlighting both competing claims and the tendency for outcomes to reflect a dualistic view of nature being separate from humanity. In this volume, one of the central dualisms discussed refers to that between the human and non-human world. We believe that this is a false dichotomy, as humanity is intimately connected to, and is part of, ‘nature’ – and we should explore the philosophical, political, as well as practical implications of this. We will refer in this volume to *collective* humanity – although we are very aware of varying environmental impacts and material needs of different social groups and individuals. ‘Nonhumans’ will be referred to in this chapter as animals and other living organisms, including plants and fungi, as well as terrestrial and marine ecosystems.

In the sections below we shall examine key definitions and concepts, including the Anthropocene; anthropocentrism; environmental and ecological justice; and conservation.

THE ANTHROPOCENE

In the Anthropocene, humans dominate most fluxes and cycles of the planet's ecology and geochemistry (Crist 2013). We use the term ‘Anthropocene’ purely because so many in academia use it. We agree, however, with Moore (2016) that the name ‘Anthropocene’ muddles the message. In fact, some who use the term seem proud that humanity is having such a huge impact! Another term for the Anthropocene could be ‘ecocide’. A better term, we suggest, would be the positive term ‘The Ecozoic’ coined by Swimme and Berry (1992), which describes the geologic era that the Earth needs to be entering – when humans live in a mutually enhancing relationship with Earth and the Earth community. According to some estimates, we run the risk of losing more than half of the total

amount of species in the world before the second half of the 21st century (Broszmitter 2002). Raven et al (2011) suggest that by 2100 we may lose *two-thirds* of the Earth's species. By explicitly privileging human welfare over that of all other living beings, anthropocentrism denies ecological justice, or justice between species (Eckersley 1992; Schlosberg 2004; Baxter 2005; Strang 2016; Washington et al 2018) and the 'Rights of Nature' (Borràs 2016) and Earth jurisprudence (Cullinan 2003; Burdon 2011). Baxter (2005: 4) argues that nonhuman species have a moral right to 'distributive justice' in regard to a fair share of the environmental resources that all life-forms need to survive and to flourish'. Mathews (2016) speaks of "bioproportionality", an ethic that reaches beyond mere 'viability', seeking optimal populations of all species. This clearly has policy implications in regard to the need to control human overpopulation (Crist et al 2017). It also strengthens the case for increasing the extent of protected areas and especially the 'Half Earth' vision' (Wilson 2016).

These concerns are not new, as (for example) environmental sociologists have warned us for many years about the dangers of the Dominant Western Paradigm encompassing economic growth (e.g. Catton & Dunlap 1978). Similarly, philosophers explored the exclusion of nonhumans from dominant ethics (e.g. Naess 1973; Goodpaster 1978; Shepard 1982; Rolston 1983; Taylor 1983; Katz 1996). Multiple authors in fields of sciences – biologists, ecologists, geologists, climate specialists and other scholars (e.g. Ehrenfeld 1978; Curry 2011) - have outlined the danger of industrial development to ecosystems and their inhabitants, including ourselves. Mass consumption and expanding populations worldwide have led to the conversion of wild habitats into agricultural or industrial areas and exploitation of billions of animals for food production (Crist et al 2017).

These concerns are documented by several joint 'Statements of concern' by scientists. For example, in 1992, 1,700 of the world's leading scientists published a 'Warning to Humanity' (UCS 1992) that stated:

Human beings and the natural world are on a collision course. Human activities inflict harsh and often irreversible damage on the environment and on critical resources. If not checked, many of our current practices put at serious risk the future that we wish for human society and the plant and animal kingdoms, and may so alter the living world that it will be unable to sustain life in the manner that we know. Fundamental changes are urgent if we are to avoid the collision our present course will bring about.

In 2017, over 15,000 scientists endorsed the 'World Scientists Warning to Humanity: A Second Notice' (AWS 2017) which noted that most problems were getting worse. They have pointed out that the Anthropocene is intertwined with the practice of industrialization and the ideology of economic growth, which ignore the needs of other living beings on this planet (Dietz and O'Neill 2013; Daly 2014; Chapron et al 2018). The rhetoric of 'sustainable development' proposes win-win solutions (WCED 1987) reflected in the triple bottom line approach of 'People, Planet, and Profit'. This approach is rooted in classical economic assumptions that growth will maximize human well-

being through *spreading evenly* – thus, that the “rising tide will raise all boats” (for critical discussion, see Washington 2015). However, trying to achieve low mortality, economic prosperity and ecological sustainability is all but impossible (Rees 2008; Rolston 2012). Unless Western-style consumption is made more sustainable, and human population growth is voluntarily halted, the crisis of limited resources is virtually certain to deepen (Crist 2015, 2016; Washington 2013, 2015) and conservation is likely to be twisted as a concept to serve nothing more than the utilitarian needs of a single species (Crist 2012; Crist and Cafaro 2012; Kopnina 2015, 2016; Washington et al 2018). In this context, the Anthropocene has come to signify the domination of economic industrial thinking, steeped in anthropocentrism.

Anthropocentrism

Anthropocentrism typically allocates ethical consideration only to the human species, where only humans have rights. It generally glorifies human domination over nature. Anthropocentric modernism generally seeks technological solutions to problems created by industrial development (Cornucopianism). Yet, the prospects for reconciling the conflict between economic growth and nature conservation with technological progress are limited at best (Daly and Cobb 1994; Czech 2008; Dietz and O’Neill 2013). The term “human ingenuity” is spoken of in regard to environmental problems, however, the result is exclusive human welfare (The Economist 2015a and 2015b), and not that of other living beings and their habitats (Higgins 2010).

Typically, discussions of environmental problems involve environmental disasters that threaten economic progress, as in the case of climate change that endangers food production and coastal communities. Significantly less attention is given to biodiversity conservation unless it is seen as *useful* for humanity (Katz 1996; Taylor 2013; Gren et al 2016). In fact, the use of conservation for advancing *human* welfare has become common in the so-called “new conservation” (ideologically neo-liberal) and also in “critical social science” (ideologically neo-Marxist) (these distinctions are described in Kopnina et al 2018a and b). New conservation considers only strictly economic benefits (or disadvantages) of protected areas (e.g. Marris 2014; Marvier 2014). In fact, new conservation can be seen as a surrender to the logic of economic growth and industrial development (Miller et al 2014). For the ‘critical social scientists’ (Sandbrook 2015) the concept of justice is often connected with the neo-Marxist discussion of downtrodden communities. Environmental justice in connection to conservation is often linked with gendered, racial, and inter-class differences that affect forest livelihoods of local communities, arguing that outcomes of conservation policies often reflect elite interests (e.g. Büscher and Fletcher 2016). These schools of thought will be further discussed in Chapter 2.

Anthropocentrism is reflected in the paradoxical nature of the concepts widely used in policy and economics, which include “sustainable development” (Kopnina 2012, 2016; Washington

2015). Anthropocentrism denies the concept of bio-proportionality, which supports an abundance and flourishing of *all species* according to their living requirements (Mathews 2016).

Anthropocentrism is also antagonistic to any vision of an increased area of conservation reserves, such as the ‘Nature Needs Half’ movement (e.g. Noss 1992; Cafaro et al 2017; Wilson 2016).

Anthropocentrism, in its original and most common connotation in environmental ethics, is the belief that value is human-centered and that all other beings are just means to human ends (Grey 1993; Curry 2011; Quinn et al 2016). Anthropocentrism is the belief that humans are more important and superior to other species, where the assessment of ‘reality’ is through an exclusively human perspective. Anthropocentrism can also operate both in the case of 1) disregarding entire ecosystems and habitats and geodiversity that support biodiversity as a whole (Callicott 2006; Cafaro & Primack 2014; Doak et al 2015; Fitzgerald 2015; Cafaro et al 2017), and: 2) disregarding individual animals (Bisgould 2008; Borkfelt et al 2015; Kopnina & Gjerris 2015; Sykes 2016).

Recent decades have witnessed a rising concern with anthropocentrism and a renewed interest in the radical examination of the ethical underpinnings of animal rights and welfare (e.g. Singer 1977; Regan 1986; Bisgould 2008; Borràs 2016); biological conservation (e.g. Nelson & Vucetich 2009; Rolston 2012; Tallis et al 2014; Doak et al 2015; Nelson et al 2016; Shoreman-Ouimet and Kopnina 2016; Cafaro et al 2017); compassionate conservation (e.g. Bekoff 2013; Walda 2013) and a plea for ecocentrism (Taylor 2010; Curry 2011; Rolston 2012; Fisher 2013; Vetlesen 2015; Weber 2016; Washington et al 2017).

Environmental justice

Not all human beings on this planet have equal access to natural resources, leading to questions of inequality and injustice. According to Veronica Strang (2016: 259), an anthropologist concerned with both social and ecological justice, the notion of justice is: “fundamentally concerned with equalizing relations between those who have power and those who do not”. Environmental justice is thus often defined from the general “justice” in terms of fairness: “the condition of being morally correct or fair” and “the system of laws by which people are judged and punished” (Cambridge dictionary). Environmental justice usually excludes the environment when it is unconnected to human welfare, as it mostly refers to environmental risks and benefits for human communities (Schlosberg 2004; Kopnina 2014; Washington et al 2018). Environmental justice refers to the equitable distribution of environmental goods such as natural resources and clean air and water, or the economic proceeds of biological conservation among human populations (Kopnina and Shoreman-Ouimet 2013; Strang 2016). It is thus justice for humans in regard to environmental issues – it is thus quite different from *ecological* justice, which is about justice for nature. Environmental justice is associated with social equality in regard to the access of different social groups to environmental benefits such as food security, water, and energy services. Often, social

justice as intimately interlinked with neoclassical economics. Proponents of environmental justice often speak of unequal exposure of vulnerable, poor, marginal or indigenous communities to the negative effects of the creation of protected areas that restrict economic activities (Baviskar 2013; Nonini 2013; Büscher and Fletcher 2016). Some have argued, “it is ethically problematic to privilege conservation of a maximum level of biodiversity at the expense of livelihood security and poverty alleviation” (Benjaminsen et al 2008: 225). In cases of conflicting interests such as human-wildlife conflicts (e.g. Jacobsen and Linnel 2016) or ecosystem services trade-offs social and environmental justice is sometimes counter-posed to ecological justice (e.g. Low and Gleeson 1998). Thus, the objective of environmental justice is to raise living standards of disadvantaged human groups permitting biological conservation *only* if it serves this purpose.

Yet, raising living standards is often used as a euphemism for the spread of the logic of neoliberal capitalism and global consumerism (Crist 2012). Raising people out of poverty without tackling over-consumption by the rich is likely to lead to a greater crisis of, and competition for, resources (Rees 2008). In fact, critics of conservation rarely address the fact that most communities are actually displaced and disadvantaged by industrial development, and rarely tackle the root causes of poverty. Rather, as Crist (2015: 85) argued, “strictly protected areas are scapegoated and wild nature, once again, is targeted to take the fall for the purported betterment of people, while domination and exploitation of nature remain unchallenged.” As Monbiot in his blog (2012) argues:

The politically easy way to tackle poverty is to try to raise the living standards of the poor while doing nothing to curb the consumption of the rich. This is the strategy almost all governments follow. It is a formula for environmental disaster, which, in turn, spreads poverty and deprivation.

Kidner (2014) argues that the current industrialist neoliberal ideology presents a barrier to both human and ecological interests. Industrocentric ideology is a self-serving system that destroys cultural and biological diversity, and portrays living beings as just a ‘resource’, at the expense of both ourselves and nonhumans (e.g. Baxter 2005; Taylor 2010; Crist and Kopnina 2014). Additionally, discussing only consumption and not tackling human population growth is likely to result in continuous demand for more resources, both by the poor and the rich (Crist 2012).

In terms of ethics, while in some definitions environmental justice may encompass ecological justice (Schlosberg 2004) or justice between species (Baxter 2005), most commonly environmental justice ignores the environment or nonhuman species as a focus of moral concern. Essentially, this type of justice is human-centered or anthropocentric (Cafaro et al 2017; Washington et al 2017, 2018; Kopnina et al 2018a and 2018b; Piccolo et al 2018) It is also self-defeating if long-term human flourishing is what we aim for (Washington 2015; 2018b). While displacement or disadvantages to local communities are touted as violations of human rights (e.g. Büscher and Fletcher 2016), there is little mention of violation of nonhuman rights through

destruction of their habitat and the physical extermination of not just individuals, but in some cases entire species (Cafaro and Primack 2014; Kopnina 2016; Kopnina et al 2018a).

Noting interdependence between human and non-human species, Strang (2016: 259) notes that a “short-term focus on immediate human interests has longer-term detrimental effects on humans and non-humans alike” as ‘social’ and ‘environmental’ domains are intertwined. Indeed, Strang notes, a theoretical frame in which human needs are, “separated and prioritized” which “inevitably gives insufficient weight to the needs of the non-human” (Ibid). Strang continues: “giving humankind priority in the provision of justice leads down a path that is morally questionable, carries high risks, and is intellectually problematic” (2016: 259). Indeed, as the most privileged classes around the world live in unsustainable affluence, it is difficult to suggest that poorer people should be prevented from enjoying the material benefits that economic development promises. Yet, “discourses on justice often imply that the most disadvantaged human groups should have special rights to redress long-term imbalances” Strang (2016: 259). However, “if the result is only a short-term gain at the long-term expense of the non-human (and thus humans too), this is not a sustainable way to achieve either social or ecological equity” (Ibid). Thus, ecological justice is proposed both as a more inclusive moral framework, but also a more practical strategy in the long run.

Ecological justice

So what *is* ecological justice, or what should it be? Ecological justice (Schlosberg 2004; Baxter 2005) is concerned with other species independent of their instrumental value for humans and refers to justice between human and non-human species (Naess 1973). Ecological justice is associated with biospheric altruism and extends concern beyond human beings (Shoreman-Ouimet and Kopnina 2015: 130). This is *justice for nonhuman nature*. We feel that the simplest and most holistic meaning is ‘justice for nature’ and we will use this in the book.

The inclusion of non-humans by eco-advocates within political systems could be the next step in achieving ecological justice (Schlosberg 2004; Cafaro and Primack 2014; Kopnina 2014; Washington et al 2018), as discussed by Joe Gray and Patrick Curry in this volume (see also www.ecodemocracy.net). Ecological justice has profound implications for how biological conservation is practiced. However, it is also central to how an ecocentric ethical movement can, and should, manifest itself.

Recent developments in international law have addressed a number of areas in which ecological justice finds political and legal support. On the one hand, there is a trend toward the development of ecocide law (Higgins 2010), and on the other hand, animal rights law (Sykes 2016; Borrás 2016). The United Nation’s Office on Drugs and Crime (UNODC) has recently recognized the trafficking of wildlife as both a specialized area of organized crime and a significant threat to

nonhuman species. The World Wildlife Crime Report takes stock of the present wildlife crime situation with a focus on illicit trafficking of protected species and provides a broad assessment of the nature and extent of the problem at the global level. Another notable initiative is the Rights of Mother Earth petition, which seeks to persuade the UN to adopt the universal declaration of the rights of nature (<http://www.rightsofmotherearth.com/>). This conception of ecological justice has great implications for how biological conservation is ethically framed and practically conducted.

CONSERVATION AND ITS MAIN CHALLENGES

There are a great many definitions of conservation. We face a future *bottleneck* in terms of the survival of life, as an eminent biologist E.O. Wilson (2003) has observed. We live in a time of exponentially fast change, and the ‘bottleneck’ represents how successful we will be in terms of saving ourselves and our world’s rich biodiversity and geodiversity. Conservation is ideally the best strategy of *widening* the bottleneck - so that more of nature survives into the future in this century, at the ‘crunch time’ when all the negative impacts of our growth economy peak. We will not save it all, but we can save as much as possible.

For the purpose of this volume, we will subscribe to a simple definition: conservation is the protection or preservation of nonhuman nature. This includes species, including animals, plants, algae, fungi, bacteria, and also, crucially, entire ecosystems that sustain them. It also includes conservation of geodiversity (Washington 2018a), which is the variety of geological, geomorphological and soil features. The greatest challenges to the aim of protection of nonhuman species and ecosystems are the destruction of habitat, industrial development, and associated unsustainable production and consumption, and of course ongoing human population growth (though many scholars shy away from talking about this, as discussed by Kopnina and Washington 2016). Intensive agriculture, urban development, and the expansion of human activity everywhere on the planet - result in land clearing and deforestation, as well as climate change. The greatest threats to biodiversity are summed up by the acronym HIPPO: Habitat Loss, Invasive Species, Pollution, Human Population, and Overharvesting. While, as we shall discuss in this volume, conservation as a movement has many different orientations, some of them conflict. The overarching aim of conservation so far has been the creation of protected areas, in an effort to protect both biodiversity and geodiversity. We agree with this, though of course other strategies are also needed.

However, there is a threat to conservation as a movement, assuming we mean conservation is the maximum protection of remaining nonhuman nature. The so-called ‘environmental pragmatism’, and anthropocentrism have taken hold of the conservation debate in recent years. Rather than trying to meet the ambitious targets for conservation through addressing the root causes of species’ extinction - some policy-makers, academics, and even practicing conservationists, seem

to have re-oriented themselves *solely towards human welfare*. While the root causes of the environmental crisis are population growth, overconsumption, habitat clearing for agricultural and urban development, pollution and climate change - the ideology of ‘pragmatic conservation’ favors only conservation that helps people. One example is the *Eco-modernist manifesto* (<http://www.ecomodernism.org/>), which represents a surrender to development by celebrating an assumed technical ingenuity and the human ability to control anything, from climate to biodiversity. It thus *subverts the meaning of sustainability to suit neoclassical economic needs* (Washington 2015). In this volume, we are worried that the idea of ‘control and management’ increasingly dominates conservation objectives (Kopnina et al 2018a) and that this derives from neoliberal ideology. Conservation goals seemed to have moved from trying to preserve ecosystems and biodiversity (Miller et al 2014) to making them subservient to growing human needs and ‘designing’ new human-dominated environments so that nature is just a ‘garden’ (Marvier 2014; Marris 2014). They argue that ‘traditional’ conservation is outdated. In reflecting on how conservation is supposedly “being overtaken by fast-moving reality”, *The Economist* (2015b: 12) suggests:

Conservation is nearly always backward-looking. *It aims to keep plants and animals not just where they are but where they were before humans meddled.* The only real debate is over how far to turn back the clock ... In future the question will no longer be how to preserve species in particular places but to how to move them around to ensure their survival.

This clearly advocates that humanity must become extensive ‘ecological engineers’ to keep species alive, rather than solve the problems *causing* the environmental crisis. It is not entirely clear how humanity is going to engage in such a planetary ambitious project, undertaking this hubristic monumental effort to move all species into safety, as if we are the new Noah. What region will truly be ‘safe’? What makes us think we know enough to control nature? Many ecologists question the later.

Conservation today is thus fraught with many issues, which include worldviews and ethics (though commonly these are hidden and not stated) as well as different strategies in terms of what will work. This volume will discuss some of these, and look to the best solutions to conserve our living world into the future.

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