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ACRONYMS

AAAS American Association for the Advancement of Science
ACLU American Civil Liberties Union
AIDS acquired immunodeficiency syndrome
ALD adrenoleukodystrophy
BC British Columbia
BEST Berkeley Earth Surface Temperature project
BSE bovine spongiform encephalopathy
CRU Climate Research Unit
DNA deoxyribonucleic acid
EA Environment Agency
ECO Earth Communications Office
ENGO environmental non-governmental organisation
EPO European Patent Office
FAO Food and Agriculture Organisation
FIDO Fraser Island Defenders Organization
FWA French West Africa
GHG greenhouse gas
GM genetically modified
HGDP Human Genome Diversity Project
HGP Human Genome Project
HIV human immunodeficiency virus
IAC Inter-Academy Council
ICT information and communications technologies
ID intelligent design
IPCC Intergovernmental Panel on Climate Change
MoA Ministry of Agriculture
MTL mean trophic level
NASA National Aeronautics and Space Administration
NGO non-governmental organisation
NIPCC Non-Governmental International Panel on Climate Change
OMNH Oslo Museum of Natural History
PCR polymerase chain reaction
PETA People for the Ethical Treatment of Animals
PKU phenylketonuria
PXE pseudoxanthoma elasticum
QPWS Queensland Parks & Wildlife Service
RFRG Ryedale Flood Research Group
RNA ribonucleic acid
RRc Roundup Ready canola
RSPB Royal Society for the Protection of Birds
SCST Select Committee on Science & Technology
SSK sociology of scientific knowledge
STS science and technology studies
TRIPS Trade Related Aspects of Intellectual Property Rights
UEA University of East Anglia
UNEP United Nations Environment Programme
USPTO United States Patent and Trademark Office
WCWC Western Canadian Wilderness Committee
WIPO World Intellectual Property Organization
WWF World Wildlife Fund
The author and publisher would very much like to thank the following individuals and organisations for granting permission to reproduce various images used in this book: Nature Publishing Group for allowing the reuse of Figure 1.2, taken from Pauly et al. (2002); Dr David Kirby for allowing the reuse of Figure 3.1 (Kirby, 2008b); Professor Roger Pielke Jr. for allowing the reuse of Figure 8.1 (Pielke, 2007); the Royal Society for the Protection of Birds for allowing the reproduction of Plate 2.1, originally an advert in *The Guardian*; Skoda Auto (Czech Republic) for allowing the reproduction of Plate 2.2, also originally an advert in *The Guardian*; Dr Irus Braverman of Buffalo University for providing Plate 2.3; Adrian Dorst from Tofino, BC, for permission to reproduce Plate 4.2; Nature Publishing Group for permission to reproduce the cover of *Nature* 409 (15 February 2001) for Plate 4.4; Innovation Norway – Tourism, London, for permission to reuse the image in Plate 4.5, originally an advert in *The Guardian*; Prometheus Books, Amherst, NY, for permission to reproduce the poster of *Zoo* as Plate 5.1; and Creators Syndicate, Hermosa Beach, CA, for reuse of the cartoon that is Plate 8.1.
This book was conceived in 2006 when preparing seminar presentations for visits to the universities of Bergen, Umeå and Wollongong. Inger Birkeland, Nora Räthzel and Lesley Head were its unwitting catalysts, but its origins lie way back in my days at the University of British Columbia (where I learnt much about nature from Bruce Braun and David Demeritt, among others). Though I should know better, the book took far, far longer to write than I anticipated when setting the initial deadlines. Researching and authoring each chapter became a major logistical challenge. Time has been an exceedingly scarce resource despite the fact that I have probably been working harder (though clearly not smarter!) than at any previous time in my academic career. Indeed, of late I’ve had cause to wonder if I’ll ever get the chance to write another book before I retire (assuming I make it that far!). Thankfully, the atrocious British ‘summer’ of 2012 (which kept me chained to my PC) and study leave, kindly granted by my school in the autumn, together greatly speeded completion of the manuscript.

My thanks go to Andrew Mould at Routledge, and not for the first time. He contracted *Making sense of nature* and remained understanding as deadlines came and went. Andrew’s assistant Faye Leerink prodded me along in ways that were ultimately a help not a hindrance. She also supplied the book’s cover after my own fruitless search for an image. Together Andrew and Faye commissioned three reviews of the book draft in summer 2012. I had no reason to expect such detailed and constructively critical feedback from this anonymous trio of reviewers. Their observations and suggestions were instrumental in allowing me to figure out what I was really trying to achieve. I offer my sincere thanks to all three of them. At least one of them reviewed the prospectus for the book in 2008, and I should also record my thanks for formative advice received from him/her and two others at this time.

I’m also very grateful to the students of GEOG 30700, the undergraduate course (also open to master’s degree students) in which this book’s central ideas and basic structure were trialled in a very rudimentary form. Despite my best efforts, this course was less than perfect – though the two cohorts who took it were very generous in their feedback. The module gave me reason and opportunity to synthesise arguments in a way I’d never quite achieved before. It’s testament to how teaching can powerfully inform how
one uses research (rather than merely being a vehicle for ‘disseminating’ that research ‘off the shelf’).

My Manchester geography colleagues continue to make my working environment a congenial one, despite us experiencing some very challenging times since 2010. I pay particular tribute to Gavin Bridge (now in Durham), Neil Coe (now in Singapore), Jonathan Darling, Peter Dicken, Martin Dodge, James Evans, Martin Hess, Mark Jayne, Maria Kaika, Chris Perkins, James Rothwell, Fiona Smyth, Erik Swyngedouw, Kevin Ward and Jamie Woodward. I’ve also benefited from guiding the doctoral research of Jason Beery, Lisa Ficklin, Tomas Frederiksen, Miranda Morgan and, most recently, Laura Pottinger, Craig Thomas and Daniel Banoub. Simon Guy’s professional support and personal friendship has been central to my enjoyment of life in a multidisciplinary School of Environment and Development.

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Without my wonderful family, writing Making sense of nature wouldn’t have been nearly as rewarding as it’s turned out to be. Thankyou, thankyou to Marie-Noel, Thomas, little Felicity and my mum. Finally, I’d like to record my profound gratitude to Linda and Zig Buczak for 30 years of unstinting support of me and mine. Linda’s passing in April 2013 came far too soon and leaves a hole that can never be filled. I dedicate this book to her memory.
Do you have a love of nature? Perhaps you’re worried about the destruction of the Amazon rainforest or the over-fishing of our oceans. Perhaps you’ve swum on the Great Barrier Reef or hiked in the Himalayas. Conversely, maybe you think too much nature is a bad thing. After all, who wants hurricanes, earthquakes, tsunamis or the Ebola virus? Maybe you appreciate the benefits afforded by controlling nature, human and non-human. In this case, you might be excited by the potentialities contained in new nature-altering technologies like gene-splicing, which permits the species barrier to be breached. Whatever your attitude, if you’re interested in nature – what it is, what it does and what we do to it – then this book should interest you.

However, my approach to the topic will probably differ from other things you’ve read on the subject. This book explores how what is called ‘nature’ is made sense of for you by a myriad of others who daily seek to shape your thoughts, feelings and actions. I use the scare quotes because I’m not alone in insisting that nature isn’t natural, even though continued use of the word – and its collateral terms like ‘race’ – suggests the contrary. In the chapters to come, I’m less interested in what nature is and more in what it’s considered to be, as well as what the effects of this are. My eye will be trained on all those who speak for nature, or who make significant reference to it in what they do. This is why I say nature is made sense of for you, not by you. I believe that the vast majority of people’s beliefs and sentiments about everything from climate change to their own genes are derivative. They result from an ‘epistemic dependence’ that makes us all potentially subject to the claims and aims of others. This is a situation in which a relative minority of the global workforce is employed to create information, knowledge, arguments, symbols, etc. to which the majority of people are exposed – and usually reliant upon.

I belong to this workforce. If you’re reading this book as a university student or member of the public then you’re relying on me to enlighten you – even though you may lack all the tools necessary to critically evaluate the claims that I make. This puts me at a distinct advantage. I’m one of countless ‘epistemic workers’ who together comprise a large and diverse set of ‘epistemic communities’. These communities utilise largely one-way communication channels to shape societal ideas, tastes and practices.
They inhabit institutions like universities, think tanks, non-governmental organisations, private research laboratories, newspapers and advertising agencies. Their members often have impressive skills, expertise or credentials (like my PhD and professorial title). They devote enormous amounts of time and energy to representing different aspects of reality to the rest of society, utilising a range of genres and media, from ‘serious’ books like this one to political cartoons and television wildlife documentaries. They clamour for people’s attention, together enriching their understanding of life – or perhaps manipulating, confusing and overwhelming them (by design or unwittingly). Because of the latter, people at times feel the need to ignore much of what is thrown their way.

References to nature, I will argue, are a significant preoccupation of a surprisingly large and diverse set of epistemic communities. It’s not only, or mainly, the likes of geneticists, atmospheric scientists or environmental activists who incite us to think or care about natural phenomena. Many others insinuate references to things like elephants, water resources and stem cells into their discourses and images. They do it even when nature is not their primary concern. For instance, for years beer adverts in North America have featured snow-capped mountains and blue skies to make consumers think of pure ingredients and ice-cold refreshment. Though many of these references to nature are of little consequence in the short term, others have important medium- and long-term effects – or so I will claim. They’re a key part of the ongoing process of governing the thoughts, emotions and behaviour of hundreds of millions of people worldwide. While many of these references occur outside the domains of ‘government’ and ‘politics’ proper, my argument will be that they are political nonetheless, often profoundly so. This means that – even when not designed to – these references contribute to the quality of collective deliberation and decision-making, known in much of the world as ‘democracy’. And any democracy is only as good as the ‘semiosphere’ its citizens inhabit. This is the world of information, knowledge, debate, signs and symbols that we daily navigate through. It’s a world most of us play no role whatsoever in creating. Like the weather, it appears as something we have to live with, for better or worse.

I’ll explain why I think that what we call ‘nature’ is not natural in the first chapter. For now, let me quickly illustrate just how pervasive references to nature are in our everyday lives, and why some of these references might be highly important for all of us (at least some of the time). Consider the following.

**HYBRID ORGANISMS**

In November 2009, the British television station Channel 4 broadcast a science documentary entitled *Is it better to be mixed race?* It was part of a series of six programmes whose theme was *Race: science’s last taboo* (see http://raceandscience.channel4.com/). The documentary examined the
suggestion that ‘mixed race’ individuals enjoy certain biological advantages over those who descend from genetically similar populations. For instance, it assessed evidence that they might be perceived by others to be better looking facially. It reproduced the common belief that there are significant genetic differences among *homo sapiens*, even as it partly challenged that belief. A year later, and several newspapers ran stories about *cross*-species (rather than *intra*-species) hybridisation. Their focus was on an American biotechnology company called AquaBounty that had sought government permission to sell transgenic salmon (grown in fish farms) to humans. If granted a licence, the firm would have been the world’s first to sell a genetically modified organism directly to consumers. Some environmentalists and organic food campaigners argued that these artificial, fast-growing salmon posed an environmental threat if they escaped and reproduced. For others, there was also the ‘yuk factor’ of encouraging people to eat a biologically engineered hybrid reared on manufactured feed in small marine enclosures.

**ECOLOGICAL COMPENSATION**

A few months before the AquaBounty story was reported, several news television programmes in the United Kingdom reported on the new Futurescapes programme announced by the Royal Society for the Protection of Birds (RSPB) (see http://www.rspb.org.uk/futurescapes/). This long-term programme is devoted to protecting wildlife outside the nature reserves already managed by the RSPB. For example, a new port able to (un)load large container ships is currently being constructed on the lower River Thames, 50 kilometres east of central London. The port’s developers have been legally obliged to purchase a large area of land upstream, which will be flooded to create compensatory habitat for that lost during the construction process downstream. Thousands of water birds will benefit, most of them migratory species. Meanwhile, thousands of water voles, grass snakes and crested newts are being relocated to avoid the planned inundation. The RSPB will manage this artificially ‘re-wilded’ estuarine site.

**NATURAL ADVERTS**

In 2011, the fruit juice firm Innocent ran an ad-campaign in magazines, on billboards and using flyers. Its tag line was ‘Nature, bottled’. The two words were written in large, dark green letters against a blue-sky background with a see-through plastic green-capped bottle of squeezed orange juice next to them. Clearly, the intended message was that Innocent juice is pure and unprocessed – in short, good to drink in both taste and nutritional terms. Meanwhile, in the same year the fashion companies Louis Vuitton and Edun ran an ad-campaign in which nature was foregrounded, but in a very different way. The one- (sometimes two-) page adverts were placed
in magazines mostly read by affluent consumers (e.g. *The Economist*). They comprised ‘spontaneous’ (but clearly staged) photographs of world-famous stars known to have a personal interest in addressing problems in the so-called developing world. For instance, in one the U2 lead singer Bono and his fashion designer wife Ali Hewson are seen stepping off a small plane in a savannah landscape in eastern Africa. The landscape is empty, and hills can be seen on the far horizon. Wading through yellow grasses reaching up to their knees, Bono and Ali carry expensive designer bags on their shoulders (to accompany their expensive hair cuts and fashionable clothes). Beneath the photo is the tag line ‘Every journey begins in Africa’.

This is clearly a reference to the fact that *homo sapiens* are thought to have first evolved in that part of the world. Bono and Ali are not only making a symbolic journey back to humanity’s common roots in a time where planes and fashion did not exist. They’re also urging consumers to spend money on ‘ethical’ commodities, like the bags both advertise on their shoulders. The overt message is that some of the money spent will flow back from wealthy consumers’ pockets to (in this case) cotton growers in rural Uganda. The implicit message is that those of us who have no first-hand knowledge of poverty or living directly off the land need reminding that there are costs, borne by people and the non-human world, when we urbanites fail to pay the ‘proper’ price for the many things we consume. We are encouraged to show our concern by closing income gaps and bridging geographical divides.

**CRIMES AGAINST NATURE**

In September 2012, a Nigerian court sentenced an actor to a 3-month prison sentence. His crime was to have sex with another man. The prosecution lawyer and sentencing judge made reference to a British colonial law that deems sodomy a transgression ‘against the order of nature’. Indeed, imprisonment aside, in some parts of Nigeria sodomy is punishable by whipping or stoning. The Nigerian government also recently tried to pass a new law that makes shows of same-sex affection a crime, while banning same-sex marriages. Gay rights activists were understandably outraged. In a satirical riposte to the lawmakers, a popular comedian (John Okafor) called gay actors a ‘virus’ and said publicly, ‘If there is any way in this world that people can make them stop it or kill it, please do it’ (see: http://www.guardian.co.uk/world/2012/sep/21/nigeria-court-jails-actor-gay-offence).

**SCIENCE FICTION AND THE LAWS OF NATURE**

Such is the technical wizardry now employed in the film and television industries that patently fictional creatures or events can be represented in
highly realistic ways. Even so, in early 2010 an American physics professor, Stanley Perkowitz, complained that too much science fiction was insufficiently tethered to the known facts of biophysical science. For instance, he complained that the giant killer bugs menacing the universe in the Hollywood blockbuster *Starship Troopers* were physically impossible. If you scaled up a similarly designed real insect to the size of the fictional bugs, Perkowitz argued, it would collapse under its own weight. He suggested that sci-fi depictions of biophysical processes and phenomena would be taken more seriously by audiences if they possessed greater scientific verisimilitude. Relatedly, the US National Academy of Science announced that it wanted its ‘Science and Entertainment Exchange’ to be more frequently consulted by sci-fi film and programme makers.

**WILD BEHAVIOUR**

Among the more notable events in recent British history were the government rescue of several large banks in 2008–9 and the urban riots of summer 2011. Subsequent to the latter, a feature writer employed by the British broadsheet *The Guardian* noticed a linguistic pattern emerging in the criticisms made of bankers and rioters. Jon Henley suggested that the word ‘feral’ was being repeatedly selected by otherwise different politicians and political commentators. According to the *Oxford English dictionary*, feral means (1) Existing in a wild or untamed state, (2) Having returned to an untamed state from domestication, and (3) Suggestive of a wild animal; savage. Among others using the term, Henley cited the London Mayor Boris Johnson and the former Deputy Prime Minister John Prescott. In a news interview, Johnson described the (mostly young, working-class) rioters as a “feral criminal underclass”, while Prescott talked of “feral bankers” on Twitter. In both cases, the word feral was being used normatively and metaphorically. People were being compared to animals and being criticised for failing to observe the rules and norms that supposedly distinguish humans from the rest of nature (see http://www.guardian.co.uk/theguardian/2011/sep/06/use-of-feral-suddenly-everywhere?INTCMP=SRCH).

**HOW TO BUILD A HUMAN**

The turn of the millennium saw biologists publish the first ever ‘map’ of the human genome. But how do the 25,000 or so identified genes work together to create a healthy (or in some cases diseased) person? This has been the focus of the international Human Epigenome Project (http://www.epigenome.org/). The project has focused on how chemicals attach to different parts of DNA strands so as to differentiate human cells and permit their growth into body parts from birth to adulthood. In late 2009, the first fruits of the project were published in the world-famous science journal
Preface: Nature is here, there and everywhere

**Nature.** A team led by Joseph Ecker at the Salk Institute in California issued a press release describing their research into the development of healthy skin cells. Theirs was an example of ‘basic science’, inquiring into the functioning of processes we currently know little about. It will form part of the foundation for future research into what causes ‘malfunctions’ in the epigenome. This research will, in turn, reshape preventative medicine.

* * *

These seven vignettes are just some of a great many I could’ve presented. On the face of it they’re very different – indeed seemingly unrelated. Yet all involve literal or metaphorical references to natural phenomena. What can we learn from them? First, references to nature are extraordinarily diverse. In the cases earlier, everything from orange juice to salmon to human genes is encompassed. Second, a remarkably wide array of people are referring to nature when addressing the rest of us: scientists, politicians, celebrities, film directors, judges, comedians and private firms (to name but a few). Third, they address us in every imaginable medium and genre of communication – from press releases to movies to websites, from realism to fantasy, from entertainment to edification. Fourth, their references to nature together span all three of our ‘faculties’, namely cognition, moral reasoning and aesthetic experience. They speak to head and heart, reason and emotion. Finally, the seven cases suggest how important the issues often are when nature or its collateral terms are invoked. For instance, a proper understanding of the human epigenome might allow diseases like cancer to be prevented, rather than cured after the fact. Likewise, to label some sections of a society as ‘feral’ is one way of highlighting a fundamental problem with their behaviour that the rest of us are enjoined to care about. Similarly, if you’re not ‘mixed race’, how would you feel about a scientist telling you that you might be at a genetic disadvantage? If you’re gay, do you think it right for homosexual intercourse to be classified as ‘unnatural’?

Perhaps all of the above reflects the simple fact that nature is promiscuous in a real (or ‘ontological’) sense. It seems to be a large and diverse phenomenon that is literally everywhere – in us, as well as all around us. In all seven cases, nature is assumed to be a thing unto itself. It is, variously, something to be investigated, protected, properly understood, tamed, restored or modified. But is this really so? Is nature natural? Or is the idea of naturalness a convention that speaks volumes about the diverse values and goals of those who represent it to us day-in and day-out? I will answer this last question in the affirmative. In so doing, I hope this book will give you some important tools with which to understand your own relationship with what we call nature. Whatever your current attitude towards things like tigers or ice sheets, and however much (or little!) the topic interests you, I’m hopeful you’ll learn something new and important by reading this book.

As the chapters to come demonstrate amply, *Making sense of nature* builds on over 30 years of academic and more popular writing about what is
sometimes called ‘the social construction of nature’. This is an ambiguous term that, these days, has a range of meanings – hence the scare quotes. However, in a broad sense it conveys the idea that what we consider to be ‘natural’ always bears the (usually) hidden or forgotten trace of particular assumptions, agendas and desires specific to a social group or a wider community, culture or society. I use the word ‘social’ to designate a wide array of shared imaginings, ideas, beliefs, norms, propositions and practices that different people employ in their everyday existence. The contents of ‘the social’ tend to alter slowly, usually because the words and deeds of a plethora of influential groups and institutions nudge us all into changing. But I don’t naïvely presume there’s a thing called ‘society’ that is a coherent, closed system and that’s somehow separate from the biophysical world. Indeed, without a non-social domain perceived to be ‘out there’ in the first place, the epistemic communities to which I referred previously would be rendered largely silent. They would have nothing to tether their references to. In short, there’s certainly more to the world than we humans are aware of, can imagine or can control. But the fact that we group so much of that world together and call it ‘nature’ is, I maintain, anything but natural.

There have been a number of books about nature’s ‘social construction’ over the past 20 years. This one differs from those in a few key respects. First, I cover the full range of things signified by the term nature and its ‘collateral concepts’. For instance, I don’t just focus on the natural environment. Second, I’m interested in the full range of epistemic communities that make sense of nature. For example, whereas some authors will devote a book to news reporting of recent developments in human genetics, I cast my net much wider. Finally, I link representations of nature in all their forms to big issues that seem largely separate from such representations – at least at first sight. These are issues of people’s identities and actions: how they are produced, governed and changed over time. It’s not just what the likes of climate scientists or human biologists say to us that makes nature relevant to understanding who we (think we) are, how we treat each other and what sort of world we wish to inhabit going forward.

By insisting that references to nature and its collateral terms matter greatly in our lives, I’m being a little unfashionable. Many researchers whose publications I read these days argue that we need a new vocabulary to make sense of the world. They argue that reality does not comprise two great domains that interact (the social and the natural). Instead, it’s fabricated out of all sorts of interrelations between human and non-human entities. These connections, they suggest, are so intimate that our current dichotomies (or dualisms) fail to do them justice. My own response is two-fold. First, a great many people continue to talk as if ‘nature’ is real. Second, in effect this makes nature real, not least because of the effects on people and non-humans of nature-talk. I defend my approach at greater length in this book’s Endnote sections for those who are interested in knowing more.
I hope that degree students and their teachers in a wide range of social science and humanities subjects will find this text both relevant and stimulating. But it would please me no end if some of my readers were based in the various biophysical sciences (field, computational and laboratory) – even if they ultimately agree to disagree with my claims and contentions. I have drawn on the work of anthropologists, sociologists, philosophers, cultural studies scholars, historians, literary critics, media analysts, linguistic theorists and many others who operate beyond the perimeters of human geography, my academic home turf. The topic of ‘nature’ does not respect disciplinary boundaries, in either the academic world or the wider world. I have tried to honour this fact in the conception and writing of the present volume. *Making sense of nature* is thus very different in its content and aims from either *Social nature* (Castree and Braun, 2001) or *Nature* (Castree, 2005). Both of these books were strongly rooted in debates in my own discipline. By contrast, this text is not. 1

In fact, I have no particular desire to respect the niceties and nuances of academic debate about nature, whatever the field. If I did, I would simply repeat – and no doubt get bogged down in – what have, at times, become painfully esoteric discussions rendered in a language so rarefied that only the self-selected few can understand (and thus care) about them. In the following chapters, I prefer to draw liberally upon published research from a range of fields in the service of my major arguments. At times, this will involve using others’ ideas and findings in ways they did not necessarily intend or anticipate. I hope they will forgive me this licence, and tolerate my not recounting the fine details of intra- and inter-disciplinary discussions about ‘nature’. 2 I also hope I’ll be excused for the various simplifications I make and the many argumentative shortcuts I take. At times, in my desire to speak to those new to the ideas contained in this book, I will make general claims that specialists may regard as old hat, trite or in need of more careful elaboration.

I’ve written this book in what you might call an ‘advanced introductory’ style. This is to say that students at, or beyond, an upper bachelor’s degree level ought to find this book accessible, if not always easily so. At times, *Making sense of nature* will be a very challenging read for them, but always – I hope – readable. Part 1 presents all of my major arguments and claims, while the remaining chapters amplify, deepen and illustrate them by considering a range of extended examples and cases. A principal function of universities is not only to create new knowledge (concepts, arguments, evidence, etc.) but also to ensure that this knowledge travels beyond its originators so as to participate in the drama that is human existence on the planet. Though the chapters are generally long ones, I’ve broken the arguments down into distinct chapter sections; so too the case material. If I can thereby engage those wholly new to this book’s contents and claims, but still hold the interest of readers already steeped in some or all of the relevant literatures, then I will have realised my own ambitions. 3
These ambitions are anchored, largely, in what otherwise different readers of this book have in common. I want to address them (you) not so much as professors or students (depending) but, less specifically, as members of a world in which we are all consumers of information, knowledge, experience and belief that we take largely on trust (happily or otherwise). Throughout the book, I’m willing to take the risk that my frequent invocation of the collective first person – ‘we’, ‘us’ – is presumptuous to the point of being thoroughly ill advised. It at least reminds us that we are members of a ‘public’, or rather publics in the plural, that need to be proactive in the face of a deluge of messages about our own ‘nature’ and that of the non-human world.

Student readers (and, I hope, their tutors) will benefit from the various study questions and exercises peppered throughout the chapters. Ideally, these should be undertaken at each stage before reading on. Numerous boxes offer an additional aid to learning, as do the several diagrams, tables and photographs. Throughout the book, terms appearing in bold font are defined in the glossary. Finally, a further reading section itemises my major sources for each chapter after Part 1 and the ‘How to use this book’ appendix may help tutors build their own module around this text, should they wish.

ENDNOTES

1. However, there is one strong point of connection with the book Nature: the present volume elaborates at length ideas sketched roughly in Chapter 1 of its more argumentatively circumscribed predecessor.

2. What I mean is that this book does not do what many survey texts do – such as Jan Golinski’s (2005) Making natural knowledge or my colleague Peter Wade’s (2002) Race, nature and culture. I do not here present, systematically and critically, the findings and arguments of various interlocutors within defined disciplines and fields. Making sense of nature is thus a ‘textbook’ with a twist. Unlike many literature-based books, it does not summarise ideas and findings within a single academic domain, and nor does it organise the research surveyed according to familiar categories. Instead, I package and arrange ideas, arguments and case material from a range of fields within a plenary framework that, in my view, adds value to the published work on which this book is otherwise dependent. In this endeavour, one of my models is Denis Wood’s superb book Rethinking the power of maps (2010), based on his earlier The power of maps. My own book is not about maps, of course, but I take inspiration from Wood’s approach to a diverse and large body of theory and empirical research. Though I cannot match his pungent, often witty prose style, and while Making sense of nature is (I believe) pitched at a rather more accessible level than Rethinking the power of maps, I hope some of the strengths of Wood’s approach to presenting material are evident in this book. I should declare that when I was halfway through writing this book (December 2011) I encountered Stephanie Rutherford’s (2011) Governing the wild. I also, belatedly, read David Delaney’s (2003) superb book Law and nature at the same time. There are some strong generic similarities between these monographs and my own book, but – equally – some significant differences in approach.

3. In a review of his book Geographies of nature (2007), I chastise geographer Steve Hinchliffe for leaving novice readers adrift in his attempt to edify more expert readers (Castree, 2009). I can only hope he doesn’t think the compliment worth repaying should he ever review Making sense of nature!