

Forum review

Why We Disagree About Climate Change. Understanding Controversy, Inaction and Opportunity. By MIKE HULME

Cambridge: Cambridge University Press, 2009, 392 pp. £15.99 (paperback) ISBN 978 0 521 72732 7

This forum review is based on readings of this book by members of the interdisciplinary Climate Change and Sustainability research group in the School of Geography, University of Exeter, UK, and by another invited reviewer.

'Climate-ology'

Some commentators argue that climate change is the most important issue facing humanity in the twenty-first century, with implications for the maintenance of biogeochemical systems and possible long-term survival of *Homo sapiens* on this planet. As such, climate change spans a wide range of scientific, economic, social, cultural, political and management issues. The context for discussion of climate change has also changed. Not since Darwin has science been so much at the forefront of public debate, and in a range of contexts, covering that ground trodden by evolutionary theory (including ethics), but also engineering, economics and politics. Science has therefore been taken out of the domain of scientists and into the wider public sphere.

In this book Mike Hulme deconstructs some climate change issues and makes connections between them, with the aim of yielding a better understanding of 'why we disagree', and about what. The way in which this is done is through a broad discussion of some significant concerns in the construction and communication of scientific debate. One of the strengths of this non-'academic' book is its easy, conversational style and its wide-ranging touchstones of science, philosophy, ethics and historiography, among others. One of its weaknesses is its lack of Science and the explanation of *why* scientists 'disagree about climate change', which is a familiar part of academic discourse and not limited to climate change, but which frames the public debate on what we know about this particular science, and what we don't.

This book has already received plaudits from various quarters, and the cover is plastered with some of them. The book is also front-loaded with prefaces, forewords, various blurbs and other ephemera such that, after 39 pages, we reach Chapter 1. This book comprises 10 chapters. At the end of each chapter is a helpful annotated bibliography; a more extensive reference list (14 pages), containing many up-to-date publications, is at the end of the book. These chapters describe human responses (values, beliefs, fears) to

certain situations that have a broadly environmental basis, including climate. In doing so, these chapters cover a lot of ground. One chapter deals with 'the challenges of development'. This is obviously of relevance to issues in present and future climate change, and the chapter introduces key topics such as population growth, trade, low-carbon economies, and bio-fuels. However this, and the subsequent chapter on 'how we govern', is weakly argued when contrasted with Hulme's professed motivation which is outlined in the preface.

What is disappointing throughout is the muted voice of Science in the book. What would be useful to explore is the question of whether there is something inherently *different* about the science of climate change that distinguishes its discourse from that of, for example, genetics or quantum physics. The sections on scientific knowledge within Chapter 3 try to place climate change within this wider scientific sphere, but are relatively restricted in content and approach, and are somewhat outdated. It would be useful to link this section with discussion of uncertainty and error, something that is not even mentioned here. Discussion of the set-up and outcomes of climate models is likewise missing. This is a significant omission because different models offer alternative futures and are the basis for policy and planning.

Although a wide interpretation of climate change impacts is taken throughout, it would be useful to set these impacts within the context of changes to landscapes and landscape resources, such as biodiversity, ecosystems, water resources etc. This is because these impacts have important implications for policy and management and thus most readily come into conflict with human activity. In that sense, therefore, this is not really a book about climate change or even Climate Change; rather it is a book about human–environment relations in which climate change is a metaphor for the shifting ground of our understanding and practice of science, and the performance of science in the public domain. What Hulme tries to tackle here is the nature of this performative discourse, the meta-narrative of climate change in its representation of (some of) the world's ills. The totemic position of climate change and cognate environmental issues within the public and media consciousness makes it an ideal exemplar through which to explore scientific debates, which Hulme achieves in this book.

JASPER KNIGHT

Myth, mystery and mindset

Any scientist who quotes Tom Stoppard as a key player in our understanding of a major scientific debate deserves to be listened to, and it is no surprise that this

book has had so many plaudits as, by its very nature, it manages to stop and make you think. Its aim is to cause a range of people, from scientists to policy makers (hopefully), to reassess the way they view the whole issue of climate change, and this it achieves with clarity and erudition. There has been an exponential rise in the amount of interest in climate change over the last two to three decades and what Hulme strikingly points out is that the science has advanced more quickly than our ability to assess and utilise the information that has been produced: 'We won't understand climate change by focusing only on its physicality' (p. 355). Essentially this is a book about ideas, written by a scientist who not only recognises the importance of his science but also, and perhaps more importantly, wants to understand what it is about that science that needs to be communicated widely and how best to achieve that objective – a difference he perhaps best encapsulates in a separation of lower case climate change from upper case Climate Change, a differentiation that is as much cultural as scientific.

Building on a broad base founded in social sciences and humanities, rather than strictly in climate science, and covering areas such as the Climate of Fear debate, recently highlighted in the academic literature, Hulme builds the argument to a final synthesis in *Beyond Climate Change* seeing climate change (lower case) as an imaginative resource. To the Apocalypse Now, or at least Very Soon, adherents this may seem to make light of a very real and highly dangerous problem, but to me this is not the message of the book. The underlying message is that there is no quick fix, political or technological, and yes the science does show the anatomy of a system that is potentially fragile and could within levels of uncertainty create huge problems for much of the world's population. Thus the reality of Climate Change (upper case) needs tackling in different ways, and we need to see it as a catalyst for intellectual action. Hulme thus offers four myths as foci for our thinking – the myth of Eden, the myth of the Apocalypse, the myth of Babel, and the myth of Jubilee; myths that 'embody truths about how we assume reality to be' (p. 359). Applying these ideas to the current concerns over climate change allows us to understand not only climate change, but also ourselves and the societies and cultures within which we live, and wish to hand down to future generations.

Climate change has pushed more scientific heads above the parapet than any other recent scientific development, perhaps with the exceptions of nuclear physics and genetically modified crops. The tendency of many scientists as soon as the crossfire starts is to duck, but the necessity with this topic is to engage and understand, especially if the implications of the research are to ask people to change radically the way in which they live. What this book does very successfully is to show ways in which this engagement can and must take place, written by a good example of the 'new kind of scientist' suggested by Schmidt and

Moyer (2008) as needed to tackle the problems of the early years of the 21st century, and complex issues such as Climate Change.

CHRIS CASELDINE

Reference

Schmidt G and Moyer E 2008 A new kind of scientist *Nature Reports Climate Change* 2 102–3

Climate quarrels: 'It's not you, it's me . . . well it's us'

In *Why we disagree about climate change*, Professor Mike Hulme concludes that (spoiler alert!) 'the sources of our disagreement about climate change lie deep within us, in our values and in our sense of identity and purpose' (p.364). He argues that, 'our disagreements should, at best, always lead us to learn more about ourselves' (p. 364). Thus, improving our considerations and understanding of these elements can help us collectively get to the root of our climate quarrels.

Hulme begins the volume by mapping out how disagreements are more usefully seen as productive and revelatory processes rather than bothersome issues that need to be eliminated. He posits, 'disagreements about climate change are as likely to reveal conflicts within and between societies about the ideologies that we carry and promote, as they are to be rooted in contrary readings of the scientific evidence that humans are implicated in physical climate change' (p. 33).

After table-setting chapters on the meanings of climate change, and its discovery through time, Chapter 3 explores the nature of scientific knowledge, and how it is taken up in society; Chapter 4 details primarily utilitarian economic approaches to valuing the climate; and Chapter 5 examines how our varied religious and ethical perspectives and priorities shape how we view climate change. These chapters are followed by treatments of potential barriers to this more expanded view of climate change: among them, Hulme works through how entrenched discourses of fear and risk are communicated through mass media, and how ossified considerations of development and governance may inadvertently dampen the effectiveness of stated climate policy goals and objectives. This organisation of chapters and approach to the subjects are largely effective. However, he does seem to place specific economic applications (Chapter 4) ahead of broader questions of ethics and perspectives in which these economic viewpoints are situated (Chapter 5). In my view, these chapters would be more effectively placed in reverse order: the 'endowment of value' is more an expression of 'the things we believe', rather than the other way around.

Along the way, and in the concluding chapter, Hulme effectively stitches these themes together into a

coherent and compelling thesis about 'why we disagree about climate change' (as the title suggests). In the concluding chapter, Hulme comments that instead of trying to 'solve' climate change:

we need to see how we can use the idea of climate change – *the matrix of ecological functions, power relationships, cultural discourses and material flows that climate change reveals* – to rethink how we take forward our political, social, economic and personal projects over the decades to come.

(p.362, emphasis added)

While he has done well to touch on these four elements of the matrix (highlighted in italics) throughout the volume, the influence of 'power relationships' still needed greater emphasis. I would have liked more about how asymmetrical power circulates through climate-related knowledge communities to produce not only discourses, but also particular institutional constellations, and (dominant) practices of knowledge production. Such treatment could effectively open up considerations of how the variegated roles of NGOs, climate 'contrarians', businesses and authoritative organisations like the IPCC shape how we view (and disagree about) climate change. Through more central considerations of power, Hulme could have then interrogated how and why particular practices and ways of knowing have achieved traction while others may have been silenced. These factors certainly play a part in 'why we disagree about climate change'. He touches on these issues at the end of Chapter 2 in a set of questions (and in other places as well), but they remain too much at the periphery of his central thesis.

Nonetheless, throughout this book Mike Hulme advances our considerations of this environmental, cultural, political and physical – eminently interdisciplinary – phenomenon of climate change. Among them, he has challenged readers to, first, critically (re)consider the dynamically changing physical and cultural dimensions of the idea of climate change over time; and second, (re)examine the notion that the idea of climate change has been harnessed to promote various ideological projects. In so doing, he has effectively articulated how the disagreements surrounding this high-stakes and high-profile issue serve as critical illustrations of ongoing challenges as well as opportunities at the human–environment interface.

I have now used this book for both undergraduate and graduate courses here at the University of Colorado. Through feedback from students (and from now having read the book myself many times), I can say that one of the greatest strengths of the volume is Hulme's ability to clearly and effectively communicate what are often complex interactions and abstruse concepts. With his commitment to interdisciplinary scholarship and communication, Mike Hulme's work here represents a post-normal and neo-millennial John Tyndall-magnitude kind of contribution. In short, *Why we disagree about climate change* collectively helps us ponder how we think about, discuss and formulate actions about climate change. Like a fine red wine, I think this book will grow in value and appreciation as time goes on.

MAXWELL T BOYKOFF, *University of Colorado-Boulder*