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THEMED INTERVENTION

Unbounding the future: New directions for climate-changed geographies

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Abstract

This commentary reflects on the contributions that human geography has made to climate change research, as well as future directions for human geographic work on climate change. I suggest that one of the key achievements of the field is to render climate change a boundary object: an entity whose interpretive flexibility allows it to become a shared object of knowledge that, in principle, facilitates collaboration across disparate communities of practice. However, the ways in which that contribution has been made, and made possible, have effects that ripple elsewhere. While the subfield of political ecology and its historiographical methods have played vital roles in laying the intellectual foundations for human geographic work on climate change, and thus its ability to construct climate change as a boundary object in the first place, I suggest that they and other neo-Marxian approaches to the study of the (climate-changing) environment tend to diminish human geographic engagement with the future as an object of scholarly inquiry. To address that limitation and help push climate-changed geographies in novel directions, I suggest that climate-changed futures be engaged problematically. I then conclude with a discussion of key empirical domains—chiefly climate reparations and climate adaptation—where such problem-oriented work may be productively applied.

KEYWORDS

climate adaptation, climate change, future geographies, reparations

Inquiry, Star (2010) notes, feels like an oncoming sneeze. Something strange tickles your nose and triggers a sensation that is at once vexing and exciting and ultimately compels you to respond. I experienced this sensation often while preparing for the *Transactions of the Institute of British Geographers'* plenary at the 2023 RGS-IBG Annual Conference. Prior to the event, I assembled an embarrassingly large database, which I filled with key information of peer-reviewed journal articles on climate change that were published in human geography journals from the 1980s to the present.[1] I made the

database in part to ease the anxieties that come with feeling like an interloper who has been given a microphone (note: while I engage with geographic debates, I lack a degree in geography). But I also assembled the database because I found the plenary prompts genuinely interesting. It wasn't obvious to me how geography, a notably heterogeneous discipline, would approach climate change in the first instance, let alone how its approach would change over time—some of the main questions that *Transactions* editors posed to plenary speakers.

Inasmuch as the database answered those questions, its contents also reminded me why I am drawn to geography, and to human geography in particular—the geographic subfield to which I contribute and which I will be engaging in this commentary. As I scoured the database, I recognised that I was not simply taking stock of a burgeoning body of geographic thought on climate change; I was also taking in a geographic history of the present. Across the bodies of work, I observed geographers account for, and problematise, empirical developments such as authoritarian turns in governments (McCarthy, 2019); scalar shifts in climate governance ambitions and practices (Bulkeley & Castán-Broto, 2012; Liverman, 2004); and the proliferation of market-based climate 'solutions' (Bailey, 2007; Castree & Christophers, 2018). I also saw geographers turn to climate change when engaging broader developments within the interpretive social sciences, such as post-structural, de-colonial, and abolitionist turns (Demeritt, 2001; Ranganathan & Bratman, 2021; Sultana, 2022; Tornel, 2023). In other words, I encountered a very lively, porous discipline that takes the present seriously. Thus it seemed one question asked by *Transactions* editors might be reframed: perhaps it is not so much about how geography has changed its approach to climate change *over* time, as if operating somewhere above the current. Instead, the question might be how geography has changed *with* time, dynamically (re)assembling its specific research objects and interpretive frames in response to a range of developments that stand to shape how climate change plays out and how such playing out might be usefully analysed.

1 | PARANOID CLIMATE GEOGRAPHIES?

The general liveliness of geography made the following pre-sneeze sensation stay with me: why were certain strands of human geographic work on climate change so resistant to change? Take, for example, some prominent geographic scholarship on resilience. As an explicit and highly publicised norm and practice of government in an era of climate change, resilience was a relatively new 'thing' in the world when human geographers began to take it up: the highly studied 100 Resilient Cities program, after all, only launched in 2013. But many human geographers were quick to call the novelty of resilience into question, and instead attached resilience to more familiar forms, such as neoliberalism, whose norms and practices had already been the object of sustained geographic critique (see, e.g., Watts, 2015). Resilience, many prominent critical geographic accounts of resilience concluded, must be resisted, refused, or, better yet, abandoned (Bonds, 2018; Derickson, 2016; Ranganathan & Bratman, 2021). Similar suspicions arose in relation to other climate-related interventions. Might urban adaptation and sustainability initiatives, for example, be little more than the extension of urban growth machine dynamics into a catastrophic future (While et al., 2004)? Does the rapid proliferation of climate finance initiatives in so-called developing contexts denote anything other than the latest iteration of unequal metropole–periphery relations in the present (Perry, 2023)?

My interest in this body of work did not lie in evaluating whether the arguments made were right or wrong, or whether the questions taken up were worthwhile (they were and are). Instead, it centred around two basic concerns. First, that the suspicious orientations underlying such questions risk passing over, or misrecognising, the many ways that climate futures are being (re)made now—by multiple actors, toward multiple ends, and through multiple means. Second, and relatedly, that the same orientations may hinder human geography's capacity to respond to, and produce valuable work on, the surprising ruptures, coming-togethers, and possible durabilities that climate change will bring, and already is bringing, about. To stay with the development finance example, it is certainly possible that the dizzying array of climate finance instruments being peddled by multilateral banks may do little more than saddle low-resource nations with debt, thereby reproducing if not exacerbating longstanding colonial relations. But it is also the case that development finance and its burgeoning climate machinery are being rendered sites where such relations are being called into question and possibly reworked (Government of Barbados, 2022). If we are to follow a central provocation of reparative thought, that the past does indeed bear on the present but the future need not reproduce the past and its present-day unfolding (see Sultana, 2022; Táíwò, 2022), we might ask the following: what could it mean to look to development finance reform to establish different relations between the past, present, and future? How are officials going about it, and with what possible effects?

The basic problem is that the modes of reasoning and critical habits at work in the above examples—what Ricoeur[2] and Sedgwick (2003) refer to as a hermeneutics of suspicion and paranoid thought—are not likely to ask these kinds of questions

(see O'Grady & Shaw, 2023). And that is because these critical practices and ways of thinking are constitutively averse to, and in many ways seek to eliminate, surprises: the significance of events unfolding in the present and into the future must 'be always already known' and 'exposed' through projects of demystification (Sedgwick, 2003, p. 130; see also Wright, 2017). That such a surprise-averse analytical orientation stood out in prominent human geographic work on climate change did, in fact, surprise me. Human geographers have, after all, developed a robust body of work on futurity that should in theory extend to climate change (see, e.g., Anderson et al., 2020; Chandler et al., 2020; Grove et al., 2022; Rickards et al., 2014). Moreover, the governance and politics of climate change are often mediated by novel events and temporal concerns, whether they be the time frames in which decarbonisation must take place; the slow, rapid, and/or anticipated unfolding of climate impacts in and across particular geographies; or the futures made, deferred, or foreclosed pending how, exactly, adaptation happens. And yet such geographic engagements—where, for example, climate futures are probed rather than deduced (see Ginn, 2015; Rickards et al., 2014)—remained, in my read, somewhat marginal. What was behind that?

Notably, answers seemed to lie in human geography's past—and in its key achievements regarding how we understand climate change today. The database made clear that one of geography's essential (if seldom explicitly stated) contributions to thinking on climate change is its decades-long push for treating climate change as a boundary object (Star & Griesemer, 1989): an entity whose interpretive flexibility allows it to become a shared object of knowledge that, in principle, facilitates collaboration across disparate communities of practice, such as the physical and social sciences. It is perhaps unsurprising that geographers—whose work traverses the physical and social sciences—would *endeavour* to make climate change a boundary object. That climate change would *become*, or *remain*, a boundary object is sadly not self-evident. That is true today, as governments funnel more and more research and development funds to so-called technical fixes to climate change, like geoengineering. It was also true decades ago, when climate scientists were often considered the sole arbiters of climate change and its inconvenient truths. Nevertheless, as author affiliations within the pages of IPCC reports make clear, geographers have made and maintained significant gains in ensuring that climate change remains within the remit of the interpretive social sciences.

Human geographers have often done so by taking historiographical approaches to their analyses of climate change. Such approaches are common within political ecology (see Gandy, 2022), which in my reading (and others', see Diana Liverman's account (2024)) has laid much of the intellectual groundwork for human geographic work on climate change. It is beyond the scope of this commentary to provide a full account of how political ecology and other neo-Marxian approaches to the study of the environment have invoked historical thinking to examine nature–society relations. For now, let us say that where pioneering works in political ecology looked to longstanding power relations, ultimately driven by capital, to make sense of issues such as environmental resource (in)access and the (re)production of vulnerability (Blaikie & Brookfield, 2015; Watts, 1983), geographers today often draw on the field to identify structural drivers of unevenly distributed climate vulnerabilities; to differentiate responsibilities for addressing those vulnerabilities, and to question totalising epochal categories like the Anthropocene, and the mythical undifferentiated human (see, e.g., Moore, 2017; Wolford, 2021).

These are vital contributions to geographic understandings of climate change. But the ways that these contributions have been made, and made possible, have particular effects that ripple elsewhere. The temporal analytical manoeuvres described above have indeed helped politicise climate change by looking toward the past to demystify the present. But, and for reasons outlined previously, the same methodologies have largely bounded geographical understandings of, and engagement with, the future. By and large, the future becomes something whose specific features human geographers can anticipate, or change, given what they observe and do today—not as something to be investigated in and of itself. And seemingly for good reason: because we know how systems of domination have shaped unequal presents, we can deduce the forms and features of climate-changed worlds in advance of their arrival. The future is not something that surprises; at best, it holds bad surprises (Sedgwick, 2003), and thus demands pre-emptive, transformative action today. But is that all the future offers ontologically or compels of geographers analytically (Massey, 2005)? Moreover, if the future as theorised above does not surprise, is it really a future (Anderson & Adey, 2012)? My answer to both questions would be no, and that these analytical and ontological limitations amount to significant practical problems on which human geographers should dwell. After all, how climate change plays out relates to the myriad ways that various actors—be they governments, activists, or investors—are trying to make (and indeed making) the future something that they can act on today (Collier & Cox, 2021; Cox, 2022). How climate change plays out also relates to the multifaceted presence(s) of the future—as something to be hopeful about, fearful of, or bored by—in situated thinking about, experiences with, and actions on, climate change now (Anderson, 2023).

2 | FUTURE DIRECTIONS

So how to open up the future and push climate changed geographies forward? An obvious first step would be to treat the critical practices detailed above as one among *many* to deploy, and perhaps combine with others, when researching climate change and related developments and interventions. Further research might, for example, think *problematically* about the future under climate change: not in the sense that the future is normatively bad, but in the sense that it is something that is and can become very important and worth knowing about to many differently situated actors at specific, often difficult, conjunctures (see Barnett & Bridge, 2016). Then follows how, and with what spatial and distributional consequences, climate futures *are* known about and acted on.

Problem-focused accounts of climate adaptation, mitigation, and finance, for example, might devote themselves to tracing how and to what effect the future, or multiple plausible futures, is made present, whether through technical exercises such as stress testing (Morris & Collins, 2023); scenario planning (Rickards et al., 2014) or risk mapping (Koslov, 2019); visual and discursive representation (Paprocki, 2021); or the myriad, highly impactful climate modelling exercises conducted by physical geographers. For me, as I discussed in the *Transactions* plenary Q&A, the question of anticipating futures is where the radical interdisciplinary potential of climate change research lies (see also Colven & Thomson, 2019). In my own work co-advising physical geography PhD students with physical geographers, for example, I have the chance to introduce students to social scientific theories of how power is established and exercised through seemingly mundane practices of translation, commensuration, and classification, and thus encourage students to think reflexively about the modelling work that they do (Hacking, 1998; Latour, 1987; Rose & Miller, 2010). Equally, I am also able to learn from my physical geography colleagues as they recount how they go about producing authoritative knowledge about coming, or possible, climate-changed worlds—as well as their own concerns about how and to what end that knowledge might (or might not) be used.

But climate action is also spurred by how the future is *felt*. Thus geographers might more deeply engage approaches in cultural geography to investigate how and to what effect attachments to particular places are changing due to individual and community views of what the future holds (Linz, 2021). Equally, geographers might explore (1) how present-day events linked to climate change (e.g., disasters or decarbonisation strategies) establish collective feelings that there is no future, only certain kinds of futures, or perhaps more desirable and urgently needed futures in a given place and (2) how and to what effect such feelings become objects and targets of multiple forms of power—and, equally, catalysts of 'radical possibility' and repair (Anderson, 2014; Hooks, 2015, p. 20; O'Grady & Shaw, 2023).

In short, because human geographers actively create worlds rather than describe them in their work, they have both the opportunity and responsibility to 'get closer' to climate change and related developments rather than see through them (Latour, 2004, p. 231; Gibson-Graham, 2008). My hope for climate-changed geographies is that geographers take them.

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DATA AVAILABILITY STATEMENT

Research data are not shared.

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ENDNOTES

[1] The database consisted of highly cited papers on climate change across general and subfield-specific (human) geography journals, such as *Annals of the American Association of Geographers*; *Transactions of the Institute of British Geographers*; *Progress in Human Geography*; *Antipode*; *Political Geography*; and *Environment and Planning C: Politics and Space*. I began with the 1980s as that is when the term 'climate change', as commonly understood today, was first used and began to be popularised, and limited my review to human geography, as that is the subfield to which I contribute and therefore felt comfortable analysing. These decisions are not without their problems. But they helped paint a general, if inevitably partial, picture of trends within human geographic thought on climate change over time and informed the provocations raised. Further work can and should be done to deepen the points made here.

[2] Ricoeur used the term to describe the positions of intellectuals such as Marx, Nietzsche, and Freud, as well as what Sedgwick (2003, p. 125) calls their 'intellectual offspring' that have laid the foundations for dominant modes of critique in numerous fields, including geography.

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