

Reply

Governing and adapting to climate. A response to Ian Bailey's Commentary on 'Geographical work at the boundaries of climate change'

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Ian Bailey has responded to my original Boundary Crossings article (Hulme 2008) with a well-argued call for introducing more explicit consideration of the spatial and the cultural into current thinking about climate policy (Bailey 2008). This call complements my original argument that in our construction of climate change as a global and material phenomenon we have unhelpfully de-cultured, or purified, the idea of climate. Thus Bailey comments,

Like Hulme in relation to [the idea of] climate change, I argue that past failures to emphasise the spatial and the cultural dimensions of climate policy have produced a rather blinkered view of the challenges and possibilities ahead . . .

Bailey draws attention to two aspects of climate policy which demand stronger geographical insights: the changing multi-scale nature of our tentative steps towards climate governance, and the cultural contingencies which shape and re-shape the implementation of climate policies in diverse places. This is a welcome extension to my original critique of how and why our relationships with climate have changed. I agree with Bailey that there are serious repercussions from failing to name and respect the diversities that characterise our world and from conceding too easily to the universalising instincts of scientific modelling and neo-liberal economics. In my view these repercussions include the multiple illusions that beset our current climate change discourse: that climate policy

is synonymous with the Kyoto Protocol, or its successor(s), that a universal climate regime ('one gigantic package deal'; Ott *et al.* 2008) is indeed within our grasp and, the biggest delusion of all, that through human ingenuity we can stabilise and then govern a benign global climate.

But there are two facets of Bailey's response that I would like to highlight here, using them to further drive home my original critique. The first of these is the focus on policies oriented to climate mitigation to the exclusion of policies that congregate around the idea of climate adaptation, and the second is the notion (implicit in mitigation policy and hence lurking unstated in Bailey's narrative) that global climate can be governed. Let me comment briefly on these two facets in turn and show again where critical geography can find openings to enrich our understanding of this 'mutating hybrid entity' (Hulme 2008) we name as climate change.

Placing and scaling adaptation policies

Bailey's exclusive focus on climate policy oriented towards reducing emissions of greenhouse gases is revealed when he says,

Climate change has long been recognised as a global environmental problem requiring coordinated action by the international community. At the same time, authority to reduce physical emissions is heavily concentrated with national and sub-national administrations and individual emitters.

This framing leaves no room for policies oriented towards enabling societies to live less riskily within existing and future climate envelopes. There are many reasons why climate policy is instinctively interpreted in terms of mitigation rather than adaptation (see Parry *et al.* 1998; Füssel 2007; Pielke *et al.* 2007). Most of these can be traced back to the framing in the late 1980s/early 1990s of climate change and our response to it, embodied notably in the UN Framework Convention on Climate Change (UNFCCC; see comments below).

Yet the geographical perspectives on climate mitigation policy offered by Bailey – scales of governance and contingencies of policy implementation – are equally important, perhaps even more so, for the case of climate adaptation policy. If the goals of climate mitigation are to be interpreted heterogeneously (as claimed by Bailey), how much more need the goals of adaptation be spatially differentiated. If the ‘universal remedies’ offered by mitigation policies are challenged through an appreciation of cultural diversity (as claimed by Bailey), how much more so are attempts to squeeze the adaptive dynamism of societies and cultures into universalising and codified adaptation policy frameworks. And if the hegemony of the nation state in implementing mitigation policy is challenged by governance at smaller and larger scales (as claimed by Bailey), how much more fragmented and fractalised are the policy actors and networks which frame and implement adaptation.

The governance of adaptation, and the associated labelling of social, environmental and economic policy measures as ‘adaptation policies’, has emerged under the terms of the UNFCCC as a new phenomenon. But adaptation to the vicissitudes of climate and the processes entailed in adaptation has a much deeper history than does our new-found fetish about managing carbon. This history of societal adaptation to changeable and changing climates remains to be fully explored and written, whilst the geographies of adaptation are as complex and contingent (e.g. Leary *et al.* 2008) as the geographies of mitigation (e.g. Bumpus and Liverman forthcoming). I emphasise these spatial and cultural attributes of adaptation processes and policies as a way of augmenting Bailey’s complement to my original critique.

‘Governing’ climate?

The other facet of Bailey’s Commentary I wish to highlight raises a more fundamental and much

larger question. Can global climate be governed? This is prompted by Bailey’s remark,

Although policy and politics were not Hulme’s main targets, the causality implied [by Hulme] is perhaps arguable . . .

I interpret this comment as asking ‘does policy frame knowledge or does knowledge frame policy?’ There is no simple linear solution to this question of causality – Sheila Jasanoff instead adopts the idiom of ‘co-production’ (Jasanoff 2004) – yet there was a very distinctive role played by the knowledge community in the late 1970s and 1980s in (re-)shaping our view of climate as global, material and predictable. This Cold War construction of climate change as a global environmental problem opened the way for certain sets of policy initiatives to emerge subsequently, rather than for other sets of policies to do so (Sarewitz and Pielke 2000; Fogel 2004). The path taken from the WMO/ICSU/UNEP Villach Conference on the Assessment of Carbon Dioxide (1985) to the first IPCC Assessment Report (1990) to the Rio Earth Summit (1992) codified the way in which climate change was to be viewed by international institutions of science and policy (Agrawala 1999). ‘Climate policy’ took over from 1970s energy policy and the drive for climate change mitigation was elevated over the need for climate adaptation (Franz 1997; Pielke *et al.* 2007).

One powerful consequence of this problem construction is that we have absorbed the notion that global climate is governable, an idea expressed in the goal of ‘Earth system governance’ (Biermann 2007). The idea of the governability of global climate can be traced back to the analogy of systems control, an idea introduced alongside climate change for the first time in 1977 by US economist Bill Nordhaus. Nordhaus (1977) used the language of the systems engineer – control, optimisation, stability – to speculate about the desirable and (implicitly) achievable goals of climate (mitigation) policy. In the intervening 30 years we have become used to framing the goals of climate policy this way, seeking to engineer a stable climate system in which humanity’s climate agency is governed for the global good. The idea of climate governance therefore emerged in the 1980s and 1990s, alongside the insurgency of globalisation and the liberalisation of the global economy. The instruments of climate governance started with ideas around carbon taxation and energy policy and have evolved into the diversity of market-based policy measures referred to by Bailey in his Commentary.

I do think therefore that the question raised here – can global climate be governed? – is prior to Bailey's examination of the geographies of climate policy. The question has both scientific and political dimensions – is climatic 'stability' a feasible physical goal and in whose interests and through what means is climate governed? Lenton *et al.* (2008) point out the difficulties of securing the former and Swyngedouw (2007) reminds us of the dangers of ignoring the latter. And beyond these concerns, embedded in and enabled by the discourse of global climate governance, lurks the rising appeal of geo-engineering (Fleming 2006; Kintisch 2007). Schemes to re-engineer the physical climate through stratospheric aerosols, ocean fertilisation, biological pumps or free air capture of carbon dioxide now have an eminence unforeseen a decade ago. The more we think global climate needs governing and the more we think that we have the means to govern climate, the more weight we lend to these advertent and high-risk technical interventions. We would do well to expand Bailey's call to explore the spatial and cultural boundaries of climate policy and politics to include such schemes. Jamieson (1996) and Parson (2006) are two of the very few to date to have reflected on the governance, political and ethical dilemmas posed by these Promethean prospects.

Re-mapping the terrain

Bailey commends the twin projects of using the skills and insights of geographers to understand our ideas of climate change and our construction of climate policy. We also need to embark on a third parallel project, which is to examine how constructions of climate change knowledge and discourses of climate policy are deeply interwoven. We need geographers to reveal where, why and how a very particular story about climate and our relationship with it has come about, to reveal through the language of climate our 'designs on nature' (Jasanoff 2005). Whilst there remains little doubt that humanity has emerged as a new and powerful agent shaping our physical climatic environments, there is no simple or single way to interpret the significance of this agency. Nature alone does not dictate our knowledge of climate and our knowledge alone does not dictate climate policy (Rayner 2006). As the climate diplomacy caravan struggles along the 'bumpy road full of potholes and obstacles' (Ott *et al.* 2008) from Bali, not knowing whether or

in what shape we will arrive in Copenhagen in December 2009, we need critical voices to point out some roads less often chosen. Geographers are intimate with the construction and deployment of maps and we need to be more active in shaping and mapping the terrain over which knowledge and policy about our climate may roam in the years ahead.

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