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Climate and Culture

Taking Stock and Moving Forward

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Climate change is acknowledged by many as one of the greatest challenges of the twenty-first century, a challenge that potentially poses an existential threat to the lives and livelihoods of millions of people in different societies around the world (Tanner and Allouche 2011). At the same time, the ways in which climate change is understood has also broadened, with scholars viewing it as both a physical phenomenon and an idea. As the former, there is unequivocal evidence that the global climate system is warming at rates unprecedented in human history (Stocker 2014). As an idea, climate change is travelling or actively unfolding in different parts of the world, meeting different religions, politics and societies along the way (Hulme 2007). The pathways that these ideas of climate change follow, the new meanings that they take on and the new purposes that they serve in the process will be shaped and mediated by human culture to a considerable extent (Livingstone 2012; Arnall 2014; Hulme 2015).

Whilst there is growing interest in the discursive dimensions of the climate change phenomenon, as well as people's multiple and varying perceptions of it, there has been to date a paucity of scholarly work examining the significance and role of culture in relation to climate and its changes in a systematic, multidisciplinary manner. The aim of this edited volume is to help address this knowledge gap by exploring how culture mediates the relationship between the phenomenon of climate change and its spread as an idea. In other words, we are interested in how culture makes climate and climate change meaningful, but also determines what climate change means for us as it unfolds (Hulme 2007). This chapter, then, represents the first step towards this somewhat daunting task. In the sections that follow, we first introduce the structure of, and approach taken to, this book. Section 1.2 helps to set the scene for this volume by reviewing the distinct but interlinked topics of climate, climate change and culture. Finally, Section 1.3 suggests connections and common themes across chapters that can help to guide the reader through the collection. The themes concern: (a) the relationship between climate

change and capitalism; (b) modes of knowing and alternative ontologies; (c) how cultures persist in the face of climate change and other stressors; and (d) methodological and data diversity.

1.1 This Book

Much climate–culture research to date has assigned culture the following roles in relation to climate and its changes:

- a *cause*. Scholars have argued that climate change is not just a side effect but also an inherent condition of modern capitalist societies and the limitless economic growth and cultures of consumption that have come to define such societies (Urry 2010; Ghosh 2016).
- as a *victim*, and therefore something to be protected. Many cultures are now identified as under threat in different parts of the world due to climate change, from remote marginal regions of the world, such as the Arctic, to late capitalist cultures located in the West (Strauss 2012).
- as a *means* to adapt. Culture has been recognised not only as something for making sense of and responding to climate change (Adger *et al.* 2012) but also as a potential barrier to adaptive action (Nielsen and Reenberg 2010; Jones and Boyd 2011).

Whilst these approaches are helpful in identifying important climate–culture interactions, they also leave us with a conundrum. On the one hand, climate change fundamentally challenges our culture as a cause of climate change, and yet, on the other hand, culture is adaptable and makes life in a climate change world liveable (or at least possible). In recognition of these difficulties, this book takes a different approach that cuts across the cause-victim-means classification by exploring and critiquing the place and role of culture in climate and climate change in terms of three ways of living in a warmer world: 'knowing', 'being' and 'doing'. In the text that follows, these are briefly described in turn.

First, in terms of 'knowing', this book interrogates the power and politics of climate knowledge. This is undertaken by examining the ways in which dominant scientific knowledge systems, such as those embodied, objectified and institutionalised by the Intergovernmental Panel on Climate Change (IPCC), potentially exclude alternative possibilities for understanding climate and climate change. We unpack how climate is performed through cultural practices in past and contemporary scientific cultures and epistemic communities. These have brought climate and climate change to life through computations, predictions, visualisations and other representations, and the figure of

the expert and associated norms. Such understandings enable us to reflect on present and past efforts to understand and visualise climate scientifically. Examples of alternatives covered in this book are indigenous epistemologies and ontologies of climate and the environment in Latin America and new modes of environmental knowing through curatorial practice in Wales.

Second, in terms of 'being', the book exposes how people make sense of climate and its changes through embodied experiences, affective and emotional encounters, and everyday practices. It does this by discussing scientific, traditional and creative practices and by examining whether and how they enable the coexistence of communities in a world in which the physical manifestations of climate are moving ever more to an unknown realm. This section of the book also exposes the role of, for example, communication and collective memory in enabling the continuation of human life in a meaningful manner in the face of a potentially destabilising climate change. These dimensions are rarely presented together in the manner done so in this book.

Third, in terms of 'doing', this book examines the role of culturally determined ideas and emotions in how individuals and societies respond, or fail to respond, to climate change. Where culture may become a barrier for action, a number of later chapters in this book discuss concrete experiences of 'cultural work' that create possibilities for social and economic change. Whilst the magnitude of change needed to respond to climate change is considerable, this section of the book also shows that examples and principles that can inform such dramatic but necessary social and cultural change may exist in traditional and religious cultures that have persisted and are being rediscovered as sources of inspiration and evolving models of alternative social-ecological interaction.

In exploring the 'knowing', 'being' and 'doing' of climate and culture, this book's content is firmly multidisciplinary. Climate facts arise from impersonal observation whereas meanings emerge from embedded experience, and the environmental social sciences, arts and humanities are well positioned to foster a more complex understanding of humanity's climate predicament (Jasanoff 2010; Offen 2014). Researchers from these disciplines are already attending to societal responses to actual, predicted and imagined climate change, asking important questions about climate and its changes across time and space (Brace and Geoghegan 2010; Trexler and Johns-Putra 2011; Arnall and Kothari 2015). However, whilst the importance of the exchanges between culture, society and climate in the context of global environmental change is being increasingly recognised by different fields of enquiry, the empirical evidence is fragmented and too often constrained by disciplinary boundaries. Climate knowledge is no longer solely based on scientific data but also shaped by ideologies, worldviews and values (Hoffman 2015). Bringing the social sciences, humanities and culture into

discussions of climate is important, but if not dealt and engaged with on a level playing field with the natural sciences, then it may mean divides between knowledges are reproduced rather than transformed (Castree *et al.* 2014; Lövbrand *et al.* 2015). These cultural discussions should no longer be seen merely as an appendage to the natural sciences but rather as an opportunity to explore the ambiguous meaning of climate today (Hoffman 2015).

In recognition of these issues, this book aims to reach out across subjects as varied as history, literature, sociology, anthropology, human geography, philosophy, environmental history, visual studies, history of science and technology, religious ethics, and urban design and theory. Accordingly, it explores examples as diverse as: how Andean populations have adapted culturally to difficult environmental and climatic conditions over hundreds of years (Postigo, this volume); the documentation of the weather as part of the national memory in the United Kingdom (Endfield and Veale, this volume); and the United States' cultural traits, such as those linked to the colonial past, that inform emotional responses to climate change (Ford and Norgaard, this volume). The ideas, approaches and examples that feature here, when taken together, help to fill important knowledge gaps that continue to hamper the effective contribution of the humanities and social sciences to studies of climate and climatic change. This is important if we are to overcome the tendencies towards essentialism and determinism sometimes witnessed in the climate change literatures (Hulme 2011), including in the environmental social sciences and humanities, and fully open up the range of 'imaginable climate change-influenced futures' that are possible for us (Jackson 2015:479).

Finally, this book also reveals and highlights existing and future research and curatorial and communications praxis that is required to think about climate and climate change. We are interested in opening up and recovering ways for people to engage with place and environment, not only in a non-rational manner, but also relationally, symbiotically and deeply, to effect widespread societal transformation and to reveal the limitations of the modern, rational, scientific and utilitarian paradigm. Ultimately, this book expands existing natural science-led approaches to climate–culture relations by drawing on other areas of scholarship to make sense of the climate–culture interface. Climate change represents a potentially monumental shift in how we live on planet Earth, and culture is key to how this shift plays out and what it means for diverse societies around the world.

1.2 Climate, Climate Change and Culture

1.2.1 Climate

As we have already established, climate has long been the domain of the natural sciences, being understood as the thirty-year average of weather for a particular

region over time (Hulme *et al.* 2009). For scientists, climate incorporates observed averages of precipitation, temperature, sunshine, wind as well as other variables. Climate change in this sense might be described as unusual observed averages repeated over several years. The resulting data are then used in climate models to predict future climate. Hulme *et al.* (2009) relate this approach to the epistemological practices formed in the enlightenment period that reinforce scientifically constructed knowledge of climate, but they also point to how climate is something felt and experienced in everyday life. Thus, for Hulme *et al*., 'normal' climate is socially and scientifically constructed and can impact the world in material and imaginative ways. Climate has been an object of study and source of inspiration for the natural sciences, social sciences, humanities and the arts for centuries (Hulme 2016). Whilst meteorological evidence informs a physical connotation of climate which is external to the human imagination, cultural connotations of climate are inside the human imagination and are formed through experiences and memories of past weather events.

Building on this idea, Brace and Geoghegan (2010) have highlighted some of the difficulties of thinking with 'climate' when what people experience is weather, and weather forecasts are regularly consulted in everyday decision-making. They write, 'There is a metaphysical and semiotic problem here with discussing in terms of a future date something that is made of the stuff of everyday life (for example, weather) but which is not, in and of itself, *that stuff*, but aggregated, averaged, modified, smoothed, stripped of its outliers, rendered in statistical ways that remain mysterious to the majority' (ibid.:291). Thus, at the intersection of climate and culture, weather looms large in the construction and shaping of both self (social and cultural identities) and place in everyday life and memory. As a result, work on climate and culture needs to encompass normal weather, as well as extremes and large-scale spectacular weather events (Gergis *et al.* 2010; Vannini *et al.* 2011; Veale and Endfield 2014). For example, Sturken (2001) offers a discussion of the climatic phenomenon of El Niño, which has a deep-rooted cultural history, and Endfield and Morris (2012) uncover amateur practices of recording, observing and being in the weather.

1.2.2 Climate Change

The IPCC defines climate change as 'any change in climate over time, whether due to natural variability or because of human activity' (IPCC 2018, unpaginated). This usage differs from that in the United Nations Framework Convention on Climate Change (UNFCCC), which defines climate change as 'a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods' (UNFCCC 2018, unpaginated). However, scientists

have never been in sole possession of the term 'climate change'. This is because, as Watson and Huntington (2014) have asserted, all knowledge is a product of culture. Moreover, over the last 20 years, the climate change debate has become politically, socially and culturally charged, being related by Rudiak-Gould (2013) to 'a proxy war for a larger debate on scientific versus lay knowledge and the role of expertise in democratic society' (p.120).

As a result, some scholars have moved towards less inflammatory notions of climate change in an attempt to shift the debate forwards and towards action. Hulme highlights the numerous expressions used in this area, from 'climate change' to 'changes in climate' to 'climatic change' and suggests using 'the construction 'climate-change' to refer to the contemporary idea of human-caused global climatic change' (2016:xii, n1). Morton (2013) prefers the language of 'global warming' over climate change in his work on hyperobjects, whereby the scale of the temporalities and spatialities of the climate change issue defeats traditional attempts to understand it. For Morton, '*climate change* as a *substitute* for *global warming* is like "cultural change" as a substitute for *Renaissance*, or "change in living conditions" as a substitute for *Holocaust*' (2013:8, emphasis in original). In addition, associated with ideas of climate change are recent debates around the Anthropocene, defined as a time when human activity has been the main influence on climate and environment (Lövbrand *et al.* 2015; Bai *et al.* 2016). Whilst there is disagreement in the natural sciences regarding the ratification of this new geological epoch, social science and humanities scholars have embraced the term, although a full discussion of it is beyond the scope of this book.

1.2.3 Culture

Culture has long been recognised as crucial in mediating the relationships between humans and the natural environment (Sanderson and Curtis 2016). However, much like the term 'climate', pinning down what culture means remains a challenge across disciplines. Indeed, culture is a broad and contested term even within those fields that traditionally study the concept, such as anthropology (Strauss 2012). Yet, a range of disciplines have found culture to be a productive lens for enquiry. For instance, in social theory, a useful and relatively broad understanding is Bourdieu's notion of 'cultural capital' in which he identifies three distinct but interrelated states of culture (1987). These are: first, an embodied state, as a form of knowledge that resides within us (mind and body), and which concerns beliefs, values, morals, emotions or the way that we talk or express ourselves. For Bourdieu, this was partly experienced through high culture, in spaces such as museums. Second is an objectified form, which includes cultural goods, namely items such as artistic works. This goes beyond

mere ownership in an economic sense, involving a person's ability to use and enjoy their cultural goods. Third is an institutionalised form, which is related to the way that institutions confer recognition onto people who are especially knowledgeable or authoritative, for example holding a PhD. These three states of culture can, in turn, be applied to climate and climate change. Thus, embodied culture relates to how climate change is thought and talked about, felt and imagined; objectified culture concerns entities such as climate data, software programmes that can model or mobilise climate change, models, maps and projections; and institutionalised culture refers to people such as climate change science and scientists, politicians and journalists, and (more recently) grassroots and indigenous groups recounting direct experiences of climate change.

Culture and its states are not static, but rather they are fluid, dynamic and multiple, operating independently and simultaneously, much like the weather and climate themselves, and across time and space. Culture's temporal and spatial qualities are evoked through collective memory, and local knowledges associated with key events located in particular places (Ulloa 2011). Historical occurrences and landmarks become part of local and national cultures and are an important factor in how people interpret, understand and experience weather and climate (Harley 2003). By understanding these dynamics, it is also possible to understand cultural persistence and change and to interpret current dynamic interactions of culture and the environment. Cultures can evolve over millennia in particular places and can also be accessed digitally at the click of a button anywhere in the world. We need a view of time and space that can accommodate and explore these differing intensities, relationships and interactions around climate–culture.

Moreover, these embodied, objectified, institutionalised aspects of culture (located in time and space) merge with human practices, sensory experiences and imaginations, and with the non-human world, to form hybrid cultures, recognised in religion, farming practices or scientific knowledge, among others. Take, for example, the contrasting religious views with respect to climate change; indigenous African religions believe in meta-physical causality, whereas Christian and Islamic groups have taken a stance that refers more to humankind's neglect of the earth (Golo and Awetori Yaro 2013; Haluza-DeLay 2014). As a result, climate knowledge no longer resides elsewhere but is being made and remade personally, locally and in the everyday; culture is continually created through human activity and practice, rather than something that is 'out there', pre-existing and thus potentially 'lost'. Hulme (2016:6) draws upon the work of Ingold to define culture in these terms:

> As Tim Ingold says, 'We can never expect to encounter culture "on the ground" (Ingold 1994:330), just as no-one has ever 'seen' climate. Instead, what we find are '. . . people whose lives take them on a journey through space and time in environments which seem to

them to be full of significance, who use both words and material artefacts to get things done and to communicate with others, and who, in their talk, endlessly spin metaphors so as to weave labyrinthine and ever-expanding networks of symbolic equivalence' (Ingold 1994:330). It is therefore more accurate to say that people 'live culturally' rather than that they 'live in cultures'.

In this way, a more expansive notion of culture that engages with 'living culturally' is embraced in this book than is traditionally the case in climate change studies. For example, attention is given to liminal places to revive/recover ways of engaging with place/environment that are non-rational. Here, culture becomes relational and symbiotic. People's connections with the places where they live influence current and future responses to climate change at the local scale, and climate change narratives can circle around seemingly insignificant structures in the landscape and yet have decisive weight in different actors' understandings of climate change (Geoghegan and Leyshon 2012; Matless 2018). This also reinforces the need to consider culture through the small-scale, mundane interactions that formulate social and political worlds (Farbotko *et al.* 2015).

1.3 Cross-cutting Themes from Multidisciplinary Perspectives

1.3.1 Cultural Change: Moving Away from Modern Capitalism

A first theme emerging from this collection is the embeddedness of climate change in a particular culture – modern capitalism. While that culture can be seen as a *cause* of climate change, *cultural* change is thus crucial to address climate change.

Climate change, as many of the chapters in this book remind us (Ulloa; Postigo; O'Brien *et al*.; Daniels; Clammer; Moser; Ford; Norgaard, this volume), is the outcome of a particular, although non-monolithic, culture: modern capitalism. This culture, imposed on much of the world through imperialism and colonialism, has not only expanded consumer societies and the environmental impacts of mass consumption (including climate change), but it has also spread the structures of exploitation, including resource extraction, which made the project of modernity and capitalism possible in the West (Ghosh 2016). In non-Western societies, climate change is often perceived as another form of dispossession of traditional communities and original peoples (Ulloa; Ford and Norgaard; this volume). This reinforces our observation that there is a fundamental connection between ways of knowing, being and doing in the world – driven by capitalism – and climate change as a side effect that has come to define that culture. While capitalism is a given for many, it is also a target of critique and struggles that have been renewed and have found further momentum in connection with climate change (e.g. Klein 2014; Feola and Jaworska 2018). Thus, as Head (this volume) argues, 'we need to shift some

very big cultural frames – the importance of economic growth, the dominance of fossil fuel capitalism, the hope of modernity as unending progress – to deal adequately with the climate change challenge'.

If we accept that we cannot avoid exposing and challenging modern capitalism and the structures and cultural processes that reproduce it, then cultural work is needed to conceive, envision and make sense of possible alternative ways of living, and deliberately pursue such cultural change (Braun 2015). As argued by various authors, climate change is so difficult to come to terms with, and respond to, because it poses such profound challenges to modern capitalist identities: it forces us to realise that we need to be 'other' or 'differently human' and probably renounce a lot of what defines 'us' (Hulme 2010; Morton 2013; Beck 2016; Ghosh 2016). Many chapters in this book discuss experiences of envisioning, imagining and deliberately transforming towards a future beyond capitalism. They show that examples of what post-capitalist alternatives may look like already exist, or are re-emerging, within modern capitalist societies and at their margins in indigenous or traditional communities (see Ulloa; Postigo; Ford and Norgaard; Clammer, this volume), in religious worldviews (Daniels, this volume), and in experimental communication and visual, artistic and social change practices (Moser; O'Brien *et al.*, this volume). These contributions illustrate the ongoing efforts of cultural transformation by practitioners and scholars alike and highlight that 'doing' in a climate change world often entails challenging culturally established ways of acting in everyday life. Deliberate cultural transformation (O'Brien 2018) can inform responses to climate change and support alternative, low-carbon forms of societal development.

1.3.2 Modes of Knowing and Alternative Ontologies

A second theme that cuts across this collection is the importance of overcoming the nature-culture duality that informs modern understandings of the climate, as well as possible ways to achieve this. Current climate predictions in the form of models and graphs produce visions of compressed time and space, i.e. they fold past and future on the present (Mahony *et al.*; Grevsmühl, this volume). Not only are these predictions and visualisations socially constructed through practices, institutions, expertise and impacts of claims, but they are also culturally received, which has broader effects on the way society at large interacts with a changing climate or fails to do so (Ulloa; Moser, this volume). Therefore, the risk is that climate becomes yet another abstraction, disembodied from everyday life, and that visualisations stand in for real-life experiences of climate change, making it something that happens 'somewhere else'.

There is much research that critiques the prevailing culture of modern Western knowledge, still largely inflected with enlightenment traditions of rationality, objectivity and fact (Brace and Geoghegan 2010). Furthermore, scientific

knowledge as the hegemonic way of knowing climate change has served to prioritise the claims of certain actors whilst silencing vulnerable communities (Rice *et al.* 2015), such as indigenous ones (Ulloa, this volume). Indigenous knowledge has often been regarded only to the extent that it could inform particular Western climate change agendas by providing meaningful 'data' (Watson and Huntington 2014).

Many of the chapters in this book, in contrast, attempt to identify culture and nature as intimately connected, entangled and mutually co-produced in multiple ways (Whatmore 2002; Haraway 2008). As such, climate change emerges as a composition of the natural and the cultural, including not only language, cognition and conscious thought but also a range of multisensory engagements, relational sensibilities and emotional responses with the physical environment (whether organic or inorganic matter). Novel communication and curatorial practices (Moser; Healy-Musson, this volume), social experiments (O'Brien *et al.*, this volume) and artistic improvisational engagement (Tyszczuk and Smith, this volume), among others, help us to appreciate different climate knowledges and to comprehend the ambiguous meaning of climate, functioning simultaneously as metaphor, environment, explanatory force and a condition of human experience (Brierley 2010; Brace and Geoghegan 2010).

Thus, climate change is not something that is simply 'out there', a phenomenon to be objectively isolated, observed and managed, but rather is entangled in people's day-to-day lives, routines, plans, expectations, hopes and fears (Head 2016). As Brace and Geoghegan (2010:296) have argued, 'Climate and its changes might not only be observed . . . but also felt, sensed, apprehended emotionally, passing noticed and unnoticed as part of the fabric of everyday life in which acceptance, denial, resignation and action co-exist as personal and social responses to the local manifestations of a global problem.' As a result, climate change can be lived with and become normal, even when people are aware of it and express concern about it (Norgaard 2011).

1.3.3 Cultural Persistence

The third theme that connects the chapters in this volume is that of cultural persistence. A number of authors in this book consider the relationships between Western capitalist cultures and other cultures located in the global South to point out that the worldwide penetration of capitalism, and the speed of the changes that it is bringing about, might be limiting culture's adaptive function. For example, Postigo (this volume) argues that, in the Andes, economic liberalisation as a mechanism of modernisation and integration of peasant communities in global economic structures negatively affects rural communities' cultural adaptive