

CLIMATE CHANGED URBANISM?

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emissions of this kind will arise from the growth of cities in the non-OECD world (IEA, 2016). At the same time, cities are seen to lie in the path of the climate storm: large coastal populations and property assets are at risk from coastal flooding whilst others are seen to be vulnerable to the effects of extreme heat and water shortage (Revi et al., 2014). Whilst the discourse of climate change as a global commons problem in need of a collective international response has persisted, the powerful mobilisation of a narrative that has positioned climate change as a fundamentally urban problem by a host of cities and the transnational organisations that seek to represent them has questioned the naturalisation of the global climate problem as necessarily one of international politics. Coupled with images of climate-related urban disasters – from Hurricane Katrina to Hurricane Sandy, the Cape Town drought to the Parisian heatwave – the rendition of the globally urban nature of the climate change problem has now been widely accepted within both scientific and policy circles. If, for example, it took more than a decade for the Intergovernmental Panel on Climate Change to explicitly mention cities as a part of the climate challenge, by the time of its special report focusing on how to sustain a global temperature rise below 1.5 degrees, cities were identified “as one of four critical global systems that can accelerate and upscale climate action” (Bazaz et al., 2018: 6). Such has been the momentum behind the urbanisation of climate change that in 2018, the IPCC held a meeting dedicated to the urban contribution to the climate change challenge, with the objective of bringing together research, policy, and practitioner communities to carve out an agenda for the next decade of climate science (Bai et al., 2018). With a significant investment of both resources and political capital, CitiesIPCC was unique not only for its focus on the urban agenda and for bringing together diverse knowledge communities from beyond the academy but also as the first meeting ever held to establish the climate research agenda. Marking a significant step-change in the way in which climate change has come to be urbanised over the past three decades, it is a testament to the weight now placed on cities as central means through which climate responses can take place.

Indeed, it has been this framing of cities not only as fundamental to the climate problem but also as essential to its solution that has been critical to the urbanisation of climate change. Over three decades, the framing of the potential for an urban response to climate change has shifted. During the 1990s, the focus was on the actions that municipal authorities could undertake on a voluntary basis to demonstrate their commitment to a global cause – a frame within which cities were mostly regarded in terms of their public authorities and relevant action seen in terms of the kinds of action that could generate both momentum internationally for the cause and additional benefits in terms of financial savings locally. The landmark Kyoto Protocol, after a few false starts as US intransigence made its political future appear uncertain, ushered in a new decade of urbanising climate change as the issue came to be regarded as one of both political and economic strategic importance. The first few years of the new century saw a number of new organisations formed precisely in order to mobilise climate change as a matter of strategic urbanism, from the work of The Climate Group, established to generate interest amongst businesses and subnational governments in the benefits of climate action, to the C40, a transnational network established with the express purpose of bringing together global cities to form a ‘climate leadership group’ and the explicit engagement of a host of philanthropic bodies, development banks, and global organisations in promoting, supporting, and delivering an urbanised climate agenda.

Such manifestations of climate change as an urban issue were not simply urban in general but urbanised in particular ways that played into and through existing discourses about what it might mean to be a ‘global’ city on the one hand and along neoliberal lines on the other. For Marvin and Hodson, in an era of “resource constraints and climate change, national security, infrastructure ‘protection’ and economic competitiveness are being overlaid with concerns around energy

Over the past two decades, climate change has escaped the conventional spatial moorings of global environmental issues to become understood not only as a matter of the international arena but also one that has a particularly urban nature. Whilst other such challenges – from species loss to ocean pollution – remain resolutely global in the imaginaries they generate and in the form of their politics, climate change has come to be understood as fundamentally connected to global urbanism. In return, those seeking to articulate the ways in which cities are now necessarily global frequently point to their collective contributions to the changing atmosphere and to the levelling effect of its impacts. Urbanism is now global by virtue of its role in producing and inhabiting a climate changed world. As global urbanism comes to be deeply tied into questions of climate change and its future, in this chapter, we seek to explore how and why we have come to understand climate change in relation to the urban and at the same time to question the ways in which climate has come to change the nature of urbanism. We argue that the portrayal of climate change as a deeply urban issue has been the result of decades of effective political work to position cities as strategically (and economically) important in the governing of climate responses. At the same time, bringing climate into the city has begun to shift the terrain of the urban present and its futures. Yet the extent to which such shifts have been fundamental in reconstituting global urbanism is moot. We argue that evidence for transformative approaches to climate changed cities are as yet few and far between but suggest that they must form a cornerstone for the future of global urbanism.

Urbanising climate change

Cities have come to occupy a central place in the political imaginary of climate change. This relates both to their material entanglement with the global atmosphere and the political work that has taken place over the past three decades to position cities not only as part of the climate problem but also its solution (Bulkeley and Betsill, 2013). Whilst calculations vary and figures are heavily contested, it is thought that cities currently contribute between 60% and 70% of energy-related greenhouse gas emissions to the global atmosphere and that the vast majority of future

security, constraints on water resources, the growth of diseases, increased flood risks and multiple aspects of demographic shifts” in such a manner that the reproduction of the (municipal) state came to be understood as a matter of ensuring ‘urban ecological security’ (Hodson and Marvin, 2009; 195). Consequently, they suggest, the positioning of global cities as an essential part of the solution to climate change can be read as part of advancing the interests of and futures for particular urban centres and specific communities within them, often at the expense of ‘ordinary’ cities. Likewise, in her work, Wakefield (Wakefield, 2018: 5) has shown how the mobilisation of discourses concerning the need for resilience in the face of climate change has generated an “imaginary of ubiquitous crisis”, which in turn “is ushering in a new set of management techniques to further ‘secure’ the city and its populations” (see also Braun, 2014; Wakefield and Braun, 2014). Similarly, in their work on climate disaster preparedness in Cancun, Mexico, Manuel-Navarrete et al. (2011) found the persistence of development visions focused on mass tourism coupled with neoliberal discourses of adaptation and resilience served to further entrench urban inequalities. What these studies reveal is the variety of conditions under which climate action in cities can forge synergies between neoliberal economic thinking and global urbanism.

It is clear then that the urbanisation of climate change is neither politically neutral nor without ethical consequence. Positioning cities as climate heroes with added benefits – capable of saving the planet whilst also saving themselves – has served to do particular political work in rendering climate change a problem amenable to solutions which are compatible with neoliberal thinking about the nature of the state, economy, and individual. At the same time, focusing on some of these more prominent discourses is to neglect the multiplicity of ways in which climate has come to be framed as an urban problem with the potential for resolution. Climate change is being rendered urban through diverse actor configurations in ways that seek to generate a more progressive form of politics. Transition towns are one example of such action taking place through a transnational platform, where climate is made urban precisely in order to reconfigure global economic orders and to engender a sense of community, and there are quite literally thousands of other interventions taking place globally in which are also seeking alternative ways of advancing alternative urbanised climate agendas (Hoffmann, 2011; Bouteligier, 2013; Lee, 2013). In practice, urban experimentation forges dynamic connections across social, technical, and political systems, pluralising agency and shifting relationalities within and beyond the spatial bounds of the urban system. Consequently, this heterotopic world of urban climate change experiments helps us understand global urbanism by highlighting the many ways that interventions in cities influence interconnected systems with global reach, in turn usurping traditional spatial boundaries by dissolving distinctions between global systems and urban ones.

Climate changing urbanism

The growing urbanisation of climate change as an issue and a political arena over the past three decades has had consequences for cities – the concerns, visions, interventions, and struggles over climate change have come to change urbanism. In short, if cities have changed climate change, then climate change is also starting to change cities. It is difficult to navigate the global urban without tripping over the accoutrements of climate changed interventions, from green roofs, solar panels, and electric scooters to projects intended to provide community-based adaptation, climate-related interventions are woven into the urban fabric. Analysis of the kinds of activity taking place in cities also bears this out. In their assessment of how non-state actors can contribute to the goals of the Paris Agreement, Hsu et al. (2018: 8) find that by 2017, “7,378 [cities] from 133 countries, representing 16.9 percent of the global population” had declared some level of commitment to

action. In the largest assessment of climate change action planning conducted to date, Reckien et al. (2018) surveyed the nature of climate action planning taking place in 885 urban areas in the European Union (EU)–28. They found that “approximately 66% of EU cities have a...[stand-alone] mitigation plan, 26% an adaptation plan, and 17% a joint adaptation and mitigation plan”, though also, and critically, “about 33% lack any form of stand-alone local climate plan” with climate action, where it existed, linked into other agendas (Reckien et al., 2018: 208). Finally, climate action is not simply just a paper or plan-based exercise: Davidson et al. (2019: 2) report that the 96 cities that make up the C40 network (and which encompass 650 million people and 25% of global gross domestic product (GDP) have undertaken over 14,000 actions.

Global urbanism in a climate-changed world is materially different. The provision of water and electricity is changing form, with more or less intended outcomes for the future of urban infrastructures and service provision. In some cases, distributed and decentralised provision through rainwater collection and solar panels is having an empowering effect as cities and local communities gain control over access and costs (MacArthur, 2016; Burke and Stephens, 2017). Elsewhere, however, it may serve as a further means through which infrastructure provision comes to be splintered, as elites secure their own resources and abandon public utilities which can no longer afford to extend service provision to those who currently lack access without the profitable consumers who are going off-grid. Climate change is proving a force for the introduction of smart grids and digital technologies, including initiatives that have the intention of managing peak load and integrating renewable electricity into local grids. At the same time, such technologies are creating concerns about the increased surveillance of daily life and the potential effect of creating differential access to services between those who can and cannot afford to manage their peak demand (Bulkeley et al., 2016; Kitchin, 2017). New forms of urban nature are being deliberately introduced into cities in the form of parks and pollinator gardens, walls that grow vegetables and roofs for butterflies and drainage systems with reed filtration and the ‘daylighting’ of entombed urban rivers (Kabisch et al., 2016). Whilst often with laudable aims for enabling climate resilience alongside other sustainability goals, concerted efforts for urban greening are also being seen as a means through which new kinds of social and economic exclusion are being generated with evidence mounting of forms of ‘green gentrification’ (Anguelovski, Connolly and Brand, 2018).

Climate change is also serving as a means through which new forms of urban politics are being generated and existing political matters reconsidered. The last two decades have seen a growth of experimentation as a mode of urban climate politics. Experiments are “purposive interventions in which there is a more or less explicit attempt to innovate, learn or gain experience”: urban climate change action has largely been characterised by these more informal, heterogeneous and, on the whole, fragmented kinds of action taking place beyond the traditional channels of policymaking (Bulkeley and Castán Broto, 2013: 363; Hoffmann, 2011). Experimentation as a political practice is noteworthy for a number of reasons. First, it is facilitating new and unlikely partnerships across diverse political actors at multiple levels of governance. In a survey of climate experimentation in 100 cities worldwide, Bulkeley and Castán Broto found that whilst local governments led the majority of urban climate experiments (66% of experiments surveyed), non-public actors, such as non-governmental organisations (NGOs), community-based organisations, universities, and private-sector firms, were also actively involved in climate governance, comprising nearly a quarter of the experiments surveyed. Moreover, initiatives led by non-public actors were more commonly developed through partnerships, between international organisations and private-sector firms, NGOs and universities, community-based organisations, and regional governments. This suggests that the practice of climate experimentation is forging new relationships

amongst non-state and non-public entities and establishing new political spaces beyond traditional policymaking arenas. However, as climate governance moves beyond the public sphere, questions of justice must be reworked in such a way as to reflect shifting responsibilities and rights to act, ensure the establishment or continuation of democratic processes, and recognise existing and emerging vulnerabilities to climate change and climate interventions at the local level (Bulkeley et al., 2014).

Equally fundamentally, bringing climate into the city is serving as a means through which urban futures are being reworked. Partly they are being reworked in material terms as current interventions for climate change are done with particular futures in mind, serving to prioritise some renditions of climate urbanism rather than others. Indeed, different ideas about what a carbon-neutral city will look like are leading to different socio-technical configurations for urban built environments (Tozer and Klenk, 2018). Instead of seeing the imagination of urban futures as a process of navigating amongst various material options with different politics (Strippel and Bulkeley, 2019), contestation and negotiation are often smothered by managerial discourses and consensual politics (Kenis and Lievens, 2016). But even more broadly, as climate has been brought into the city, it has reworked our relations to the future. In the grand plans of the twentieth century, urban futures were equated with optimism and progress, but modernist understandings of the future are being challenged by new ways of relating to a future that is already changed and may already be here. Climate changed urbanism is causing us to grapple with a new question about urban futures: What does it mean to have a future that is not limitless in its possibilities but already bounded by things foretold? Interventions seeking to reimagine and reconfigure global urbanism in a climate change light are heterotopic, generating spaces in which utopian plans and projects are enacted and contested, whilst all the time refracted through the realities of existing urban interests and inequalities (Edwards and Bulkeley, 2017).

Transforming urban futures?

Yet for all of the ways in which the mutuality of climate change and global urbanism have served to generate profound changes in both how we view the nature of global challenges and the configuration of global urbanism, in both a banal sense of the everyday experience of climate changed global urbanism and its political economies, it appears as if much is intact. Above all, global urbanism is insufficiently changed. Trajectories of global urbanism are likely to take us beyond a 2-degree rise in global average temperature above pre-industrial levels, and ways in which climate is rendered as an urban issue have not opened up space for the multiplicity of alternative sites and forms of political engagement through which action could be taken. What would it mean, then, for climate urbanism to be transformative of urban lives and futures? A decarbonised and resilient global urban system requires transforming energy systems, transportation, and consumption. These systemic changes will mean reducing material use, as well as the widespread integration of climate interventions into the urban milieu. But a transformative agenda for urban climate action takes into account that “interventions must be grounded in analysis of structural drivers, and differential capacities for change” (Romero-Lankao et al., 2018: 754) and that climate change is a matter of justice since it creates winners and losers both as impacts occur and as interventions to stop it unfold (Marino & Ribot, 2012). Rather than proceeding along neoliberal lines and through existing discourses about what it might mean to be a ‘global’ city, the urbanisation of climate change needs to take new political directions in order to enact this transformative agenda. A transformative agenda for urban climate action is about achieving decarbonised and resilient urban systems,

as well as reconfiguring structures of power towards more just ends. This entails radical social transformation to address the underlying root causes of vulnerability (O'Brien, 2012; Pelling et al., 2015), as well as action to avoid exacerbating urban inequality whilst reducing greenhouse gas emissions and justly apportioning mitigation responsibilities (Rice, 2014; Fuller, 2017). Whilst many existing urban inequalities might appear unrelated to climate change at first glance, they can represent access points to address the climate crisis. Deepening and broadening material change in cities to address climate change means tackling issues such as differential access to services and infrastructure, for example, opening up space for broader political action on climate change means recognising the ways in which urban imaginaries are limited by the influence of existing urban interests. The heterogeneity of current material conditions in urban areas and the ways in which it shapes different imaginaries of urban futures provides openings to understand not only how existing inequalities are contextually assembled but also to illuminate their fundamental relationship with climate urbanism. Enacting a transformative agenda for urban climate action will mean grappling with this question: What if transformative global urbanism means tackling some of the inequalities at the heart of the contemporary urban-climate condition, and what in turn would that mean for urban futures?

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