Reflections on *Navigating Climate's Human Geographies*

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Abstract

In this reflection, I take up a variety of open questions and remaining concerns raised by the set of commentaries concerning the implications of the paper for: how we regard climate change as an issue; how knowledge systems might be changed to enable more diverse ways of knowing climate change to take root; and for its politics.

Keywords – climate change, politics, governance, interdisciplinarity

What does it mean to know and come to act on climate change? My paper, *Navigating Climate's Human Geographies*, and the subsequent rich set of commentaries in response take as their starting point the ways in which climate change has been situated within human geography and the wider social sciences of which it is a part. At the heart of my argument is the observation that climate change has both an obvious presence and a curious absence within our discipline. Whilst sharing many of the diagnoses of the current state of climate's human geographies developed in my paper, the commentaries take up a variety of open questions and remaining concerns about what this might mean for the way in which we regard climate change as an issue, how knowledge systems might be changed to enable more diverse ways of knowing climate change to take root, and for its politics. Although there are many lines of thought opened up by these diverse responses – and for the depth of their engagement I am deeply grateful – it is on these three themes that I take the opportunity to reflect further.

A Distinct Condition?

The starting point for the paper is, as Lovell points out, an unexplored assumption that climate change is worth specific and sustained attention. For the past two decades, climate change has come to dominate both environmental research and policy agendas, arguably both because of the urgency and severity of the issue but also as a result of the emblematic role it has played in signifying the contemporary social-environmental condition some term the Anthropocene. There is the risk that any

work that focuses exclusively on climate change serves to reify this issue to the expense of others, to appear to make claims for exceptionalism and to neglect the deeply-rooted ways in which climate change is tied into multiple other social and environmental agendas. This may have been the unintentional effect of this paper. Working closely in this field for over two decades it is all too easy to forget the political work that a focus on climate change can do for the complex challenges of sustainability and development with which we need to be concerned. Yet Lovell's commentary also provokes a reflection on the extent to which climate change is a distinct challenge. For instance, Lovell turns to some of its physical 'unavoidable characteristics', of persistent pollutants which create global atmospheric pollution and take effect over the long term that have in turn shaped its politics. Whilst acknowledging the materiality of climate change is vital, at least part of the argument advanced in the paper is that we need to resist singular accounts of the climate change problem. Arguably, climate change also has distinct physical characteristics in terms of its relation with the diffuse combustion of fossil fuels, the design and thermal efficiency of buildings, the power requirements of steel production, the workings of modern agricultural systems and so forth, and yet such framings of the climate problem and its politics have only just begun to gain traction. That climate change is deeply entwined with our current socio-material order and its politics means that it is critical that we view it not as a 'problem' that can be clearly demarcated, but rather as a condition structured through social, political and economic orders that permeates both the mundane and profound aspects our lives.

There are of course many other issues which we can understand as conditions in this sense: social inequality, health outcomes, food security and education for example. The claim is not that climate change is unique in this sense, but that within the environmental domain we have tended to maintain an understanding of issues as discrete problems rather than as complex socio-material conditions which shapes the knowledge we generate about the issue and its politics. In his commentary, Paterson raises a concern that such an approach could have the potential consequence of 'black-boxing' the historical processes through which environmental degradation comes to be 'organised socially and politically' because of its emphasis on the expansive and intertwined nature of climate change with all manner of things. Yet I would argue it is precisely in attending to the *specific* processes through which climate change comes to be made and (re)made both in material and discursive terms that the nature of climate-as-condition needs to be articulated. As Paterson and Lovell have shown in their own work, such processes are deeply rooted in the organisation of the economy, its politics, and contemporary culture. The distinctiveness of climate-as-condition comes then through tracing the ways in which it has come 'to be organised socially and politically' rather than from claims to significance or importance vis a vis other social and environmental concerns. Indeed, reorienting our interrogation of issues such as

biodiversity loss, ocean plastic and air pollution away from the frame of problems that require specific solutions towards an understanding of the ways in which they can be understood as conditions may also open up the scope of what is deemed viable and necessary in these domains.

Integration and Beyond

As several of the commentaries point out, debates about the nature of the 'missing middle' in geography and concerned with the integration of social and natural science are long-standing. Taking as its cue the enduring dialogue within human geography concerning the standing of social science in global environmental change research, to which interventions by Castree and O'Brien have been central, the paper seeks to explore more explicitly the role of human geography and the social sciences more broadly in, as Castree suggests, both 'perpetuating and eventually redressing' the current status quo. Yet there is certainly unfinished business here. The key question as Castree sees it of 'how to make climate change less of an 'absent presence' in human geography' remains only broadly sketched out. In their commentaries, colleagues helpfully draw attention to this dilemma both in terms of what kinds of change we might seek to engender within the discipline, and where the impetus for such changes might be found.

For their part, O'Brien and Leichenko suggest that the article is limited in its imagination of integrative research. Rather than accepting the terms given by the natural sciences for what this might involve, they argue instead for an approach which recognizes not only that there are multiple understandings of climate change at work but that these in turn are connected to 'multiple perspectives on reality, diverse ways of knowing, and different claims to validity'. Creating an 'integrative discourse' as a space in which diverse and sometimes conflicting perspectives can be bought into dialogue they suggest is a means through which to open up new ways of knowing climate change problems and solutions. Certainly, as they argue, interdisciplinary and transdisciplinary research is taking new and exciting forms and can act to foster critical forms of intervention. And yet, as Castree points out, the notion of an all-encompassing, 'super synthesis' of knowledge based on criteria for authority and legitimacy derived from the natural sciences persists. The challenge for new and different calls for integrative approaches is not only in how they move away from this model, but in how they also challenge its fundamental positioning of the social sciences and, as Paterson rightly attests, the frequent misinterpretations of the social dynamics that accompany its underlying assumptions about the nature of climate change as a problem. Whether integrative approaches can really be undertaken on the terms

of social science and without resorting to an end game which sees ever more complete knowledge as a requirement for an effective politics remains moot.

Perhaps equally critically, calls for better and more integration are in my view unlikely to reach beyond those academic communities already concerned with climate change or sustainability writ large. A central argument of the paper is that climate change should not remain confined to particular researchers who identify as being concerned with nature/society. O'Brien and Leichenko suggest that 'integrative discourse' can provide a sufficiently large tent that those working on all manner of 'non-climate' issues can find the relevance of their work for climate change. This may indeed be the case, but it does not really grapple with perhaps the more significant issue of what it might mean for climate change to be relevant to 'non-climate' issues. As Jones argues in his commentary, what it might mean for climate change to become a 'primary object' of inquiry within human geography and whether this is indeed desirable requires further consideration. For Jones, such a call may be misguided on at least two grounds. For a start, it may be that across the discipline in all the forms, sites and ways of working that human geography is to be found, such work is already underway. Searching for the presence of climate change in the mythical core of the subject is a quest that is always then likely to end in failure, even while human geography busily endeavors to generate diverse ways of knowing and acting on climate change. And more acutely, if perhaps implicitly, that it is not desirable (or possible) to insist on the primacy of any particular object of research in the discipline. With this of course I wholeheartedly agree. Instead, my concern is with whether, and if so how, climate change needs to disturb the taken for granted ways in which we theorise and undertake geographical research in all sorts of ways. There is a parallel here with calls within the discipline to reconsider the reach and power of a theoretical repertoire primarily conceived within the confines of western thought and institutions when it comes to be deployed in contexts of the global South. What would it mean to take thinking forward in relation to climate change, to consider our theories of justice, the state, democracy, rights, race and so forth as primarily determined under 'non-climate' conditions and reconsider their fundamental assumptions under the condition of climate change? This is then not a call for us all to become climate change human geographers, but instead to recognize that work in our discipline may be changed by climate change.

Understanding what kinds of futures we want is one thing, bringing them to fruition quite another as Castree points out in his commentary. Perhaps as he suggests implicitly my paper relies on drawing a map so that people will come: an unconscious reliance on the power of exhortation that is more than certainly misplaced. I would concur with Castree that such shifts in academic practice instead require

long-term resource and institutional change, and yet also share his reflections that such levers are often few and far between. Dedicated units or research institutes may offer the most promising formula for collective endeavors, though here too the global arms race for research excellence tends to reproduce agendas and ways of knowing. There remains little space for the disruptive within the academy, either in the institutionalized form taken by various corporate 'skunkworks' designed to foster innovation (and failure) during the C20th or in its looser form. Perhaps as O'Brien and Leichenko suggest, it will be through our role as educators that we will be most able to leverage change, opening up new ways of including climate change in our programmes and curricula and engaging different kinds of knowledge both within the lecture hall and beyond. Alternatively, disruptive ways of generating climate change knowledge and action might most productively be found by turning our attention to the ways in which we might imagine and call forth different kinds of future for, as Lovell suggests, doing so can draw our heads above disciplinary silos and enable us to tap into new forms of creativity.

Towards a politics of climate-as-condition

As well as offering different perspectives on the ways in which we might come to know climate-as-condition and the kinds of effort that might be required, the commentators raise some significant concerns about the utility of doing so. Both Paterson and Jones suggest, albeit in different ways, that one potential effect of loosening the notion of climate change as a 'problem' may be to lose focus on its ultimate causes and weaken the cause for action. As Jones suggests, often the elegance of theoretical elaboration can be seductive, drawing us away from its practical significance and potency. Here, he argues, attending to the complex interweaving of diverse socio-materialities that make up what it is that climate change becomes may be all too evident to those working at the coal-face of policy and practice, such that the 'implications are less than remarkable'. Much of this sentiment I whole-heartedly share. The analysis presented in the paper is drawn not from a vantage point outside of the everyday working of climate change practice and governance, but rather from in the midst of it. It is precisely the ways in which climate has come to circulate, attach and become multiple different finalities that I found in field research in cities and transnational governance arenas that provoked my interest in challenging the orthodox notion of climate as a 'problem' to be solved,. Yet where I depart from Jones's analysis is that such insights, held as they surely are both by researchers and practitioners alike, have little to offer the world of practical action.

In part, the concern raised by Jones is that by positioning critical climate social science as separate from work in the social sciences that takes existing frames of reference and terms of engagement as

given, the paper serves to reproduce a binary between critical and applied work and to locate the former in a realm where having relevance is neither necessary or desirable. Further, he rightly suggests that the paper does not offer a sufficient analysis of what a shift away from 'climate as object' would mean for practical action and the development of policy. While the vignettes seek to illustrate how climate-as-condition comes to be manifest, both Jones and Patterson find that in their focus on the relatively parochial and contemporary moment the underlying drivers of climate change and the ways in which solutions are found may be missed. Gaining the political traction for climate action is of course no easy matter, and the intention is certainly not to offer a panacea here. However, the direction of the argument the paper seeks to build can take us forward in three ways. First, and perhaps most pragmatic, is an insistence on paying attention to what recognising climate-as-condition means for *how* governing is accomplished. Rather than being confined to sites which we readily identify as the territory of policy, governing climate change is necessarily dispersed and takes place in the sinews through which socio-material orders are continually configured. In practical terms this means that there are multiple agents and interventions in the governing of climate change, both in terms of maintaining high carbon society and in attempts to move in low carbon directions. The growing engagement of non-state actors in the formal architecture of the international agreements is some recognition of this reality. Yet such moves in seeking to bring diverse forms of climate governance into one framework risk confining the scope and potency of the capacity to govern climate-as-condition.

Second, and related, climate work is in this reading not only to be found in the discrete policies and practices labelled as such, but rather undertaken through all kinds of actions – from the design of supermarket refrigerators to the economy of supply chains. For over two decades, climate action in cities has sought to champion the 'co-benefits' that acting on climate can have – for health, for air pollution, for comfort, for financial savings and so on. Yet perhaps if our ambition is more climate action this is to see things the wrong way around – climate action could instead be regarded as a co-benefit of these multiple forms of improvement. Recognising climate-as-condition calls then both for a decentring of climate change as the locus of action whilst also requiring that multiple other arenas include climate considerations in their work, whether this be in the provision of health services, urban design, the stocking of supermarket shelves or the materials through which we fashion our world. Recent moves from the UK's Climate Change Commission to attend to the ways in which climate change comes to matter in decisions over land use, food, farming and fashion are testament to such an approach, but currently lack a governance repertoire that would match these realisations. This leads to the third, and final reflection on the implications of the approach advanced here for climate's politics. As with other domains of environmental policy, climate action has long been associated with what we

might consider as forms of disciplinary power, which relies on coercive control through forms of target, regulation and sanction. Such a form of power has considerable merit of course, but it is unlikely to be practical in reaching the parts of our society and economy through which carbon is produced in all its various ways. Here instead we need to turn to forms of governmental power, which seek to work through the self-governing capacities of individuals and collectivities. Recognising climate-as-condition therefore calls for more attention to the ways in which such forms of power can be marshalled and deployed, and given due recognition within the policy arena. There are many such instances emerging across the landscape of climate action, and it is to these that this paper seeks to draw our attention and our energy.