
Introduction

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Volume aims and editorial reflections

This collection of original, commissioned essays provides an assessment of the scope and content of environmental sociology both in disciplinary terms and in terms of its wider interdisciplinary contribution, reflecting work by anthropologists, historians, geographers, ecological economists, philosophers and political scientists, as well as dedicated environmental sociologists. More than a decade has passed since the first edition of this handbook was published to considerable acclaim, and environmental sociology is now firmly established as a critical social science discipline, as well as a very broad and inclusive field of intellectual endeavour. Our goal in producing a completely new edition is to mark some of the changes, as well as the continuities, in the field of environmental sociology and to include chapters that draw attention to the substantive concerns and theoretical debates of today.

All the contributors have well-established academic backgrounds and many are also intimately involved in national, regional or global environmental policy processes from formulation through to implementation. Some of the authors provided chapters for the first edition (1997), but we have also commissioned pieces from other established scholars and younger colleagues who are challenging earlier approaches, highlighting alternative dimensions and bringing new perspectives to bear.

The volume is divided into three parts: I – concepts and theories; II – substantive issues; and III – international perspectives. While there is some overlap between these three parts, there is an overall progression from the general towards the particular. Each part begins with an editorial commentary that briefly outlines the contents of the constituent chapters and cross-references some of the more significant themes that link them. It may be useful to consult these commentaries before tackling the substantive chapters; however, each essay is entirely self-contained, so that the volume can be used as a reference source according to the particular interests of the reader.

The process of commissioning and editing the volume has been a fascinating, if at times challenging, project. The fascination and challenges are not just academic and intellectual, however. Together with the demands on comprehension and insight that editing a volume of this nature poses, personal and professional challenges are associated with accommodating such a project within a complex of other commitments and interests. This is mentioned not in preamble to any special pleading concerning the problems associated with bringing the project to fruition, but to highlight the fact that all the contributions to the volume have been produced by individuals who are deeply embedded and implicated in the very issues that they seek to illuminate (Bryant, Chapter 12).

Environmental sociology is usually defined as the study of societal–environmental relations or interactions (Dunlap, Chapter 1), yet this very definition contains within it one of the fundamental issues that many contributors to the field view as central to the emergence of our contemporary predicament: the ontological separation of people and

societies from the rest of nature (see, *inter alia*, Dunlap, Chapter 1; Redclift, Chapter 8; Foster, Chapter 7; Manuel-Navarrete and Buzinde, Chapter 9; Benton, Chapter 13). This separation is a modern invention, a product of the scientific revolution and the underpinning of society's faith in its ability to transform the world in pursuit of 'progress'. Engrained in sociology and neatly summed up in Durkheim's claim that 'we can only understand society through recourse to social facts', this human exceptionalism prompted early environmental sociologists to call for a 'new ecological paradigm' (NEP) (see Dunlap, Chapter 1). Rather than view environmental problems as just another issue of societal concern, the NEP emphasized the ecological embeddedness of society and the idea that social structure and human behaviour are influenced by ecological as well as social facts. Developed from a basis in earlier works in various schools of ecological anthropology, as evidence of anthropogenic environmental change mounted and became recognized as a global as well as local phenomenon, environmental sociology has matured into what Vaillancourt (Chapter 3) terms 'global ecosociology'.

The chapters that comprise this volume emphasize different aspects of socio-environmental relations. What follow are our interpretations, reflections and attempts at synthesis, which, while we hope they are of some value, should be understood as products of our own academic backgrounds, intellectual endeavours and personal sentiments. We hope the contents of this book will provide sets and casts for your own productions.

Concepts and theories of nature, society, and environment

Human beings share many characteristics with other animals, particularly our fellow mammals. We are all organically embodied and ecologically embedded: we all need to breathe and eat, requiring the consumption of oxygen and nutrients for our bodily growth and maintenance. Our metabolic processes also result in the production and emission of 'wastes'. Every day people die and people are born at global average rates of approximately 110 and 250 per minute respectively. Thus the total global human population, which currently stands at around 6.75 billion, is increasing at a rate of about 70 million people per year.

The relationship between population growth, economic development and resource availability has been seen as problematic for at least 200 years, notably in early works such as Malthus's *Essay on the Principles of Population* and in the later work of Marx (see Foster, Chapter 7). In more recent times, the publication of Meadow's et al.'s report to the Club of Rome, *The Limits to Growth*, highlighted the finite character of resources such as fossil fuels and minerals, and in the same year, 1972, the UN Conference on the Human Environment (Stockholm) focused on the environmental impacts of industrial pollutants such as CFCs (chlorofluorocarbons) and noted early concerns over global warming.

These two events certainly stimulated the emergence of environmental sociology; however, population growth *per se* has not been the central focus of concern. Rather, relationships between population and resources are seen to be mediated by social structures (Buttel, Chapter 2; York, Rosa and Dietz, Chapter 5), which are themselves considered as both the context and outcome of human agency.

At the same time as human beings are organically embodied and ecologically embedded, we are also culturally embodied and socially embedded. Much of the corpus that comprises environmental sociology can be roughly divided into approaches that tend to favour one or other of these two 'realities' (Dunlap, Chapter 1). In contrast to the

situation when the first edition of this volume was published, however, most people now acknowledge the relevance of both, while the more adventurous are seeking to combine them. Ideas such as ‘coevolution’, ‘co-construction’, ‘conjoint constitution’, and ‘socio-ecological agency’ refute the notion that human society can be separated from its ecological context and provide ways into theorizing the indivisibility of nature/society (Manuel-Navarrete and Buzinde, Chapter 9), while leaving room for their analytical separation.

There is also growing consensus surrounding the duality of structure: structure as both the context for and the result of social action, yet environmental sociologies generally tend to focus on either one or the other. Political ecology (Escobar, Chapter 6), while having structuralist roots, took a constructivist turn during the 1990s, and began to investigate the ways in which nature is socially constructed in discourses such as ‘sustainable development’ and ‘biodiversity conservation’, considering language to be constitutive of reality, rather than simply reflecting it. Manuel-Navarrete and Buzinde conceptualize the social and material possibilities of discourse in the figure of socio-ecological actors (Chapter 9), painting people as ecological actors, social actors and individuals all at the same time. They claim that reflexive socio-ecological agents will be indispensable mediators in the mutual co-creation of the social and material structures of successful ‘post-carbon’ societies.

On the other hand, Barcena Hinojal and Lago Aurrekoetxea (Chapter 10) focus on the structure of ecological debt to reflect the environmental injustices of capitalist development, or what Sachs (Chapter 17) calls the ‘Euro-Atlantic development model’. Both of these contributions focus on the ecological character of South–North relations in order to counterbalance narrow, financial accounting that portrays a debt-ridden global South in hock to the global North. Any route out of our environmental predicament has to recognize and address these structural imbalances (Chapter 10; Chapter 17; Chapter 19). For Parks and Roberts (Chapter 19), unless imbalances in the economic, political and ecological structure of South–North relations are taken seriously, the prospects for achieving a meaningful post-2012 climate change agreement are severely limited.

Rather than seeking to apportion blame for escalating environmental problems, Mol’s ecological modernization (Chapter 4; see also York, Rosa and Dietz, Chapter 5) is a structurally oriented social theory of environmental reform, focusing our attention on the social, economic and political structures of environmental governance. In John Hannigan’s ‘emergence model of environment and society’ (Chapter 11) the aim is to understand how novel structures emerge in the context of accelerating environmental change. Drawing on the basic tenets of interactionist approaches, while there is no attempt to synthesize the biophysical and social elements of socio-environmental relations, the emergence model suggests that both individuals and collectivities are capable of acting, and that order and change can occur simultaneously.

Many of the concepts and theories that are discussed in the first part of the book are taken up in the subsequent sections, where they are employed in analyses of substantive issues and regional case studies.

Substantive issues and international perspectives

Globalization, global environmental change and global environmental governance are either referred to directly or are implicit in all the contributions to Parts II and III of the

volume. When the first edition was published, there was still considerable debate over the accuracy and meaning of scientific data concerning changes in global mean temperatures and the possible link to climate change. Today, much more attention is focused on the character, efficacy and implications of the growing body of local, national and global policies and social movements that seek to promote climate change mitigation and adaptation.

The establishment of global scientific consensus around the phenomenon of planetary warming has created the impression, as Yearley (Chapter 14) puts it, that the world has 'grown eerily harmonious'. The issue of climate change stands out in this respect because of the way it gave rise to innovations in the production and certification of scientific knowledge – the establishment of the Intergovernmental Panel on Climate Change (IPCC) – and because of the novel positions into which it led environmental NGOs (non-governmental organizations); the IPCC consensus on global warming facilitated NGO campaigns urging governments to go much faster in responding to climate change. Yet prescriptions for action and policy to address global warming vary markedly between different national governments, industry coalitions and social movements.

In more general terms, the character and dynamics of environmental social movements have changed considerably in the wake of accelerated processes of globalization and in the context of the post-Washington Consensus aid environment. Information and communications technologies have been incorporated into the organizing and claims-making activities of social movements, while the recent emphasis on 'good governance' has created space for civil society representation within global environmental policy fora, leading to the professionalization of large-scale movements and their articulation with national and supra-state environmental agencies (Kousis, Chapter 15).

The shift towards more international and global configurations of the last ten to fifteen years has begun to slow, however. This may be linked to the inability of large-scale movements to incorporate local and regional concerns within frames of reference that gain purchase at the global scale, but it also reflects the growth of democratic spaces and processes within previously undemocratic nations and regions. The dynamics of civic engagement in environmental governance in Central and Eastern Europe following the end of the Soviet era and preparations for accession to the European Union (Carmin, Chapter 25), reflect some of the general trends noted by Kousis, but also reveal the enduring legacy of command-and-control economies and the curtailment of opportunities for engagement brought about by the demands of 'making a living' in the extended period of transition to free market economies. In Mol's assessment of the challenges of ecological modernization in China (Chapter 24), he also identifies the opening of space for civic engagement, although these are obviously spaces provided by the state rather than created by the people, and much more room is clearly needed for criticism and environmental activism.

Although the 2008 global financial crisis and consequent economic recession may have slowed the pace of globalization and unprecedented state intervention may suggest otherwise, the hegemonic position of the market as the most effective and efficient conduit for pursuing environmental reform appears to remain intact (Redclift, Chapter 8). Neoliberal regimes of environmental governance are examined in the context of Australian agri-environmental policy by Stewart Lockie (Chapter 23), in order to assess their potential in promoting climate change mitigation and adaptation. Twenty years

of experience using market-based policy instruments in pursuit of agri-environmental objectives suggest that they are not necessarily effective means for resolving the market failures that some environmental economists believe to be the root cause of agriculture's negative environmental externalities. The evidence from Australia suggests that in the absence of a more heterodox approach and greater grassroots support, policy is unlikely to gain much influence over the complex of social, ecological and economic relationships that shape rural land use and, by extension, global climate change.

Another issue that has gained significantly in prominence since the first edition of this book was published is 'sustainable consumption' (Hinton and Goodman, Chapter 16). Fitting comfortably with neoclassical economic orthodoxy and with the precepts of ecological modernization theory, the promotion of sustainable consumption through provision of 'information' in the form of media campaigns and green labelling, shifts responsibility for environmental reform from producers to consumers, whose purchasing choices will ostensibly send signals through the market mechanism, prompting more environmentally benign production processes and products. At the same time as sustainable consumption is promoted by public policy, alternative forms of green living are promoted by emerging discourses such as 'voluntary simplicity'.

The ethics of consumption are implicit in both mainstream and alternative sustainable consumption discourses, not only in terms of the environmental and social impacts of production and consumption, but also with respect to the moral consideration afforded to animals (Benton, Chapter 13). 'Animal liberation' activists have always been viewed as contentious contenders for membership of the 'club' of mainstream environmental movements, yet promotion of 'animal rights' has never been far from the centre of attention. But how does the discourse of rights hold up in a world where anthropogenic environmental change not only affects the conditions in which animals have to live but, by many accounts, has brought us into a new phase of rapid biodiversity extinction? Benton believes that while rights theory may offer a useful starting point, it needs to be more socially and ecologically sensitive and context-specific if it is to provide clear signposts towards a more benign relationship with the non-human world. Even then, he adds, a range of other moral concepts and codes of behaviour will be necessary.

Sachs (Chapter 17) is more concerned with the implications of ecological limits for global economic justice. Notwithstanding the growing importance attached to rights-based development by international institutions such as the United Nations, Sachs views rights discourse as entirely inadequate in terms of protecting ecological integrity, or for dealing with the continually widening gap between living standards and economic prospects in the global South and global North. In this context, Sachs suggests that Kantian ethics, concerning our duties, may be more helpful than promoting universal human rights. From the Kantian perspective economic and ecological justice demand sustainable consumption (Chapter 16), the eradication of ecological debt and a fair sharing of environmental space (Chapter 10), which together suggest a basic duty not to allow our own development to infringe on the development possibilities of others (Chapter 17). Nevertheless, in a world that is already running short of resources for conventional industrial development, the very concept of 'development' is moot.

At the very least we need to reassess the hegemonic status of the orthodox neoliberal discourse of sustainable development. This is not to deny the legitimate aspirations of those in the global South for secure and fulfilling livelihoods, but if greater justice is to

be achieved along the road to a more sustainable future, it will be necessary to construct and act on a discourse of the 'overdeveloped North', rather than continuing to promote private property rights and free-market competition as keys to efficient resource distribution and global utility maximization. Were we to go further and revisit the biological roots of the development metaphor, we would find that it is inextricably linked to senescence. In nature, 'everything that goes up must come down' and everything that is born and develops must eventually grow old and die. As there is no obvious reason why these basic laws of physics and biology should not also apply to our fossil carbon society, perhaps we should focus on 'managed senescence' rather than continue to trumpet the goal of sustainable development?

The senescence of the 'eco-illogical ancient regime' must be accompanied by the florescence of a new 'ecosociety' that recovers some of the fossil carbon released by industrialization and adapts its own metabolism in line with the planet's biological carbon cycles. In Chapter 8, Michael Redclift turns a sociological eye to processes of transition away from carbon dependence. Recent influential reports such as the Stern Review in the UK (Chapter 8) and the Garnaut Review in Australia (Lockie, Chapter 23) have painted climate change as 'the worst market failure the world has ever seen' and stressed the economic opportunities associated with 'decarbonization'. Yet, despite what some have heralded as 'post-political' policy consensus, continuing international negotiations towards a post-Kyoto agreement reveal the deeply political nature of climate policy and science (Parks and Roberts, Chapter 19; Yearley, Chapter 14). In this context there is a need for environmental sociology to develop a better understanding of the ideological and political dimensions of climate policy (Redclift, Chapter 8), while at the same time taking care not to reduce the analysis of climate change risks to the study of discourses abstracted from their dynamic biophysical contexts (Murphy, Chapter 18; see also Hannigan, Chapter 11).

All discourses of nature presumably have at least some historical basis in experience, even if once adopted and marshalled in support of particular political interests they prove inadequate in terms of the purposes for which they are employed. This is well illustrated in Bill Adams's discussion of society, environment and development in Africa (Chapter 22). Through an analysis of relevant case study examples, Adams demonstrates some of the unintended consequences of poorly substantiated and overgeneralized environmental policy narratives and reveals that none of the narratives he analyses has provided an adequate explanation of the realities of rural life in Africa.

A similar situation is exposed in Nora Haenn's study of 'participatory' conservation-development policy in southern Mexico (Chapter 26). The establishment of the Calakmul tropical forest biosphere reserve was supposed to provide opportunities for development through conservation for the local communities of small-scale farmers. However, failure to take account of local histories, multiculturalism and longstanding social contracts led to increasing tensions among the various groups involved (the state, donors, NGOs and beneficiaries), and ultimately resulted in a very different form of conservation than that which was originally envisaged.

Adams and Haenn draw similar conclusions from their studies. For Adams (Chapter 22), 'what works for rural Africa is what rural Africans can make work', for Haenn (Chapter 26), conservation is only sustainable when it 'supports both the physical environment and the social relations that make conservation possible'. Both studies firmly

refute the notion of post-political consensus and demonstrate the fallacy of believing that 'ecological debt repayments' can be made on the ecological debtors' terms alone. The overdeveloped countries of the North have achieved their status by occupying more than their fair share of environmental space and by accumulating an ecological debt. Twentieth-century efforts to promote market-driven development in the South have exacerbated, rather than ameliorated, socioeconomic inequality and ecological degradation. Market-based instruments such as carbon trading are unlikely to be able to address these issues successfully; alternative strategies will need to be devised to repair the social and ecological damage. Thus, establishing a successful global ecosociety will be a highly contentious and intensely political process.

Adams's and Haenn's contributions are also illustrative of the multiple roles that the world's trees and forests are expected to play in the North's transition out of carbon dependence and the South's search for 'carbon-lite' solutions for eradicating poverty and achieving human dignity. A much stronger focus on forests and what is termed the 'new forestry' is provided by Ambrose-Oji's essay on the influence of environmental sociological concepts and theories in international forestry discourse and practice (Chapter 20). Both environmental sociology and international forestry have rapidly had to come to terms with globalization and climate change. For international forestry the challenge has become how to integrate forest conservation and exploitation as crucial elements of the global carbon system, while moving forward on forest-based strategies for building resilient livelihoods and communities able to cope in the face of a range of future weather and climate scenarios.

Globalization studies and work on climate change have also begun to add credence to the view that ecological time is being compressed. For most of human history, nature's time has been understood as rhythmic and cyclical, reflecting the phases of the moon and the progression of the seasons. Other processes such as the advance and retreat of ice caps occurred so slowly as to be almost imperceptible before the development of geology in the nineteenth century. The pace of industrial developments in the twentieth century created the illusion of a timeless natural world, the most aesthetically pleasing aspects of which could be preserved for all time. Yet in the early twenty-first century it appears that nature's time is accelerating. Ecologists and natural-resource managers are revising their views of environmental change. The acceptance of non-equilibrium ecologies has moved on to the formulation of ideas about change that occurs not in incremental steps, but through major regime shifts (Ambrose-Oji, Chapter 20). Our ecological past is catching up with our social present and threatening our future survival. As Bryant (Chapter 12) so chillingly puts it, under 'fast capitalism', on 'peering into the abyss' we find ourselves on the road to a 'slow collective suicide'!

Whether we view the future with despondency or optimism, it is clear that mitigation of negative anthropogenic environmental impacts and adaptation to novel environmental conditions will depend on more than 'good science' and 'good governance'. Both may be necessary, but they are neither severally nor jointly sufficient. Part of what is needed is imagination, which is reflected in social mobilizations around climate and other environmental issues at the international level (see Kousis, Chapter 15). The Camp for Climate Action, for example, has been established by and for people who are 'fed up with empty government rhetoric and corporate spin, . . . worried about our future and want to do something about it' (<http://climatecamp.org.uk/about>, accessed 22 June

2009). Yet, much in the same way that Marx identified the ‘noisy sphere of exchange’ as a hindrance to our recognition of the ultimate source of all value and the ‘secret of profit’, post-carbon futures are difficult to imagine in the glare of ecological imperatives, social inertia and political inadequacy. As nature’s time catches up with us we need to be able to match its pace of change with the speed of our imaginations. Perhaps the message here is, as Bryant (Chapter 12) suggests, to accept the absurdity of the situation and in the peace of hopelessness, develop our awareness and understanding of socio-ecological agency (Manuel-Navarrete and Buzinde, Chapter 9) and begin to imagine alternative socio-ecological structures and how they might emerge (Hannigan, Chapter 11). Environmental sociologists (*sensu lato*) are, as Bryant’s reflections (Chapter 12) reveal, clearly aware of the absurdity of their situations – at least fleetingly – and thus well placed to undertake such abstract reflections.

In designing effective policies to facilitate the emergence of ‘carbon-lite’ socio-ecological agency/structure and the florescence of ecosociety, our imaginations must be matched by humility (Adams, Chapter 22), however, and a willingness to learn from place-based people. While climate change might be global, our experiences of its impacts will be local, and local conceptions, knowledges and cultures of place-attached people will be vital in responding to the challenges of change and the opportunities for pursuing greater social justice and repairing ecological integrity (Manuel-Navarrete and Redclift, Chapter 21).

To conclude, each of the contributions to this collection has been chosen because it reflects one or both of the following characteristics. First, the authors have pushed at the boundaries of ‘environmental sociology’, sometimes from dissatisfaction with what their own disciplines provide but more often because of the clear merits of drawing on several disciplinary and interdisciplinary traditions. Second, they have upheld environmental sociology’s tradition in sociology by marrying an ‘objective’, critical stance towards subject matter with a strong moral commitment to address urgent human problems and concerns. They have not remained on the sidelines of policy discourse, for example, yet they remain highly critical of environmental ‘policies’ and ‘policy processes’.

As the first edition of this handbook demonstrated, there is a global readership for most of these concerns, often made up of individuals for whom the main purpose of academic debate and theory is to arm themselves in the midst of positivist ‘science’ and political rhetoric. They are people who live their lives partly through adherence to the principles of robust scholarly dialogue and enquiry. It is to you, our readers, that we dedicate this new and challenging set of essays.