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>> Haste

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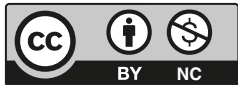Håvard Haarstad, Jakob Grandin, Kristin Kjærås
and Eleanor Johnson

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Acknowledgements

1

Why the haste? Introduction to the slow politics of climate urgency

Håvard Haarstad, Jakob Grandin, Kristin Kjærås and Eleanor Johnson

Climate change now tends to be talked about in terms of pressure for time. Climate emergency declarations in cities and parliaments worldwide stress the need for urgent action to avoid irreversible environmental change. At the same time, the actual politics of the sustainability transformation remain a slow affair. Despite the impressive proclamations of new, ground-breaking policies and technological innovations promising a sustainable future, concrete action on the ground is implemented far too slowly to make any substantive impact. Climate action in the present appears haphazard and ephemeral, postponed by social and technological inertias. Action is held back both by deliberate politics of delay and by legitimate justice concerns. The increasingly turbulent climate, causing wildfires and other disruptions, is not met with the urgent action needed. The central challenge facing urban policymakers and activists is now how to integrate rapid climate action with the need to accommodate justice in complex and contested transformations.

In other words, there are good reasons to call for more haste in the politics of transformation towards sustainability. In one sense, we are clearly running out of time. But in a different, and perhaps more profound sense, this particular understanding of time – the need to speed up the transition, to change faster, of urgency of action – could be at the heart of the problem. Perhaps haste is precisely what we do *not* need. When in haste, we make more mistakes, we overlook things, we get tunnel vision. Instead, is there a case for what we call a 'slow politics of urgency'? Rather than rushing and speeding up, maybe the sustainable future is better served by us challenging the dominant framings through which

we understand time and change in society. Transformation to meet the climate challenge requires multiple temporalities of change, speeding up certain types of change processes but also slowing things down.

That is the argument of this book, where we explore 'the slow politics of urgency' around climate change. While recognising the need for certain types of urgency in climate politics, we want to direct attention to the different and alternative temporalities at play in this field of political practice. There are several critical issues on urgency that need addressing. What does it mean politically to construct climate change as a matter of urgency? How do we accommodate concerns that are undermined by the politics of urgency, such as participation and justice? How do we act upon the urgency of the climate challenge without reproducing the problems that speeding up of social processes has brought? In short, what do the slow politics of urgency look like in practice?

The city is for us a critical lens for thinking through the ways in which rapid and radical change is made possible, lived and challenged. Many of the chapters in this book use the urban as a context for their discussions of climate politics. Urban-scale actions are widely seen as critical to meeting the global sustainability challenge. At the same time, cities are contradictory creatures. They are sites of infrastructures and spatial layouts that survive centuries, as well as sites of rapid transformations that change landscapes almost overnight. They are epicentres of socio-economic divides, with rapid urbanisation leading to both the proliferation of high carbon lifestyles and increasing precarity. As addressed by chapters in the book, cities are sites of both gradual and incremental change, as well as short-term experimentation and protest action. They illustrate well the interplay of the different temporalities of change, often occurring simultaneously in particular sites. By investigating the ways in which cities are also firmly situated in time, we can shed light on the different temporalities of the sustainability transformation.

The contributions gathered in this book respond to this challenge of haste by critically assessing opportunities and risks connected to rapid sustainability action. In different ways, they pick up the tensions between different tempos of politics and change, the relationship between experimental interventions and longer-term change, and the implications of different future imaginaries and emergency politics in the present. In this Introduction we will discuss the perspectives and arguments they bring to this discussion of the slow politics of urgency. But first, we will provide a conceptual foundation by elaborating on the temporal dimensions of transformation underpinning this book project.

Transformation as a question of time

The potential for sustainability transformation is tightly intertwined with how societies organise time. A lot has already been written about the politics of climate change, including from perspectives that treat spatial and temporal nuance with insight and care (see for example Bulkeley, Castán Broto and Edwards, 2014). To this broad field of scholarship, we bring a renewed attentiveness and critical perspective to discourses of climate urgency. We add a focus on how urgency and conflicting temporalities are experienced and acted upon, by a variety of actors in ongoing climate transformations. Of the multiple temporal dimensions we address in the book, there are arguably three that are particularly important – speed, emergencies and the future. We will briefly discuss each of them here and look at how they shape sustainability transformations.

First, the *politics of speed*. The sustainability transformation is torn between the need for fast and deliberate action and the current slow progress of the implementation of sustainability interventions. As Barbara Adam (1995) notes, there is a mismatch between the urgency of environmental problems and the slowness of action inherent in the multilateral approaches deployed to govern them. This links to the general acceleration of social change as well as human impact on the environment, which sped up in the mid-twentieth century (Steffen et al., 2015).

Cities are rapidly transformed through urbanisation, technological change, financial speculation and other processes of modernisation. Between 2018 and 2050, the number of urban residents is projected to increase by 2.5 billion, an increase by more than 50 per cent. Simultaneously, global carbon budgets to avoid thresholds of catastrophic climate change are rapidly running out (IPCC, 2018). Hence the speed at which societies are made sustainable is integral to the sustainability transformation. Previously viable sustainability solutions are rapidly being outdated. As planetary futurist Alex Steffen (2017) notes: 'The curve we've been forced onto bends so steeply, that the pace of victory is part of victory itself. Winning slowly is basically the same thing as losing outright.'

In this framing, perhaps most clearly articulated by Steffen, the core line of conflict lies between 'fast' and 'slow' interests. Here, future generations as well as the lion's share of the people presently alive are clearly to benefit from speed: they have much to gain from a swift sustainability transformation which reduces the magnitude of the planetary crisis. In contrast, a powerful minority of 'slow interests' seek to maximise their

present profits from current unsustainable practices by working to slow down the sustainability transformation. As Erik Swyngedouw writes in this book, the prevalent order works to 'make sure that the existing (capitalist) socio-ecological configurations can continue for a while longer' (see chapter 2).

These efforts are supported by a range of 'discourses of climate delay' which redirect responsibility, push for non-transformative solutions and emphasise the downsides of climate action (Lamb et al., 2020). Here social justice arguments are often mobilised to legitimise delayed and non-transformative action, for instance through the 'just transition' discourse emphasising the vulnerability of fossil fuel workers launched at the 2018 global climate summit in Katowice, Poland, or various social movements resisting fuel price hikes or car tolls (Wanvik & Haarstad, 2021).

But as the book's title – *Haste* – alludes to, there may be other constraints to a rapid sustainability transformation than predatory delay. Speed and acceleration may also have an uncontrolled, frenzied and uninhibited character to them, and have often been seen as at odds with just and emancipatory transformation. Prominent commentators have argued that we are witnessing a general acceleration of society (Virilio, 1986; Harvey, 1990). As Fredric Jameson (2002: 709) argues, the postmodern conception of time collapses everything to the present in a 'new nonchronological and nontemporal pattern of immediacies'. We can find similar ideas in theories about post-politics – which hold that politics has lost its historical and ideological dimension (Rancière, 1994). Under the post-political condition, we tend to assume that only a narrow range of possible pathways is available for the future.

As climate change is constructed as an urgent problem there is therefore a risk of reinforcing the status quo and its narrow focus on techno-economic solutionism. We are no longer regarded as having the privilege of time needed to pursue more transformative approaches. Thus, the politics of speed leads to our second temporal dimension: the *politics of emergency*.

Politics of emergency refers to the dominant framing of the problem as one that compels us to act quickly and efficiently, while setting other concerns aside. As societies place increasing emphasis on dealing with the effects of failed sustainability action – the wildfires, floods, storms, heatwaves and forced migration to which urban settlements are particularly vulnerable – climate change and sustainability are increasingly governed through emergencies. In states of emergency, established norms and considerations are cast aside to deal with immediate problems,

opening space for authoritarian forms of governance. Such emergency governance easily becomes a conservative way of organising time that also tends to reproduce social inequalities and lead to oppression (Adey & Anderson, 2012). Emergency has also become a relatively taken-for-granted way for authorities to govern situations and events (Anderson, 2017). When the focus is shifted to postponing future emergencies, argues Hu (2017: 111), there is no room for either gradual development or revolutionary transformation; we get stuck in 'an indefinite present without exit'.

Emergencies create ruptures, discontinuity and risk. Sociologists describe an increasing fragmentation of the present when grand national projects no longer hold us together (Beck & Levy, 2013). This temporal fragmentation might reinforce certain modes of governing societies, such as financial futurities, but undermine others, such as the liberal rule of law (Opitz & Tellmann, 2015). Agamben (2005) described 'states of exception', which seem increasingly common as episodes of climate emergency become widespread. Here politics suspend norms and procedures key to democratic control, in order to reinstate normalcy.

The deliberate declaration of emergency has distinct political effects. As Anderson (2017) shows, emergency discourses may also be used by progressive organisations oriented towards social justice to generate urgent attention to pressing issues and to demand a response. At the same time, scholars disagree about the implications and merits of emergency frames for advancing collective action, and some caution against it (Patterson et al., 2021).

The problem arises when emergencies become the norm. Emergency governance may then foreclose democratic deliberation, participation and environmental impact assessments in order to fast-track policies (Wilson & Orlove, 2019; Van Buuren, Vink & Warner, 2016). Emergency framings may also serve to legitimise large-scale technical interventions, such as geoengineering, in order to resolve the crisis state and maintain the status quo (Markusson & Ginn, 2014). Framing the sustainability crisis in terms of emergencies therefore run at the risk of collapsing into short-sightedness, undermining our institutions' capacity for collective deliberation and advancement of justice.

Attempts to break out of these constraints lead us to the final temporal dimension we want to address here, namely the *politics of the future.* Imaginaries of the future entail a temporality of hope and possibility. Climate politics is often framed in the long term, 2050 or 2100, which is distant enough for us to imagine having solved the challenge (or living in apocalypse). This is not to suggest that we tend to openly

and freely imagine the future – there is a distinctly political element to the construction of ideas about the future, and we learn to think about the future in particular ways. For example, the imaginary of techno-utopianism for urban futures has been advanced by corporate interests with a commercial stake in fantasies of technological ways of imagining cities (Datta, 2015). Imaginaries can be highly ideological projects, driven by different visions of what the ideal society looks like. Nowhere is this clearer than in the climate change discourse, with the strong tendencies towards depoliticised, market-driven and technology-centred solutionism (Swyngedouw, 2010). Chiara Certomà describes this well in this book (see chapter 21). Yet in this book we also consider imaginaries or imagination as a primary critique of haste, imagination being the mode through which we take as wide and colourful a view as possible of the landscapes with which we and future generations are faced.

There is a need to pluralise and diversify ways of thinking about the future (Bina, Inch & Pereira, 2020). Cook argues, in this book, that we need to rethink what innovation is, and move beyond the idea that innovation is about technological advancement (see chapter 20). Ideas of innovation and progress must be better aligned with collective social goods. Some social scientists use thinking about future and utopia as a method for fostering capacity to imagine alternative futures – the education of desire (Levitas, 2003). Gardening and reconnecting with nature could be one such innovation, or education of desire, as Sofia Cele describes in her chapter (see chapter 11). We believe an important task for social scientists is to critique prevailing future imaginaries and, through research, education and critical thinking, expand our capacity to think differently about possibilities that lie ahead.

Therefore, we need to learn the capacity to think about the potential of *the present* in order to give rise to particular future transformations (Miller, 2007). In her chapter in this book, Keri Facer challenges us to think about how to create new and more inclusive conversations about what might be possible in the world, and what alternatives we can imagine (see chapter 6). At the same time, we need to embrace the unknowability and diversity of possible futures by experimenting with small-scale interventions, guided by pragmatism and bottom-up inclusiveness, as Andrew Karvonen and Jonas Bylund argue for in their chapter (see chapter 15). Making this link between mobilising new imaginaries of future transformation, on the one hand, and exploring practical actions on the other, this book aims to make a substantial contribution to the intellectual effort of navigating the climate crisis.

What is in the book?

The chapters in book are intended to be different from standard academic texts. While making use of insights from rigorous research and reviews of existing literatures, they are intended to be more focused on discussing ideas in a direct and accessible way. For this reason, they are also shorter than typical research papers, at about half the length (so they can be read even if you are in haste). The book is structured into five parts, each shedding light on a key element of the slow politics of urgency.

With the first part, *Climate apocalypse and radical utopias*, the book starts by reflecting on visions of the future, both apocalyptic and utopian. Erik Swyngedouw's chapter unpicks the dissonance between the need for urgent action on climate change on the one hand, and the failing attempts to deflect the trajectory of the climate future on the other. In a situation where we are already living the apocalypse, the only way out is to inaugurate a new temporality and spatiality around a democratising re-politisation of the current socio-ecological state of affairs. Cecilie Sachs Olsen's chapter challenges the capitalist underpinnings of modernist architecture and holds that a different architecture is possible. Using the Oslo Architecture Triennale as the exhibit, she shows how architecture and art can generate new relationships and different conversations. Political protests can also take on this playful and creative form, as showcased in Emma Arnold's chapter on Extinction Rebellion and imaginaries of the future city. The chapter makes ample use of visual imagery to illustrate the apocalyptic messaging and the physical manifestations of the group' actions. The final contribution in this part, by Marikken Wulff-Wathne and Kristin Kjærås, puts forward that hope must be a critical response to the current crises. But importantly, we need to move beyond the individualised senses of hope that currently prevail and foster a new collective sense of hoping.

The following part, *Learning the politics of urgency*, gathers contributions that use concrete experience to explore rapid and slow transformations. Keri Facer's chapter uses a specific and challenging conversation about climate change to discuss the role of popular education in sustainable transformation. Popular education, she argues, can create new conversations and open-ended inquiry, which may in turn stale and entrenched conversations about whether it is possible to do anything about climate change into new pathways towards sustainable and fair societies. Eugene McCann takes the concrete instance of Greta

Thunberg's strike outside the Swedish parliament as an opportunity to discuss immediacy and publicness in climate politics. The immediacy and publicness of this type of protest action, which shares similarities with some of the effects of Extinction Rebellion discussed in Arnold's chapter, potentially generates significant attention and force behind the urgency of climate action. There are dangers, too, McCann warns, in the ephemerality of this type of political practice.

The final two chapters of this part are case studies reflecting on slow and rapid institutional change. Scott Bremer and Eleanor Johnson, looking at transformations in Bergen, Norway, argue that we need to critically learn from communities that are already rapidly transforming in response to climate change – particularly how their institutions are responding and how we can adapt with care. The chapter by Ping Huang and Xiaohui Hu takes us into a concrete case of rapid transformation in China, the city of Huzhou, which has become a model city for the Chinese project of ecological civilisation. The authors provide insight into the ideas and philosophies of this policy experimentation.

The third part, *Countering alienation under rapid change,* brings together contributions examining various ways to make urban transformations more meaningful and inclusive. Jesse Schrage explores individual experiences with everyday consumption, and the emergence of new aesthetics of greener and low-carbon consumption patterns. These seemingly mundane practices, he argues, entail important politicisation and utopian aspirations. Sofia Cele's contribution highlights another seemingly mundane activity, urban gardening, and argues for its importance in developing ecological literacy. This involves transformations on nature's timescales, both the gentle slowness of seasons and immediate meaning-making. In her chapter, Eleanor Johnson writes about efforts to change the wasteful practices of fast fashion in the emergence of the 'supercyclical city'. The threads of the fabric are both real and metaphorical components of the web of interactions that can slow the pace of resource use and increase the pace of social engagement.

Then follow two case studies both examining, in quite different ways, concrete experiences with countering alienation and exclusion from rapid urban development. First we move to Istanbul, where Mahir Yazar examines the battle over urban redevelopments in the name of sustainable transformation. The chapter highlights in particular the contrasts between state-led and community-led forms of urban transformation, and shows how community groups struggle for conserving urban green spaces. Second, the chapter by Tarje I. Wanvik and Håvard H. Bjørnstad tells the story of how they used 'serious gaming' to draw

social groups that are typically not included into democratic deliberation into engagement over urban sustainability issues.

Part four is titled *Contesting the speed of urban change*, and critiques ongoing large-scale projects of climate-related urban transformations. Andrew Karvonen and Jonas Bylund write about the shift which has arguably taken place in contemporary planning, away from the large-scale visions and top-down processes that characterised much of twentieth-century urban planning. Instead, they hold, there is currently a rise of locally focused, experimental forms of urban change, which may be incremental but nevertheless has potential to realise deep and long-lasting transformations. Jakob Grandin shifts our focus to Addis Ababa and examines how the city's efforts to make the transport system more sustainable and efficient are in tension with what are considered 'inefficient' urban elements. This illustrates wider politics of efficiency and speed, and the implications for those who are too slow and need to, literally, get out of the way.

Ståle Holgersen, in a similar vein, questions the city of Malmö's claim to be the greenest city in the world by shedding light on what is left out of the narrative. The chapter clearly demonstrates the multiple ironies of naming a city in one of the highest-consuming countries in the world, with reference to some of its redevelopment projects catering to the wealthiest residents, as 'greenest'. Examining a similar urban redevelopment project, Dokken in Bergen, Håvard Haarstad's chapter questions whether we have imaginaries for what radical and rapid urban transformations look like. He argues for recreating a new imaginary for transformation centred around the city as a commons.

In the fifth and final part, *Temporalities of infrastructural change*, we explore the rapid and slow processes of built environments, energy systems and technology. AbdouMaliq Simone questions the nature of urban life in the face of pandemics and recurring crises. As established trajectories increasingly appear impossible, peripheral places and infrastructures becomes spaces to, in Simone's words, 'reverse engineer' trajectories of life. Matthew Cook examines electric vehicle infrastructure developments in Milton Keynes, one of the fastest-growing cites in the UK and a testbed for various innovation projects. He considers the potentialities of alternative urban innovation imaginaries that better attend to the social and argues for more inclusive and shared spaces of innovation.

Writing from Turin, Italy, Chiara Certomà weighs up the democratising potentials hoped for the digital revolution, asking where the digital revolution is taking us next and what technologies can contribute to imagining new ways of living sustainably in cities. The chapter

by Hannah Knox, Jonathan Atkinson and Britt Jurgensen reflects on the lessons of a collaborative action research project, the People's Republic of Energy, to understand how people are experimenting with practical action in the face of the climate emergency. They reject the common criticism that such collaborative work is a luxury given the urgency of climate action, and argue instead that it creates imagination-work that actually generates action. And closing the collection on a hopeful note, Siddharth Sareen looks at Lisbon, the European Green Capital 2020, and traces the city's rapid ascent as a darling of the urban solar movement. Lisbon's achievement is not just a matter of technological progress, and Sareen attributes its success partly to urban spectacle, such as solar festivals that herald energy politics in the city.

Closing reflections

It took us, ironically, quite some time to decide upon the right title for this volume. Working with this large group of chapter authors on the contradictions and problems of rapid transformation to deal with climate and sustainability challenges, it gradually became clear that research in this field was growing concerned about the politics and practices of speed. The chapters, and the discussions around them, drew the inquiry towards multiple temporalities through which transformation can occur. We seemed to concur that there is a need for urgency in climate politics at all levels, and that the delay tactics of those with entrenched interests in the status quo are endangering our future. Yet we need more nuanced conceptions of the temporalities of climate transformation, particularly when we see it (as we do in this book) through the lens of urban, local, community and personal action.

We have attempted to capture this uncomfortable tension involved in the inevitable efficacy and error of taking brisk action towards a goal. The book's title, *Haste*, we felt, captured the elements of worry, fear and even panic that motivate many of us in the field, and on the ground in protests, to undertake action that actually causes us to change tracks, to try steering the course of history somewhere safer. Haste conjures an image of intense, almost narrowed, focus and productivity, a state of working many of us might recognise in response to a looming deadline. But this one syllable communicates something other to us, and this is the notion of accident, error and *mistake*. One is reminded of the idiom 'more haste, less speed', meaning that to act in blind haste is to act at the expense of successful arrival at an outcome. The word tugs at something

more uncomfortable and forces us to acknowledge another unwelcome word: pressure. It encapsulates a wider spectrum of felt problems and simultaneously implies a deadline. At the very least, haste affords some founding sense of direction. To make haste is to take imperfect action – yet it does do the trick of propelling people quickly from one place to another. It leads to some big questions, for such a small word.

Other than haste, and beyond lethargy, inertia and deliberate delay, there is radical imagination and deliberate action. As many of the chapters in the book show us, such imagination is both abstract and practical. It can develop through protest action in streets, as Emma Arnold and Mahir Yazar describe, as well as in gardening with children, as Sofia Cele shows. It can be sparked by grievance against particular industry practices as in Eleanor Johnson's chapter on fashion, or be built around concrete interventions, as Siddharth Sareen illustrates. In other words, imagining a different world can begin with the practical act of creating it. The climate crisis forces us to think about alternatives in real terms.

At the same time, radical imagination of the future is also, necessarily, abstract. There is important intellectual work involved in connecting dots and animating broader systems of thought around these practically generated notions of change. All the declarations of climate emergency must surely be useful for something, at least for strengthening the common cause for mobilisation across cities, countries, ethnicities and generations. To the extent that the chapters share a political project, it is articulated around collective and inclusive transformations in response to climate change which can take many different practical forms. Erik Swyngedouw's chapter talks about the need for fidelity and passion about the idea of real possibility of an egalitarian common world. Part of this, as Ståle Holgersen points out forcefully, involves confronting inequities both in the world and in the way we deal with climate change.

So where do we draw the line between necessary speed and destructive haste? As we write this, the IPCC is releasing the latest of its dire warnings that large parts of the planet will become uninhabitable without immediate, rapid and concerted climate action. Further delay in creating robust, low-carbon societies is no longer an option. But as these warnings quickly drown in the noise from the breakdown of the global security order, we realise that there is no longer a 'normal' to go back to; ours is likely a century of turbulence and upheaval. A key challenge for our time is therefore to build the capacity to maintain spaces for reflexive political deliberation as the temporalities around us are collapsing into fragmented sites of emergency.

If you were fortunate enough to witness or participate in any of the climate protests which erupted before the COVID-19 pandemic, you will understand the slowing power of collective calm, of silence and of focus. These protests, which several of the chapters in the book discuss, invoked a strange sense of relating to time within our cities, bringing these spaces to an almost meditative standstill. Though the words 'panic' and 'emergency' were reprinted on social media and in the newspapers, the action of sitting or lying down outside of parliaments in cities around the world necessitated a certain tranquillity. A more nuanced conception of the temporalities of change, as we have attempted to advance here, might help us think about the wide expanse of the future without losing passion for the immediate and practical matters of the present. Perhaps the key lesson from this book is that there is no use waiting for some future moment when the movements and the imaginaries are in place and ready to change the world. We need to fight for a slow politics of urgency through which we can create moments of stillness and focus, in which we can chart the course in stormy waters ahead.

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Part I
Climate apocalypse and radical utopias

2
'The apocalypse is disappointing': traversing the ecological fantasy

Erik Swyngedouw

End times?

We are living in strange times. Not only has the COVID-19 pandemic wreaked havoc with the normalised conditions of everyday life, but it has also foregrounded the indelible link between ecological processes, socio-economic dynamics and political configurations. More importantly perhaps, and despite the alleged break the COVID-19 pandemic exerted on environmental indicators as a result of the parallel economic slowdown, the overall global socio-environmental parameters are continuing their incessant southward march, albeit not everywhere at the same rate and not affecting everyone in the same way.

This is particularly well illustrated by the continuously worsening climate conditions. With the exception of the short-lived 'COVID' effect, greenhouse gases continue their inexorable rise, more or less in line with economic growth, rendering any attempt to keep global temperature rise to below 2°C a distant pipe dream. The talking shop of the Glaswegian COP-26 has not done much to assuage this diagnostic. Despite years of concerted international climate meetings, proliferating climate activism and scientific consensus, worryingly little has been achieved in term of rolling back the alleged pending climate catastrophe. What seems to be really at stake is to sustain, by all means possible, the prevalent socio-ecological order and to make sure that the existing (capitalist) socio-ecological configurations can continue for a while longer, rather than deflect the trajectory of the world's socio-climatic future. This is truly

'sustainability on speed', bringing to the fore indeed the real meaning of 'sustainability', i.e. to change a few things here and there to make sure that nothing of importance really has to change.

In this contribution, I shall consider the apparent deadlock signalled by the current climate condition, namely the extraordinary dissonance that prevails between the consensually established and agreed facts of climate change and the need for immediate and urgent action on the one hand, and the plainly disastrously failing attempts to deflect the trajectory of the climate future on the other. This paradox will be explored with an eye towards identifying modes of thinking and forms of political acting that might cut through this infernal impasse.

In particular, I shall insist that the presumption that the climate condition presents a common global humanitarian cause that could deflect humanity's future in a catastrophic direction is only a thin phantasmagorical veil draped over our libidinal attachment to sustaining the existing unsustainable situation. It is what Ingolfur Blühdorn (2011; 2013) calls the politics of sustaining unsustainability. This attachment drives our desire for an immunological prophylactic against the excesses of climate change – a process that produces a combined and uneven socio-ecological collapse – so that some lives can continue to be lived in some places while others are relegated to the margins where 'bare life' prevails (Swyngedouw & Ernstson, 2018). It is this infernal logic that permits keeping some souls 'green' while whitewashing death elsewhere, a logic that Achille Mbembe (2019) aptly terms necropolitics. The latter refers to an infernal process whereby the mobilisation of political and/or social power shapes how some people may live and others must die or, in other words, how socio-ecological sustainability in one place is bought at the expense of socio-ecological disintegration elsewhere. Perhaps we should indeed replace the currently popular term 'Anthropocene' (the Age of Men) with the more evocative term 'Thanatocene' (the Age of Death).

Traversing socio-ecological fantasies

In what follows, I shall focus on two fantasies that sustain the stubborn belief of many environmental activists, scientists and policymakers that a calamitous climate future can still be averted without a major transformation of the socio-ecological structure of society now. In other words, it is a fantasy whereby the presumed prophylactic qualities of a combination of carbon-capturing and carbon-saving technological adjustments,

energy transitions, and an adaptive managerial-institutional machinery suffice to make sure that life as we know it can continue a while longer.

However, encircling the Real of climate change more effectively implies, among others, the transformation and re-symbolisation of the imaginary upon which the need for and urgency of environmental action is legitimised and sustained. An anamorphic gaze that looks in a slanted way at the fantasies that underlie the impulse to engage with climate change might offer a glimpse of the Real of the situation and disclose the structure of the imaginaries that drive the current impotent climate actions. The hegemonic and symptomatic base upon which the legitimacy of the environmental discourse and practice of both mainstream and more activist climate movements is predicated rests, I contend, upon repressed traumas, a series of unacknowledged and silenced truths. Opening up different political-ecological trajectories requires transgressing the fantasies that conceal these traumas. We shall explore and illustrate this through examining the fantasies that support the climate change narrative.

Indeed, the consensual concern with climate change is predicated upon underlying fantasies that animate much of the dominant, but impotent, climate action. The first one revolves around the imaginary that it is not too late yet to avert disaster, to prevent the eventual coming of the catastrophe. Although the clock is ticking, so the argument goes, it is not too late yet to deflect the history of the future. I shall insist that this fantasy of a projected dystopian future needs to be transgressed and reversed. The catastrophe has already happened, it is too late already. It is within the contours of the present-day combined and uneven socio-ecological catastrophe and ruination that social action and political intervention need to be situated (Pohl, 2021).

Second, there is the widespread view that the assumed pending climate catastrophe needs to be averted in the name of saving a generic and abstract 'humanity'. While the climate condition does seem to invoke a sense of a 'global humanitarian cause', it is precisely the absence of a real global humanity that produces the climate catastrophe. The challenge, therefore, is to produce a future humanity in the world. While it is precisely the non-existence of 'humanity' that produced the present socio-ecological barbarism, the only hope indeed is to embark on a political process to produce 'humanity'. This would open the way to a different and more equitable socio-ecological future. This requires reorienting desire and its object-cause from an obsessive concern with greenhouse gases and other socio-ecological objects that only seemingly stand in the

way of producing a 'good' world to articulating desire around a political fantasy of the necessity to produce a common, inclusive and ecologically sensible world.

The apocalypse is disappointing

The climate emergency is articulated around the insistent construction of a scientifically robust promise of a dystopian, quasi-catastrophic, socio-ecological future if no urgent and appropriate action is taken. This real catastrophic imaginary of an unliveable future, reminiscent of the post-apocalyptic fantasy of the *Mad Max* movie series, is staged as the horizon that needs to be avoided or averted. In other words, decisive action is required today in order to deflect the unfolding of this anticipated (and very real) cataclysmic climate future.

This argument sustains the view that it is not too late yet, that the forecast future can still be avoided if appropriate techno-managerial interventions are implemented. The perverse revelling in the *jouissance* of a potential failure foretold is paralleled by an unquenchable fascination for the dystopia-to-come: images of scorched lands, disintegrating icebergs, fleeing people, hungry faces or an unliveable environment exert an irresistible pull – the projected dystopian future functions here as anti-desiring machine, an end that will never come but that is continuously reinvented and reimagined, and nurtures a perverse lure of and fascination for a possible eschatological destiny.

This pull of a catastrophe-to-come reinforces at the same time our libidinal attachment to the present status quo, not only as a normalised condition, but as one that needs to be preserved, cherished and 'sustained'. The preservation of the present socio-ecological arrangements, which can be achieved with 'proper' techno-institutional change, is considered not only as the horizon of the possible, but also of the desirable. This is a radically reactionary and literally conservative position. The repeatedly announced end-of-times deluge solidifies even more our attachment to a reactionary desire to sustain the present. In doing so, such phantasma-gorical imaginary covers up the trauma of the already existing combined and uneven socio-ecological collapse, and disavows the Real of the present socio-ecological predicament many already find themselves in.

Indeed, many people around the world already live in the socio-ecological apocalypse, as demonstrated by the large numbers of climate refugees and mounting socio-ecological problems in the poorest parts of the world or, rather, experienced by the poorest part of the world's

population (Bettini, 2013; Parenti, 2011). The apocalypse has already happened for them; it is their Real of the present. The fear of the consequences of climate change in one place is paralleled by deepening and already really existing socio-ecological disintegration elsewhere. The promise of a catastrophe-to-come is one around which middle-class and elite desires (for a 'better' climate) and fears of collapse circulate. While the elites nurture an apocalyptic dystopia that can nonetheless be avoided (for them), the majority of the world already lives 'within the collapse of civilization' (The Invisible Committee, 2009). The apocalypse is indeed a combined and uneven one, both in time and across space (Williams, 2011). More importantly, the combined and uneven collapse implies that the costs and consequences of attempts to postpone the climate disaster for some people and places are increasingly decanted onto the poorest parts of the world's population.

Consider, for example, how the very quest for 'sustainability' in one place is predicated upon the production of unsustainability elsewhere, and the speeding up of 'sustainability' in some place accelerates socio-ecological disintegration and 'unsustainability' elsewhere. For example, the Nordic countries routinely score very high on a range of 'sustainability' hit parades. Norway, in particular, stands out as the top of the chart. The extraordinary technological and institutional advances that secure a socio-ecologically sensible life and society are 'bought' at an extraordinary environmental cost elsewhere. The liberation of oil and gas from their sequestration in the Nordic oil and gas fields upon which the economic basis for this success is built quickly transforms into the release of even more greenhouse gases in the atmosphere. Or consider the rapid expansion of electrical vehicles and associated smart IT infrastructure, narrated as part of the foundation to nurture energy transition and 'sustainable' urban environments. Their expansion is fundamentally predicated upon deepening and widening the post-colonial extractivist ecologies upon which the Global North's success has historically been founded (and that produced the lineaments of the current socio-ecological catastrophe). Lithium, cobalt and a series of other 'rare earths' (such as columbine-tantalite) are feverishly mined in the (semi-)arid zones of Chile or in the disintegrating socio-ecological mining enclaves of Central Africa, thereby producing both extraordinary socio-ecological conflict and environmental degradation. This combined and uneven ('unsustainability') circuit intensifies indeed the Thanatopolitics upon which 'sustainability on speed' is produced in the immunological enclaves of the world's resilient elite environments, leaving the immunised in an illusionary capsular splendid isolation (Kaika, 2017).

I would argue that sustaining and nurturing catastrophic imageries is an integral and vital part of the new cultural politics of capitalism for which the management of fear is a central leitmotif and provides part of the cultural support for a process of environmental-populist post-politicisation (Swyngedouw, 2018). At the symbolic level, apocalyptic imaginaries are extraordinarily powerful in disavowing or foreclosing social conflict and antagonisms. Or in other words, the presentation of climate change as a global and universal humanitarian cause produces a thoroughly depoliticised imaginary, one that does not revolve around choosing one trajectory over another, or that identifies clear adversaries in a political process; it is one that is not articulated with specific political programmes or socio-ecological projects or transformations. It is a powerful antidote to symbolising a future-to-desire, to the making of the socially inclusive and ecologically sensible world many environmental activists claim they wish to inhabit, but for which no name can be imagined, or a strategy devised.

Transgressing this fantasy cuts through this trauma. To begin with, the revelatory promise of the apocalyptic narrative as well as the redemptive, but impotent, insistence on the key importance of behavioural and techno-managerial, more eco-sensitive, change has to be fully rejected. In the face of the dystopian imaginaries mobilised to assure that the apocalypse will *not* happen at some time in the future (if the right techno-managerial adaptive or mitigating actions are taken), the only reasonable response is, 'Don't worry (eco-modernisers, Green New Deal pundits, Greta Thunberg, COP-meeting participants, many environmental activists …), you are really right, the environmental catastrophe will not happen, it has already happened. It is too late, IT IS ALREADY HERE in the actual present conditions of planetary life.'

Many (but by no means all) already live in the post-apocalyptic interstices of life, whereby the fusion of environmental degradation and social disintegration renders life 'bare'. The fact that the socio-environmental imbroglio has already passed the point of no return for many people and places on earth has to be fully asserted. The socio-environmental ruin is already here for many. It is not some distant dystopian promised future mobilised to trigger a response today. Water conflicts, struggles for food, environmental refugees, the extreme social triaging inflicted by the COVID-19 pandemic, the infernal logical of extractivist socio-ecologies, etc., testify to the socio-ecological predicament that choreographs everyday life for the majority of the world's population, many of whom are living in urbanised environments. It is already too late; it has always

already been too late for them. They experience the consequences of the necropolitics that animate the contemporary immuno-biopolitical environmental state (Ernstson & Swyngedouw, 2017).

There is no Arcadian place, time or environment to return to, no benign global socio-ecological past or an ideal climate that needs to be reconstructed, sustained or stabilised. It is only within the realisation of the apocalyptic reality of the ruinous now that a new politics might emerge. It is from within the ecological wreckage of the present that a new imaginary of the possible might arise. Directing the environmental gaze to the perspective of those who are already barely surviving within the collapse of the socio-ecological conditions opens up a wide range of new ways of grappling with socio-ecological realities and reveals a vast terrain of different political and socio-technical interventions other than the presently dominant ones. More importantly, it shifts the gaze to those who are already suffering from socio-ecological disintegration *now*. Surrendering our libidinal attachment to the enjoyment of future failure on the one hand and to the injunction to enjoy our neoliberal consumerism and identitarian, but often well-meaning, inscriptions in the present on the other just deflects desire away from embracing the necessity of constructing a different world in the world (Swyngedouw, 2021).

The empty core of 'humanity'

The second fantasy around which the consensual climate discourse is constructed revolves around insisting on the immanent danger climate change poses to the future of humanity. Humanity in this context is not just understood as the sum total of humans living on planet earth but rather as human civilisation, characterised by a range of shared and common beliefs, ethics and principles (such as liberty, solidarity, social relationality, pluralist inclusion, human rights, principled equality and civic rights). As Maurice Blanchot already argued in the early 1960s (in the context of what was then perceived as the possibility of nuclear apocalypse), this view is predicated upon the fantasy that 'humanity' (in the civilising sense) actually exists, that there is a global and human civilisation, that human history has demonstrated the making of a common 'humanity'. And it is precisely this fantasy that underpins the view that 'humanity' requires or deserves salvation against the threat of a potentially devastating or dehumanising future environmental condition.

However, the Real of the human presence on earth of course exposes the empty core of 'humanity' (Blanchot, 1971). There is no reality of the presence of a common humanity. The multiple tensions and conflicts, the unspeakable and recurrent violence inflected by some humans on other humans, and the deepening uneven power geometries between humans, testify to this 'emptiness'. This does not detract from the many examples that occasionally demonstrate the possibility of a deep humanity shared by some humans in some places. On the contrary, these examples demonstrate its potentiality. Nonetheless, most of human history, culminating in the serial massacres of the twentieth century, testifies to the non-existence of humanity (in an earthly sense) and to the continuing barbarism that characterise many human interactions, despite successive, often heroic and occasionally locally successful attempts to produce collectively a common sense and practice of humanity. 'Humanity' indeed does not exist (yet); it may never do.

It is precisely this absence or emptiness that is denied or disavowed in much of the climate argument; it is a repressed trauma, namely the disavowed knowledge that there is no such thing as 'humanity' despite the assertions and avowed desire to be deeply 'human'. The continuous objective and subjective violence inflicted by some humans onto other humans (consider, for example, the ongoing massacre of refugees drowning in the Mediterranean Sea – more than 17,000 recorded deaths since 2014 according to the International Organization for Migration – or reduced to 'bare life' in North African concentration camps funded by European taxpayers, the class war waged by a global financialised bourgeoisie, or the infernal consequences of serial socio-ecological exclusion) demonstrate the radical antagonisms and conflicts that cut through the human collective and signal that a common 'humanity' does not exist. It may indeed never do, unless a sustained political fidelity to the possibility, if not necessity, of its making is inaugurated and sustained in a determined political programme.

The disavowal in the climate discourse of the barbarism that characterises human collective life is a classic form of traumatic repression. In fact, it is precisely the conflicts and struggles that cut through humanity that produce the conditions for accelerating negative environmental change. According to Blanchot (1971), the fundamental challenge we are faced with, therefore, is the choice between an apocalyptic future that speeds ahead precisely because of the absence of 'humanity' on the one hand or the actual construction of a global earthly 'humanity' now that, in turn, would deflect the course of the future in a different and more benign direction on the other. What is at stake, therefore, is not

to assure the future of a really non-existing humanity as we know it, but first and foremost the creation of a humanity. As Alenka Zupančič insists:

> Blanchot isn't saying that the destruction of the world would be insignificant because there is no real (communal) world yet; he is not, that is, cynically saying, 'Let it all go to hell, the world such as it is is not worth the trouble anyway!' On the contrary, Blanchot is suggesting that, now that we have at least an abstract idea of the world (humanity) as a whole, it is worth the trouble more than ever. (Zupančič, 2018: 19)

Transgressing these fantasies, I contend, opens up enabling trajectories for the construction of a different socio-ecological present in the future. This requires staring in the face the Real of the situation, and to inaugurate a new temporality and spatiality articulated around a democratising re-politicisation of the current socio-ecological state of affairs.

'The people do not exist': foregrounding axiomatic equality

Indeed, a significant post-truth imaginary seeps into the dominant climate discourse, a phantasmagoria of an abstract and virtual, but nonetheless threatened, global humanity. In doing so, the Real of class and other antagonisms that cut through the semblance of humanity is considered irrelevant or at least subordinate. This fetishistic disavowal or foreclosure of the antagonisms that form the matrix of the social assures that nothing will really change. Traversing the present fantasies of a just and sustainable climate transition through techno-managerial and (neo)liberal individualist consumerist adjustments requires recognising the trauma of the non-existence of humanity and that it is precisely this non-existence, i.e. the class and other conflicting axes that cut through humanity, that has already caused the climate catastrophe.

Traversing this fantasy is predicated upon reversing the dominant argument: recognising that is already too late – the apocalypse has already happened – and the only possible thing left to do is to engage in a process of constructing a real 'humanity', of producing a human world in the world. As The Invisible Committee put it:

> It's useless to wait – for a breakthrough, for the revolution, the nuclear apocalypse or a social movement. To go on waiting is

madness. The catastrophe is not coming, it is here. We are already situated within the collapse of a civilization. It is within this reality that we must choose sides. (The Invisible Committee, 2009: 138)

The latter necessitates foregrounding radical politicisation. Or in other words, if we really want to take the ecological condition seriously, we have to displace the question of ecology onto the terrain of agonistic politicisation, animated by a sustained fidelity to what Alain Badiou calls a passion for the real possibility and necessity of an egalitarian common world. It is through such a political project that a common and enabling climate might be constituted. First and foremost, we have to insist that indeed there is no alternative.

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3
From architectures of capital to architectures of care: the arts of dreaming otherwise in the Oslo Architecture Triennale

Cecilie Sachs Olsen

In the world you know, the driving force behind how cities are built is speed, efficiency and progress. The desire for infinite growth has discounted common and ecological goals, measuring acts of care, culture and community as mere bumps in gross domestic product (GDP). You contribute to society by contributing to the economy – your work is what defines you. Streets are for circulation, not interaction; arts and culture have become the creative industries; social networks have become advertising markets; architecture and design have become surplus value. You sleep not to dream but to be more productive the next day.

Yet the limits to this paradigm have become abundantly clear. As social equity, well-being and non-monetary measures of prosperity falter, rising sea temperatures, extreme weather and other indicators of climate breakdown converge around the conclusion that the days of growth's predominance are running out. The COVID-19 pandemic has reasserted that we cannot continue living in a system rooted in the exploitation of people and nature. At the same time, the pandemic's disruption of business as usual opens new pathways in the ongoing struggle to emancipate ourselves from the growth paradigm. In the aftermath of the pandemic, there is an opportunity to transition towards a radically different kind of society that prioritises social and environmental flourishing over economic growth. But how can such a radically different society come about? The perceived inevitability of capitalism and the market economy as the basic organisational structure of society makes it hard to imagine and build alternative social structures and futures.

Capitalist utopias

Architecture has a long-standing relation with utopianism as a way to imagine alternative, ideal worlds. In modernity, the utopianism of architecture has predominantly been based on an ideology of progress and growth with a promise of building a better future. As a practical activity, this ideology inevitably requires time, money and resources. Not surprisingly, then, architecture has always been entangled with the ruling power and its specific economic system. Today, current conditions of accelerated neoliberalism, oligarchism and authoritarian populism have further locked architectural production to market-driven logics. How is 'a better future' defined within these logics?

It is well recognised that proposing blueprints of the good society can serve forces of reaction by harmonising present conditions and thereby constraining future possibilities. Consider the glossy computer-generated images (CGIs) that are used to bring architectural ideas to life. They are a valuable communication tool to depict the future of a place or a city: many struggle with plans, but everyone understands a picture. CGIs present schemes at their best: under a blue Mediterranean sky, with a well-placed bike and populated by smiling citizens, swinging their shopping bags or sipping lattes. Functioning not only as a tool for communication, but also as advertising for the sale and investment opportunity of a specific future, CGIs transform the urban environment into sleek promotional images displaying racial homogeneity, cultural appropriations, speculative global investments and a privately managed public realm. The future appears as a capitalist and consumerist utopia – a commodity that is predicted, transformed and controlled for the wealth creation of the present.

Capitalist utopias treats the future as a terrain that is empty, open and subject to colonisation by power and capital. The colonial attitude of the blank slate or *tabula rasa* ignores everyone and everything that existed on and with the land before. One example: an image fixed to the construction hoarding of a new one-thousand-home residential complex in East London played on the aspirations of overseas investors by showing a shiny shopping mall and an affluent white girl – possibly in her late teens or early twenties – flying into London and straight into a life of friends and shopping. There is a huge contrast between the girl and the multicultural working-class population currently living in the area. Another example: the CGIs promoting the Fjord City development, in which the former industrial port of Oslo will be transformed into

recreational facilities and residential neighbourhoods, depict glossy sea-front buildings. The sea itself appears as an opaque and concealing cover, as if there is nothing relevant underneath. The marine habitat that will be destroyed by the future development is largely overlooked.

Capitalist utopias are not about the enhancement and flourishing of existing habitats but their replacement. Yet we fail to notice (and care) because our attention is directed towards the shiny architectural object, looming forward from an indistinct, and insignificant, background.

Cultivating attention and care

In French, the word attention refers both to a capacity to notice something (*être attentif*) and to a capacity to care for it (*être attentionné*). The French cultural theorist Yves Citton (2017) argues that attention rests at the core of our environmental challenges because before we can care for something we need to notice its presence. How can we direct our attention away from the autonomous building and towards its facilitative background? How can we adapt our way of looking so as to identify, question and ultimately transform the power relations, neglects and injustices that are at the root of our socio-ecological predicament?

The architectural theorist Jeremy Till (1994) argues that the ways in which we conceive of and eventually build cities, and the buildings that constitute them, are to a large extent determined by the way that we represent them. He problematises the diagrammatic, large-scale and rationally oriented techniques that are predominantly used in masterplans and standard modes of architectural presentation. These techniques, he argues, reduce the architectural project to an autonomous, coherent and rational system presented through stable, unified and ordered elements that proceed in a steady manner from the scale of the city, through the scale of the building and finally to the scale of the architectural detail. The production of the built environment is depicted as a linear process that reduces the city to a series of codes that are reductive and exclusive: the scale excludes the realm of human and non-human bodies, the graphic excludes the social and political, and the rational method of representation excludes the imaginative, the suppressed and the personal. These modes of presentation may not only have fundamental negative consequences on how cities are built, but they also remove architects from a personal involvement in the construction through abstract codes and methods that put them in the role of a 'detached orderer'.

Cultural theorist Elke Krasny (2019) confirms that modern architecture is linked to a glorification of detachment and independence which relate not only to how architecture is represented but also to the intellectual and creative capacities of the, almost exclusively male, genius. Architecture with a capital A as it was discursively shaped by Western thought has accordingly excluded spatial practices performed by Indigenous people, people of colour, women or workers. Following on from this, one might say that the architect's work, despite the fundamental function of architecture to provide shelter indispensable for human life and survival, is positioned outside the realms of connectedness, dependency, social reproduction and care-giving.

As a result, when architecture claims to 'attend to' social and environmental issues, these concerns are generally taken on technically and autonomously. Sustainability has become about the building only, focusing more on what goes into it (e.g. products and materials used) than in monitoring the ongoing and processual relationships with its environment, people, flora and fauna. This approach is extremely averse to the relational concerns of care. Feminist scholar Joan Tronto (2019) illustrates the point: when men work and bring home a pay cheque, they consider this activity as a form of care. But the money (while enabling the family to sustain liveability) is not itself a form of care; it needs to be transformed into clean clothing, food, a safe and pleasant place to live. Doing so requires participating in the ongoing relations with those who are cared for. Similarly, buildings and their materials do not provide care in and of themselves. The relationships between buildings, their location and context, how they were built and who they will accommodate or displace, are all aspects that fundamentally affect the nature of the caring that buildings do.

What, then, if we shift our attention from the celebration of the creative architect-genius and the iconic status of detached and autonomous buildings to an architecture in the midst of things, emerging from a contingency of events across complex social, political, economic, ecological, technological and material fields? Would we then be able to unite our attention with a focus on planetary care and the interrelations between humans, non-humans and their material environments?

The Oslo Architecture Triennale

Let me invite you to *Society under Construction*, the opening performance of Oslo Architecture Triennale 2019. The performance takes place at the

main stage of the National Theatre in Oslo. The stage is turned into a global construction site with scaffolding, sandhills, piles of bricks and construction containers. Yet what is actually being built – the building itself – remains curiously absent, even irrelevant. Instead, you are introduced to what normally remains in the background: the many people and fates that are entangled in processes of construction. A Romanian construction worker talks about illegal employment and existential angst; the former head engineer for Berlin's BER Airport reconstructs how he became a scapegoat for the government, for supposedly designing a default smoke-extraction system; an investment consultant draws up a cost–benefit analysis of investments in 'concrete gold'; a lawyer reveals tactics for how to fight supplementary claims by subcontractors; an economist warns a government delegation from Ethiopia against copying the urban development of Singapore; a lawyer from Transparency International details cases of corruption in the Norwegian construction industry that resulted in poisoned forests and contaminated drinking water; and a biologist demonstrates how ant colonies build more successfully than humans by doing things together rather than solely looking out for individual interests.

Perhaps you are familiar with architectural festivals like this one and you are surprised that I invited you to a theatrical performance and not the standard architectural exhibition that characterises these events. As the curator of the 2019 edition of the Oslo Architecture Triennale

Figure 3.1 *Society under Construction*. Photo: Istvan Virag/OAT.

I can, however, assure you that this festival is different. It deliberately broke with standard modes of architectural presentation and instead presented practices and experiences rooted in the arts, such as theatrical performances, immersive installations and works of fiction. Through these practices, architecture was rethought not as an autonomous object or 'thing' to be achieved, but as a multiplicity of diverse practices and concerns. Instead of celebrating creative geniuses and iconic buildings, the festival asked: how will cities be formed when it is human and ecological flourishing that matter most?

In contrast to the *tabula rasa* claim of CGIs and other capitalist utopias in which planned and built solutions or blueprints attempt to programme the future in advance by covering a presumably blank canvas with new images, the starting point of the festival was to rid the canvas of the habits of thought and preconceptions already occupying it so as to direct thought and practice in new ways. In this vein, *Society under Construction* laid bare the social and ecological costs of growth-based development in real-life stories of personal failures, convictions, interests and doubts. Rather than analysing the construction process as a detached orderer, the audience was invited to inhabit the problems by living them out. In other words, rather than simply looking for an answer or solution, the aim was to enable a heightened awareness of the challenges and problems at hand, and this way possibly access a different mode of inhabitation.

The Library

After the *Society under Construction* performance, I suggest that you join me for the opening of *The Library* – an immersive installation at the National Museum of Architecture. You are curious to learn more about the festival, so you are happy to come. *The Library* is filled with lendable items that you can take with you home if you like. There are books, furniture, tapestry, paintings, tools, compost, plants, games, devices and material samples that are made by architects, activists, scientists, writers and artists from across the world. The items have in common that they are all oriented around the basic tasks of sharing responsibilities of caring for our world.

You admire a large woven tapestry titled *Two Thousand Years of Non-Urban History* by the group Civil Architecture. The tapestry tells an alternative history of the Arab Gulf, emphasising that the West has much to learn from civilisations that thrived before the violent imposition of industrial capitalism which is manifested in the monumental skylines emerging

from a sparse landscape dominated by oil fields. The alternative history is one of communal cooperation and care, planning around scarce resources and trade, including the *falaj* and *qanat* water systems, fish traps and the

Figure 3.2 *Two Thousand Years of Non-Urban History*. Photo: Istvan Virag/OAT.

desert kites of the Arabian Peninsula. You notice that many of the items in *The Library* revolves around how architecture starts with nature, what is already present in the world around us, rather than the *tabula rasa* claim of modern architecture. This perspective raises questions around how architects, in the process of building, care for nature and all living beings (humans, animals, plants, trees) involved and affected by the building process. Such questions explore the architect's responsibility for the entire process of building, from the sourcing of materials and the environmental impacts of these processes, to caring for the people (workers, residents, neighbours) involved, along with concerns around what has been displaced and how the building will be maintained.

You think about these questions as you sit down at a large reading table which is constructed as part of the project *Shelter for One Stone, One Tree, Two People and Four Birds* by the artist Kalle Grude. The table addresses not only your needs as the human user of the table: the techniques and materials used to construct it were equally oriented around the care for nature and other living beings. You have brought a book that you found on one of the shelves to the table. It is called *From Subtraction* and is written by the architecture think tank n'UNDO. Reading its introduction you learn about 'the transformation paradox' in which the human urge to constantly transform the world is at the same time a root cause of the environmental crisis as too much nature is transformed and turned into human-made capital: rivers are turned into power generators, fossils into gasoline, stones into skyscrapers and so on. In response, n'UNDO proposes that 'doing' forms no part of the architectural project, rather 'undoing' and 'redoing' are the only strategies available. True architecture, they argue, can be found in simple and everyday interventions, such as orienting a chair to contemplate the landscape.

You are so immersed in the book that you startle when someone taps on your shoulder to gently remind you that *The Library* is about to close. It is one of the cleaners of the building, carrying a large broomstick. 'I am, in fact, part of the installation,' he explains as he starts dusting the reading table. He nods towards 10 glass vessels displayed at the other end of the room. The vessels are part of the project *Away* by the artist James Carey. Foregrounding the labour of care required to maintain a building, each vessel presents a small collection of waste material produced and collected during each week of the festival, alongside an audio commentary featuring interviews with the cleaners working in *The Library*. As you get ready to leave you check that you are bringing with you the two items that you have collected from *The Library.* The first item is a bag of seeds from the installation *Logistics* by the architecture office

Figure 3.3 Various items in *The Library*. Photo: Istvan Virag/OAT.

Lilla Sthlm. The installation invited you to become custodian of a pine by bringing home a bag of seeds and with it the responsibility for the time and effort it takes to grow a single pine tree. The second item is a letter from the installation *Inventory of Experience* by Bart Decroos and Laura Muyldermans. The letter is an incentive to write an 'inventory of experience' of your own home and return it to *The Library*. It proposes ways in which such inventories can be included in architectural project briefs along more technical inventories.

We Should All Be Dreaming

It is getting late, but I manage to convince you to join me for a final event this evening with the bait that there will be food. We arrive at a run-down and abandoned petrol station in which we are seated around a large table set for a dinner party. The artist-activists Maryan Abdulkarim and Sonya Lindfors welcome us to the dinner titled *We Should All Be Dreaming*. During the dinner, we are invited to spend time, listen and dream together in a format that is a mix of collective think tank, choreographed gathering, performance and a meal. Focusing on the radical potential of dreaming as a deliberative, restorative and subversive practice, the performance centres on Afrofuturism to recentralise and decentralise taken-for-granted assumptions through eco-poetic relations, presencing and atmospheric sensitivity, ecological tunings and mindful

practices. The aim is to speculate about what could be otherwise: what if colonialism did not happen? What if Africa was the centre? Linking these questions to the Oslo Architecture Triennale, and the field of architecture more generally, worked to challenge the racialised, sexualised and classed divisions of power that have characterised the modern development of the discipline.

You dance, eat, dream and talk. During the interactions you have with various strangers around the dinner table, you are reminded that the critiques of progress and development articulated in the Global North risk being insufficiently sensitive to the realities of other cultures in other parts of the world. The climate crisis discourse of an end-of-the-world emergency risks over-simplifying and generalising the issues at hand. Indigenous cultures have, for example, lived through exactly the socio-environmental breakdown now predicted by climate scientists several times over. Yet critiques of development articulated in the Global South and alternative and/or Indigenous projects promoting alternative life-worlds may also have much in common with the critiques articulated in the Global North. Hence, in order to avoid unintentionally creating new forms of intellectual domination, we need to create alliances between plural perspectives rather than promoting a homogeneous model for transformation.

It is getting late and you are becoming tired. The dinner ends aptly with a collective dreaming session. You close your eyes and join the other guests in dreaming otherwise by asking questions out loud that no one is expected to answer: 'What if we could sleep just to dream and not to be more productive the next day?'

The end

For some critics, the Oslo Architecture Triennale was a failure because it did not present any concrete plans or solutions for what radically different future beyond economic growth would be like. As journalists from a prominent Norwegian magazine lamented: 'The curators do not only reduce the ability of humans to solve problems, they are also reducing their own project. Oslo Architecture Triennale could be a provider of viable solutions in the field, but instead they are delivering science fiction!' (Choi and Austrheim, 2019).

There is an alarming situation today in which attempts to challenge or question the status quo are ridiculed and/or neutralised through a demand to present concrete solutions. This change of register, from

a discussion of problems to one of solutions, nurtures public debates that favour pragmatic politics over political critique. Paying attention to something is valorised through a certain external purpose – gaining something, finding a solution, solving a problem. This very focused form of attention may prevent us from producing new sensibilities and forms of understanding that might enable us to consider the problem at hand in new ways. Pragmatic solutions risk seeing things in isolation, while the Oslo Architecture Triennale aimed to increase the ability of the public to become attentive to interrelations. This reorientation of our attention need not entail turning away from pragmatic and policy agendas. Rather, it may help us move towards an architecture of care – a wider vision that, by foregrounding connectedness, dependency and care-giving, rather than independence, economic production, growth and progress, can provide a context for pragmatic policy debates and raise fundamental and often neglected questions about cities, urban space and architecture, about processes of urbanisation and societal transformation, and what they might become.

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4
Extinction Rebellion and the future city

Emma Arnold

'*Pour ce qui est de l'avenir, il ne s'agit pas de le prévoir, mais de le rendre possible.*' 'For that which is to come, it is not a matter of preventing it, but about rendering it possible.' This quotation from Antoine de Saint Exupéry's *Citadelle* (1948) stands alone in the preliminary pages of the 2018 Intergovernmental Panel on Climate Change's (IPCC) special report *Global Warming of 1.5°C* (IPCC, 2018: xi). Both ominous and hopeful, the quotation makes a connection between the future and the possible. Read in the context of the catalytic report forecasting impacts of a warming world, it suggests that what the future holds is dependent on the actions we take in the present. This connection between the future and possibility is significant for it hints at the role of imagination and creativity in transforming the present and creating the future. In other words, the future is something we create now. Are we doomed to a dramatically warmed and altered world? Or can we create a different future – multiple futures, even – made possible through our collective imagination and action?

How do climate activists creatively imagine the future? How does climate activism hint at possibilities of a different future? This chapter addresses these questions and explores how the city is performed and transformed in the artistic climate activism of Extinction Rebellion during their Nordic Rebellion in Oslo in August 2021. In the words of academic and politician Rupert Read: Extinction Rebellion is 'an emergency response' (Read, 2020: 1). Extinction Rebellion staged its first major actions in London in late 2018, declaring a climate emergency not long after the IPCC's influential report. In connection with this declaration, the city of London became the site for unprecedented urban climate activism. The group's creativity, urgent tone and unexpected actions across the city captivated the public

imagination, tapping into widespread feelings of hopelessness and a collective desire for meaningful action on climate change.

Introducing Extinction Rebellion

Extinction Rebellion was founded in the United Kingdom in 2018 by Roger Hallam, Gail Bradbrook, Tamsin Omond and Simon Bramwell. The motivations behind Extinction Rebellion are described by Rupert Read: 'Politics as usual, governments as usual, have let the peoples of the world down in an extreme way: we are on course for eco-driven societal collapse, and we are extinguishing other species very rapidly' (Read, 2020: 1). Extinction Rebellion has a number of features distinguishing it from other environmental organisations: a distinct de-centralised governing structure, a particular emphasis on civil disobedience, and a unitary and easily recognisable aesthetic. Extinction Rebellion advocates for the use of civil disobedience or non-violent direct action with the goal of instigating government action on the climate crisis. These acts of civil disobedience are often playful, artistic and disruptive. These actions frequently take place in public urban space at symbolic sites. Through their actions, Extinction Rebellion repeatedly make three demands. They demand that governments *tell the truth* about the severity of the climate crisis and declare climate emergencies. They demand that governments *act now* on this emergency and achieve net-zero carbon emissions by 2025. They also advocate for going *beyond politics* through setting up citizen assemblies, a form of participatory democracy through which citizens are empowered to make decisions on climate and ecological issues (Extinction Rebellion, 2022).

The Nordic Rebellion

By December 2018, Extinction Rebellion was already in Norway. In April 2019, the Oslo group staged their first major action: *The Green Reaper.* This action was grim and urgent and darkly humorous at moments. The action entailed a funeral procession for all life on Earth through the streets of central Oslo and culminated with speeches, chants, songs and artistic performance in a blockade outside the Ministry of Finance. This was linked to the April International Rebellion though more modest in comparison to events in London, where numerous bridges and public spaces were occupied for 11 days by activists. Extinction Rebellion Norway carried out its second

mass action later in April 2019 with a series of 'die-ins' at strategically chosen sites in Oslo: the iconic Oslo Opera, the main hall of Oslo Central Station and the Oslo City shopping mall. As activists fell to the ground and played dead, clutching signs with dire warnings, the message was clear: climate change kills. Mock funerals, die-ins and other morbid performances continued between April 2019 and August 2021. Throughout 2019, new chapters emerged throughout Norway, a climate camp took place at the Norwegian political festival at Arendal, and Nordic activists joined German rebels at the International Rebellion in Berlin. From 2020 onwards, more local uprisings took place in Oslo, though the COVID-19 pandemic punctuated these rebellions and prevented large collective actions due to public health concerns and restrictions.

More than two years after their first action, Extinction Rebellion Norway staged the *Nordisk Opprør* (Nordic Rebellion) in August 2021 in collaboration with chapters from Denmark, Finland and Sweden. The Nordic Rebellion coincided with the Impossible Rebellion in the United Kingdom and the run-up to national elections in Norway. The Nordic Rebellion took place during a moment of pandemic détente and was promoted as a 'historically large demonstration of civil disobedience'. Taking place in the streets of Oslo between 21 and 29 August 2021, the overarching theme of the week's actions was: 'Our money or our life?' During this week, Extinction Rebellion activists from the Nordic countries collectively made two demands of Norwegian government: 'Keep it in the ground!' and 'Life over profit'. The actions, as many previous actions in Norway have done, addressed the issue of oil dependency and extraction in Norway and the ways in which economic development is perpetually prioritised over environmental concerns. More specifically, the activists demanded 'a rapid downsizing of oil production on the Norwegian continental shelf – and an immediate halt to the exploration for new oil fields' (Extinction Rebellion Norway, 2021a).

Extinction Rebellion write that 'through artistic and other means, we wish to show everyone how our restless search for more riches leads to devastation: the destruction of fertile soil, forests and animal welfare to make room for highways, runways, windmills, salmon farms, oil fields and deposits of mining waste in fjords' (Extinction Rebellion Norway, 2021a). These questions and issues frame the Nordic Rebellion actions that were carried out by autonomous groups of activists. Though many were organised independently, their messages converged on their shared vision and demands at various sites throughout Oslo. The following photographs taken during the Nordic Rebellion pick up on these dominant themes and they are presented as a visual essay.

Images of the *Nordic Rebellion*

'The rebels are coming!' (Extinction Rebellion Norway, 2021b)

'The Nordic uprising is underway!' (Extinction Rebellion Norway, 2021b)

23 August 2021

The Nordic Rebellion begins. The first wave of actions begin 23 August 2021. Youth and Red Rebels march from the monolith at Vigeland Park to the Norwegian Parliament. The road is blockaded at Majorstuen. The Ministry of Petroleum and Energy is occupied. Anker Bridge is seized – it is held for the rest of the week. Forty-eight rebels are arrested (Extinction Rebellion Norway, 2021b).

A yellow vinyl banner marks the southern limit of an occupied space, stretching across the width of Anker Bridge, which connects the centre of Oslo with Grünerløkka. At the northern limit of the bridge, a white banner impedes passage and shouts to passers-by: 'ACT NOW'. Anker Bridge, sometimes called the Fairy Tale Bridge because of its Art Nouveau design, crosses the Akerselva River that divides Oslo between east and west. For one week, rebels camp here in tents in the middle of the road. 'La livet vokse – Ikke økonomien'. 'Let life grow – Not the economy'. On either side of the banner text are illustrations of oak leaves and acorns in the signature Extinction Rebellion art style. Pastel coloured

Figure 4.1   'La livet vokse – Ikke økonomien' – 'Let life grow – Not the economy' banner blocks Anker Bridge (23 August 2021). Photo: Emma Arnold.

chalk softens the pavement with abstract designs, flowers, leaves and the iconic Extinction Rebellion logo. For a moment the banner obscures the people just out of view: playing music, dancing, eating food, hanging out. Just behind another banner, two people sit on the sidewalk. 'Norwegian oil kills.' A little white dog stands to the side and watches the scene.

As evening falls, a performer swirls fire. In the foreground, a blue umbrella with a black stencil of a butterfly stands open in a shopping cart. A flag for Animal Rebellion, an affiliated group that advocates for animal rights, hangs blurred and limp in the low light.

Figure 4.2   'Norsk olje dreper' – 'Norwegian oil kills' banner on Anker Bridge (23 August 2021). Photo: Emma Arnold.

Figure 4.3   A performer swirls fire on Anker Bridge (23 August 2021). Photo: Emma Arnold.

24 August 2021

Actions alight and burn out all throughout the city. The Ministry of Environment and Climate is occupied, Karl Johan is blockaded. Rebels are removed from spaces throughout Oslo and arrested, and actions fade away from the city streets. Activists sit in Grønland Politistasjon waiting to be processed and freed. Fines for arrest total 429,000 kroner (Extinction Rebellion Norway, 2021c).

25 August 2021

It is a late summer morning and time for *Sørgemarsjen*. The Sorrow March begins in Oslo's verdant Botanical Gardens in Tøyen. Activists dressed in black with sombre expressions hold dismal messages hand-drawn on fabric and cardboard. A large white banner with silhouettes of animals and humans is held facing outward near the beginning of the long line of activists: 'Dør de – Dør vi'. 'They die – We die'. The Sorrow March is both a present and pre-emptive mourning for the death of animals, of nature. These messages commemorate and grieve the species that disappear each day, that may well vanish in the future. These images of loss are jarring alongside the bright greens and life of the gardens.

The Red Rebels leave the Botanical Gardens, trailing at the end of the Sorrow March. They are an important part of Extinction Rebellion's artistic expression. Like the caryatids whose form they emulate, they are

Figure 4.4   The Sorrow March begins at the Botanical Garden (25 August 2021). Photo: Emma Arnold.

supports. They join actions in silence, moving in slow unison. Their white faces with bright red lips and black eye make-up carry solemn expressions. The red velvet mixed with hanging layers of satin and tulle draped over red flower crowns, all evoke a powerful symbolism. Their red textured garb, exaggeratedly languid movements and doleful faces elicit sorrow and grief, evoking the loss of blood and of life.

The Sorrow March ends at the Ministry of Agriculture and Food. Inside the ministry, activists glue themselves to the windows, looking

Figure 4.5 Red Rebels leave the Botanical Garden (25 August 2021). Photo: Emma Arnold.

Figure 4.6 Activists demonstrate at the Ministry of Agriculture and Food (25 August 2021). Photo: Emma Arnold.

onto the blockade outside, onto the mourners from the march and the activists holding banners: 'Natur over næring' – 'Nature over industry'.

Outside the Ministry of Petroleum and Energy, an artistic performance is begun by a young woman in front of golden doors. Two security guards in navy suits and pale blue surgical masks stand stoically on either side. Pedestrians push past, activists watch from the pavement, employees occasionally squeeze through the protest and make their way inside. Music plays and she slowly pours dark sludge, something akin to concrete or petroleum, over her head. It spills down her face, over her bare skin, over her dress, slowly destroying a landscape painting she holds symbolically in her hands. Later activists toss roses on the destroyed landscape laid at the entrance of the ministry.

26 August 2021

'Hey ho Equitanic! Hey ho Equitanic! Hey ho Equitanic! Heading for disaster …' Reimagined sea shanties are sung by activists dressed like sailors next to a carboard boat like the *Titanic*, renamed after the Norwegian state oil company Equinor. Activists from the German civil disobedience movement Ende Gelände together with Extinction Rebellion take action early in the morning at Equinor's headquarters at Fornebu, protesting the company's fracking in Argentina. They drop a large banner from the roof: 'Fracking kills! Out of Vaca Muerta.' Half a million in fines now (Extinction Rebellion Norway, 2021d).

Figure 4.7 Artistic performance outside the Ministry of Petroleum and Energy (25 August 2021). Photo: Emma Arnold.

27 August 2021

'Keep IT in the ground!'
'Keep it in the ground!'
'Keep IT in the ground!'
'Keep it in the ground!'

'Hva vil vi ha?'
' *KLIMAHANDLING!*'
'Når vil vi ha det?'
'*NÅ!*'
'What do we want?'
'*CLIMATE JUSTICE!*'
'When do we want it?'
'*NOW!*'

'*Hey ho! Take me by the hand. Strong in solidarity we stand. Fight for climate justice, fight for climate justice now.*'

A climate march with an unknown destination. It ends in the middle of the intersection of Storgata and Hausmanns gate in central Oslo, just metres away from Anker Bridge. A blockade is established. 'Ban oil over profit.' 'Olja eller livet, Norge?' 'Oil or life, Norway?' 'Ta tak nå! Redd klimaet!' 'Grab it now! Save the climate.' 'Vi vil leve.' 'We want to live.'

Figure 4.8   Activists march along Torgata (27 August 2021).
Photo: Emma Arnold.

Thick black letters on a bright yellow banner held by six hands across an intersection. More banners, more messages, more hands stopping four lanes of traffic on a Friday evening. Cars, buses, trucks are halted in every direction blocked by activists holding signs, activists with arms locked inside steel pipes who lay down in the road, and a panel truck spray-painted with graffiti-style lettering: 'System Change – Not Climate Change'.

Figure 4.9 'Vi vil leve' – 'We want to live' banner held by activists blockading Hausmannsgate (27 August 2021). Photo: Emma Arnold.

Figure 4.10 'System change not climate change' painted in graffiti-style lettering on a truck blocking Hausmannsgate (27 August 2021). Photo: Emma Arnold.

Two activists stand atop the truck, waving Extinction Rebellion flags, brandishing a megaphone. They give speeches and dance on the roof of the truck. Activists below are dancing in the street. Others are locked to the chassis beneath the truck, while some sit cross-legged and glue themselves to the metal sides. Police are present; they confer in groups. Meanwhile, the space that the blockade has created is joyous, made so by live music, dancing, chanting, singing, cheering, speeches.

It is difficult to hear the warnings of the police from their megaphones: their words get lost in drums and trumpets. Hours pass. It is dark and the dancing has stopped. Rebels are removed slowly, one by one, but it takes effort, heavy equipment. Sparks fly as steel pipes are cut from the arms of activists locked on to each other in the road. A fire engine joins police efforts. Police lines expand and push non-arrestables to the outer edges of the blockade. Media get privileged access to the space, some live-streaming the action, while pedestrians are (not always happily) diverted down side streets.

A young woman holds a red rose out into the evening. A sign on her back: 'Eg er livredd fordi 99% av barna i verda e utsatt for minst 1 klimatrussel nå.' 'I am terrified because 99% of the world's children are at risk from at least one climate threat now.'

One week of rebellion, 129 arrested, 2.1 million kroner in fines (Rustad, 2021). Much media coverage, both supportive and critical. Multiple images of the future, in and of the city.

Figure 4.11   An activist holds a single red rose at the police perimeter of a blockade at Hausmannsgate (27 August 2021). Photo: Emma Arnold.

Imagining the present and future city

An empty hourglass suspended in a circular frame. Bold black lines against vivid green, pearl white, neon pink, acid yellow. The circle: the Earth. The empty hourglass: the message that we have run out of time. The Extinction Rebellion symbol has quickly become a powerful climate activist icon; its strong and simple representation is synonymous with a very particular politics. The visual language and aesthetics of Extinction Rebellion are stark and exacting, frequently pairing the dramatic together with bright colours and ludicity. Extinction Rebellion exalts the urgency of the climate crisis, demanding political action through an activist strategy centred on disrupting the order of the city. As the images from the Nordic Rebellion demonstrate, Extinction Rebellion is a movement that is concurrently morbid and hopeful, creative and jarring.

Cultural and artistic expression are important facets of how we imagine and make possible different futures. Veldman (2012) writes that there is a connection between environmental activism and how we imagine the future. Activists frequently act upon a narrative or vision of the future that is dystopian or apocalyptic. Creative actions of climate activists like Extinction Rebellion often take on foreboding tones. These cultural and creative performances of the future may be bleak yet they simultaneously convey hope. When climate activists blockade roads, transform bridges into spaces for play, turn the streets of the city into places of joy and spectacle, activists may unintentionally offer visions of how the city might be reimagined. Paul Chatterton writes that 'the climate emergency is also a city emergency' (Extinction Rebellion, 2019: 162).

The city is a symbolic site, one which thinkers such as Henri Lefebvre have described as places of accumulation and flows of capital. In his most renowned essay, Lefebvre writes about the need to 'redefine the forms, functions and structures of the city', arguing that there is a 'fundamental desire' for citizens to create moments in the city that are playful, creative and operate apart from the dominant role of cities as sites of commerce, consumption and labour (Lefebvre, 2010: 147). Extinction Rebellion address the symbolic and real power of cities frequently. Their arguments for carrying out actions in capital cities like Oslo are specifically about disrupting these flows of capital and about targeting the spaces and places where decisions are being made. During the Nordic Rebellion in Oslo, it was frequently government departments, the Norwegian Parliament and companies like Equinor that were targeted.

What is the future that Extinction Rebellion imagines? Pairing contradictory aesthetics, Extinction Rebellion plays with utopia and dystopia, simultaneously evoking very different possible futures through their activism. These contrasting futures are inherent to the movement's climate politics. Indeed, the novelty of this movement is in successfully balancing potential dystopian futures with hopeful alternate visions. Dystopian futures emerge through actions that engage with death and extinction. Die-ins, artistic funeral processions and other performances remind the spectator of the dire consequences of unchecked climate change. While the tones are morose, they are often paired with strong, playful graphics: brightly coloured flags and banners emblazoned with bold black text and stencil graphics of animals and plants.

Hopeful visions also emerge in multiple ways. The political organisation and ambitions of the movement are themselves a vision of how a more 'utopian' society might function: a non-hierarchical, non-violent, transparent, equitable participatory democracy built on a foundation of a resilient and regenerative culture. The way that Extinction Rebellion takes space in the city is similarly hopeful. Disrupting the city through non-violent direct action, activists transform spaces into the possible. The actions of Extinction Rebellion weigh multiple futures against each other. On the one hand, they imagine a dystopian future where all species are extinct, ravaged by humanity's greed and unbridled economic growth. Yet their actions suggest that this catastrophic future is not inevitable. It is not yet written. Acting now is how another future may be made possible. It is a future free from oil dependence, in which the rebellion against extinction is successful. It is a future where life is elevated above profit. Disrupting the flow and rhythm of the city and altering the logics of space, Extinction Rebellion offers a glimpse of a different path, showing what the future city and life could be.

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5

The urgency of hope and responses to contemporary crises

Marikken Wullf-Wathne and Kristin Kjærås

Hope can be understood as an intrinsic part of being human, in the human tendency of seeking fulfilment. While hope is arguably a consistent force in society, the ways in which it is experienced and expressed will vary between different times and places: thus they are socially contingent.

In this chapter, we build on the idea that expressions and experiences of hope have seen a change during capitalist modernity. Hope was previously related to a desire for long-term, collective improvement, but is currently configured as more individual and immediate. Contemporary desires can often be reduced to 'individual liberation through money or fame or both' (Thompson, 2014: 5) and tend to revolve around individual mobility, wealth, the body, and the obtainment of fleeting moments of happiness (Thompson & Žižek, 2014). In Wolfgang Streeck's (2016: 97) analysis of contemporary capitalism he understands the act of having a dream for oneself to be 'the last remaining duty under liberal individualism, regardless of the circumstances in which one may currently be living'. Lauren Berlant comes to a similar conclusion in her book *Cruel Optimism* (2011), where she describes hope as a force in doing what feels good, rather than doing good.

We use *hope* as a lens to discuss the difference in public response to two different crises. The purpose is to better understand the relationship between hope, crises and progressive action. We argue that understandings of the role and function of hope are important if we are to understand societal responses to contemporary crises. Crises pull the rug from underneath established foundations – but all crises do not do so in the same or similar ways. The different ways in which crises impact us – and our sense of hope – are likely to impact how we respond to these same crises.

To explore this argument, we draw on lessons from the COVID-19 pandemic and from the climate catastrophe. Whereas the COVID-19 pandemic has been a cause of immediate action and extensive measures – drastically altering our societies in a matter of days – we have still failed to adequately address the climate crisis, even after decades of knowing the serious risk it poses to terrestrial life. The immediacy – and arguably the intimacy – of the COVID-19 pandemic instilled a different sense of urgency. We argue that the very different ways in which these two crises have affected our experiences and expressions of hope can be part of the explanation of their highly different responses.

As we argue in the first part of this chapter, hope is today largely an individual or immediate enterprise. We hope for money, fame, self-realisation and a healthy and attractive physique for ourselves and our loved ones. The COVID-19 pandemic inflicted itself directly on such hopes by limiting our ability to travel and socialise, as well as posing a direct medical threat to our bodies. Although a crisis of arguably higher severity, the climate crisis has not posed the same threat to individual lifestyles to the same extent as the COVID-19 pandemic. From the perspectives of privileged, Western countries, the climate crisis does not appear as an intimate threat to our individual lifestyles. Rather, it is a crisis that calls upon international and inter-species solidarity. We argue that the different responses to these two crises can – at least partly – be explained by the ways in which they threaten our sense of hope and how this coincides with the solutions they require.

At this point, however, it should be noted that both of these crises – the COVID-19 pandemic and the climate catastrophe – both operate at both the individual and the collective level. For many people across the world, the climate crisis is deeply intimate and immediately threatening to the routines of daily life. Yet we argue that there are clear differences in how these crises appear in privileged, wealthy places such as the Scandinavian countries. The effects of the climate catastrophe often appear abstract and distant in both space and time as the consequences are geographically, socially and economically displaced. The threat of COVID-19, however, was immediate and individual. Within this context, the COVID-19 pandemic strikes the contemporary experiences of hope right to the core with a medical threat to individual bodies and freedom. Climate change, on the other hand, appears to have fewer individual consequences in the short run, and our individual hopes and dreams seems best protected by our inability to act on the issue.

The argument we seek to make in this chapter is that over recent decades, we have become accustomed to dreaming big at the individual

scale, while on the collective level, our hope is failing us. When crises threaten individual feelings of hope, then, both the perceived urgency and our capability of building hope for our individual selves leads us to finding silver linings and opportunities. In short: it leaves us *hopeful*. When faced with collective crises such as the climate catastrophe, on the other hand, we are less urged to – and less able to – hope for solutions and subsequently imagine and develop them. The result is a dwindling sense of hope in the face of such crises. Understanding how hope influences our perception of crises, and thus our ability to act, is key if we want to understand why the climate crisis is met with so little where the COVID-19 pandemic is met with so much.

Changing expressions of hope

Philosopher Ernst Bloch has famously argued that hope is an intrinsic part of human nature, if not the *most authentic* of all human emotions. The imagining of an alternative social world and a transformed self is to him an 'anticipatory consciousness' stemming from a dissatisfaction with the status quo (Bloch, 1995). Hope can be understood as a desire to fill the gaps of our lives – to find what is missing – and as the perception of the possibility for change. If change is going to happen, the hope of change happening, and belief that this hope might be fulfilled, is arguably a prerequisite (Lefebvre, 1996 [1967]).

One can identify expressions of hope, understood in such a broad sense, throughout history. Humans hope for the improvement of themselves and of their societies, but the ways in which they do so – the forms and formats through which hope is expressed – depends on the contexts under which formulations of hope are constructed. Whereas dreams of betterment have historically been reserved for the afterlife, human agency has increasingly migrated into hopes for a better life on earth. This sense of progress intensified through the Enlightenment and the industrial age, giving hope that drastically improved futures were not merely obtainable in distant places or in fictitious tales, but that they could be realised in this world (Manuel & Manuel, 1979; Rønbach, 2017). Such ideas also came to culminate in the attempted constructions of ideal societies in the twentieth century. Here, the hopes and desires found within mass ideologies (such as communism, liberalism and fascism) for radically altered societal organisations led to the formulation of blueprint parallel societies (Moir, 2020).

In recent decades, however, many have argued that we are witnessing the *disappearance of hope*. Manuel and Manuel (1979) point to how

world wars, the atom bombs, climate crisis and dystopian technological developments have resulted in a reduced faith in societal improvement and progress. As sociologist Ruth Levitas (1993: 259) has argued, 'the idea of progress no longer dominates … the future is either viewed as an area of decline, or an arena which is (perhaps for that reason) out of bounds'. As a consequence, it is difficult for ideas to 'occupy the space of an imagined alternative future which seems to transform the present'. In a time where the future is looking bleak, apathy, protectionism and capitulation are perhaps stronger feelings than hope.

Others have pointed to the so-called 'end of history' to explain the apparent disappearance of hope. With the fall of the Soviet Union, alternatives to market liberalism in terms of social, ecological and economic organisation were effectively eliminated (Fisher, 2009; Fukuyama, 2006; Jameson, 2003). Now, 'capitalism seamlessly occupies the horizons of the thinkable' (Fisher, 2009: 8), and with a lack of alternatives, the 'future seems to be nothing but a monotonous repetition of what is already here' (Jameson, 2003). What reigns is thus a 'capitalist realism', with 'the widespread sense that not only is capitalism the only viable political and economic system, but also that it is now impossible even to imagine a coherent alternative to it' (Fisher, 2009: 2). As Fredric Jameson (2003) has famously stated, it has become 'easier to imagine the end of the world than the end of capitalism'. The lack of temporal alternatives can be complemented with a lack of spatial alternatives: with a world that has been fully 'discovered' and globalised, the hope of unknown places with alternative societal configurations has disappeared. As Zygmunt Bauman (in Levitas, 2003: 6) argues: 'Globalization renders any terrestrial location for utopia difficult to envisage.'

An alternative explanation exists: Rather than seeing hope as *withering away*, many argue that experiences and expressions of hope are *changing form*. In such a metamorphosis, formulations of hope have changed from long-term and collective, to focusing on the individual and the immediate. Many scholars have pointed to this tendency of hope being experienced and formulated at the more individual and immediate level. With the spread of what Peter Thompson calls the 'cold stream' of economic reductionism and in its consumer-capitalist form', and the subsequent economic collapse of 2007–8, 'living for today had become the motto of society, and any sense that we were involved in any kind of process or dynamic that would lead to something different, something new, something better, had all but disappeared' (Thompson, 2014: 1–2).

Now, Thompson (2014: 5) argues, hope resides in 'individual liberation through money or fame or both. The dreams of a better world are

dreams of a better world for oneself or one's family.' As Cat Moir (2020) has similarly argued: 'Gone are the dreams of proletarian revolution or the creation of a "new man". Now, utopia looks like a 15-hour working week, universal basic income, and an open-border world.' Contemporary hope revolves around personal fulfillment and freedom; we hope to travel the world, gain individual wealth, access a wide range of consumer goods, discover ourselves, and to cultivate our bodies and minds (even to the point of using technology to live longer, or eternally – Turner, 2007). It seems both socialism and the social has disappeared from how we experience and express hope (Thompson & Žižek, 2014), and that the individual has become the new utopia.

Such an individualisation of hope 'goes along with a much wider and deeper privatization of society that is driven by powerful forces' (Kumar, 2010: 554), and has resulted in happiness being sought 'not as a public state but as a private good, and as a series of moments rather than a steady state' (Bauman, in Levitas, 2003: 5). Hope has thus moved from the shared and constant to the individual and momentary. The question, then, becomes whether hope can 'still exist in anything other than an atomized, desocialized, and privatized form' (Thompson, 2014: 5).

Hope in crises: climate change and COVID-19

From the onset of 2020, the COVID-19 pandemic and the ways national and local governments responded drastically affected the everyday lives of people across the globe. The 'new normal' also changed expressions of hope. All of a sudden many of us were dreaming of things we took for granted only a few months prior: individual freedom to move around, to socialise, to live long and healthy lives. The climate catastrophe, on the other hand, has for many been associated with the loss of hope. Understood as a collective problem, the idea that collective action will be forged in due time has been challenged in real and conceptual terms, from international climate agreements, to rising emissions and to our perception of our own actions in the planetary scope of an altering climate.

Psychological research has identified hope as a motivating force in facing difficult circumstances, as it is seen to affect behaviour (Chadwick, 2015). Yet for a problem like climate change, where possible trajectories or actionable solutions are difficult to conceive of, hope is found to take form as an emotion-regulatory motivation (van Zomeren et al., 2019) – in

the terms established above, as an individualised response. Put bluntly, facing climate change, we prefer to shop for green products, or take a long bath, rather than organising a rally. Experiencing the inadequacy of this behaviour, climate change action, *collective or individual*, is increasingly seen as impossible.

During the early part of the pandemic expressions of hope became a particularly prominent topic and several newspaper articles, especially in the *Guardian*, discussed the relationship between hope, the COVID-19 pandemic and the climate crisis. In the following, we draw on an analysis of a small selection of about 15 newspaper articles on the topic of hope, crisis, COVID-19 and climate change published mainly in the *Guardian* between March and October 2020. We draw on this small selection to explore how expressions of hope reveal strikingly different yet malleable relations to the two crises and conceptions of social change.

Changing perceptions of hope

Apathy, the loss of hope or what Berlant (2011) has named 'cruel optimism' can be descriptive of a surging affective relation to climate change. The idea that the future will at all be better is being challenged. In the newspaper article 'Meet the doomers: Why some young US voters have given up hope on climate', Alexandra Villarreal discusses climate change with Generation Z. For this generation nihilism seems to trump hope. As voiced by one of her interviewees: 'You are not seeing people who are planning for a future, because the future seems so precarious and so unpredictable' (Villarreal, 2020).

Yet in the midst of the COVID-19 pandemic, articulations of fear and hope took a new turn. 'Andrà tutto bene' ('everything will be alright') became one of the first expressions of hope, at a moment when Italy was facing the bleakest hours of the pandemic. The activity of inscribing the betterment of the future in the words 'everything will be alright' became a strategy for coping 'with a frightening situation' (Otte, 2020). As stated by author Maeve Higgins in a newspaper article in July 2020, 'many of us are feeling this strange duo bubbling up inside, fear and hope together'.

A new collective sense of hope?

The idea that a new collective sense of hope has been in the making since the onset of the pandemic has been noted by many, among them Rebecca

Solnit, a long-time writer on hope in times of crisis. In April 2020, Solnit wrote in the *Guardian*:

> Even our definition of 'we' might change as we are separated from schoolmates or co-workers, sharing this new reality with strangers. Our sense of self generally comes from the world around us, and right now we are finding another version of who we are. (Solnit, 2020)

The idea that 'it is this spirit of global togetherness that gives us hope' (Modéer and Ryott, 2020) may be ephemeral as new divisions and existing inequalities are laid bare by the crisis. Simultaneously, the rapidly changing conditions of everyday livelihoods may arguably have struck hope at its most prominent contemporary expression – the individual plane. The large-scale collective actions that have taken place after the onset of the pandemic reveal how malleable contemporary society is: 'Everything feels new, unbelievable, overwhelming. At the same time, it feels as if we've walked into an old recurring dream' (Baker, 2020).

'The new normal' is an apt description of how rapidly the collective organisation of our everyday lives can change, and the ways in which we adjust to such a reconfigured society. As argued by Solnit (2020): 'Things that were supposed to be unstoppable stopped, and things that were supposed to be impossible – extending workers' rights and benefits, freeing prisoners, moving a few trillion dollars around in the US – have already happened.'

As Solnit argues, the COVID-19 pandemic may prove fruitful for altering individual expressions of hope that can also affect how we approach climate action. Hope may as such be understood to find new routes as cynicism and hopelessness express their own faults and fractures. 'The new normal' may be a testament to the fact that the future is not beholden to a 'pragmatic' approach to social and ecological justice.

At the conjuncture of COVID-19 and the climate crisis

A crisis like the COVID-19 pandemic might arguably make us 'more urgently alive' as it has struck hope at the core of its contemporary formulation. At the same time, the pandemic and the drastic societal responses to it might help reignite the sense that change at the individual and collective level is possible and desirable. The pandemic can also be seen as exemplifying the effect of collective action for combating climate change.

Restrictions on air travel and movement more generally, the closing down of services and industry and lags and altercations to global value chains have not only served in combating the virus, but also reduced emissions in individual countries by up to 26 per cent (Le Quéré et al., 2020). This has demonstrated that society at large can be reorganised. Thus, what began as a threat to our contemporary feelings of hope (at the individual, immediate level) might also serve the purpose of reigniting hope at a more collective and long-term level.

As previously argued, hoping that things will – and can – change is arguably a prerequisite for things to change (Lefebvre, 1996 [1967]). Our sense of urgency to imagine and hope for solutions might be stronger at the individual level than on the collective level. We are better at remaining hopeful and in search of solutions when crises affect us where hope currently resides: in the individual and immediate. We have become accustomed to dreaming big at the individual scale. On the collective level, however, our hope is failing us. This might leave us better equipped to imagine solutions to crises that impact our individual hope than those impacting collective hope. Yet, as the discussion above also exemplifies, the pandemic has rendered collective and individual hopes unavoidably interconnected and malleable.

There is thus an urgent need to reconstruct a collective sense of hope. But in order to do so, where do we start? If we acknowledge the disappearance of alternatives as the culprit of the loss of collective senses of hope, this calls for an immediate reformulation of alternatives to the status quo. We need to seek out, strengthen and connect movements struggling to formulate alternatives to the current socio-economic order. And we now have an unprecedented chance of doing so. We are returning to a new normal where the existing socio-economic order no longer seems as solidified as it has over the last decades. Large-scale changes are suddenly back on the menu. If there is a time for arguing for real change, it is now.

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Part II
Learning the politics of urgency

6

Negation, imagination and organisation: rethinking sustainability transitions as a question of popular education

Keri Facer

One evening, not long after returning from the COP summit in Glasgow, I found myself caught, at the end of a relaxing evening with friends and neighbours, in one of those long late-night conversations about climate change. I was cornered by an affluent friend of a friend holding forth at length on the impossibility of making any sort of transition to more sustainable ways of living. His main argument consisted of the familiar observations that it's too complicated, there's too much to do, China and India will undermine everything, it's all too late, and what the hell, we'll all be dead in the long run. All of which he felt convincingly added up to the equally comfortable conclusion that things were just fine as they were. As usual, I was sucked into the conversation – variously seeking to point out the flaws in his argument and to create a compelling case for a viable alternative political and economic settlement – which, also as usual, barely made a dent in his confident assertions.

After these sorts of exchanges I often find myself drawn to analysing the reasons for such determined resistance to the possibility of change. I might turn to Michael Hulme or Martin Hultman's work and try to better understand the speaker and the origins of his views – in many cases finding myself thinking about the distinctive relationship between this particular performance of intellectually confident, economically secure masculinity and what Kari Norgaard calls 'socially organised denial' (Anshelm & Hultman, 2014; Hulme, 2017; Norgaard, 2011). At other times, I might reflect on my own role in these unproductive

conversations, and turn to the work of the eco-psychologists and climate communicators to help me explore what I might have said differently, what stories I could have told, what emotion or rationality I could have mobilised to better engage with his particular identity and position, and so forth (Stoknes, 2015).

Because this conversation came not long after the COP summit, however, I was tired of this debate. Tired of the energy-suck that comes as we get locked in this familiar dialogue, as positions harden. Tired of the way that 'climate researcher' and 'business as usual' positions can feed into and reinforce each other, becoming mutually necessary crutches for justifying each other's identity until both sides start fantasising about dictatorship and hoping for the sort of top-down politics that might quash intransigent opposing views.

And just as in Glasgow, when my attention was drawn away from the exhausted battles between activists and business in the Blue Zone to the everyday life outside the negotiations, and to signs in Scottish windows reading 'I cannae afford a carbon footprint,'[1] I wondered whether it was time to stop focusing on the guy in the corner and instead start thinking about who else was in the room and what sorts of other conversations might be fostered outside our increasingly unproductive argument.

In other words, I wondered if it was time to stop framing the problem as one of politics – trying to win an argument against incumbent elites who are blocking change – a framing which focuses our energy on the capture of existing levers of power, and instead see the challenge as one of working out how to create the conditions for a much wider group of people to initiate new conversations about what sorts of changes might be possible in the world. I wondered, in other words, whether it was time to turn our efforts towards the powerful traditions of popular education and their old questions: what is causing harm, how should we live, what alternatives might we imagine (Freire, 2000)?

At this point, the work of Sharon Stein (2019) and colleagues came to mind, and their identification of three different approaches to transformation. In their 2019 paper, they distinguish between what they call 'minor', 'major' and 'beyond' reform strategies. Minor reform, they say, is basically tinkering around the edges to prevent any disruption to the status quo – it is a conservation strategy, doing just enough to prevent disruption and address any glaring problems emerging. Major reform is the familiar revolutionary strategy – concerned with changing who holds the power, it is a battle for control and dominance within existing structures. What they call the 'beyond reform' position, in contrast, involves stepping away from battles for power and control within existing structures

and instead creating new spaces for thinking and experimentation that might lead to transformations not yet envisaged. This 'beyond reform' position, they argue, is the generative space needed to move beyond the familiar polarised arguments of modernity.

Applying Stein's analysis to questions of transition means, precisely, moving away from the unproductive conversation with the guy in the corner or the battles between activists and industry in the COP Blue Zone, towards a more expansive engagement with wider publics and communities. In other words, it implies a move towards a popular education agenda oriented towards creating new and unpredictable conversations with new actors.

All great social transitions have been characterised by great popular education movements, by collective inquiry into fundamental questions of how to create new conditions for living in the face of adversity. The shift to industrialisation, for example, and the challenge of how to create viable lives in the midst of inhumane working conditions, saw not only the co-emergence of union organising, forms of economic solidarity such as credit unions, and battles for the levers of parliamentary power, but also new institutions and practices of adult and popular education. A commitment to popular education, for example, was one of the four founding principles of the Rochdale pioneers in the nineteenth century when they sketched out the contours of the Co-operative Movement (Woodin & Shaw, 2019).

Equally, adult and popular education were powerful forces in the civil rights movement in the United States. Rosa Parks was not an accidental hero of the movement against racial segregation; she had attended Highlander, the centre for civil rights and union organising just a few months before intentionally triggering the Montgomery bus boycott. Popular education practices drawing on both Freirean liberation theology and Zapatista organising have gone hand in hand in creating land-based resistance and political movements in South America. Gandhi's Basic Education programme, with its countrywide network of craft-focused schools teaching adults and children together, was instrumental in driving the intellectual and economic movement for Indian independence. All of these programmes recognised that deep and profound social transformation was not only a political and technical question, but would require widespread engagement in a collective inquiry into the problems, alternatives and potential responses to the injustices and harms of the world. They paid attention, in other words, not only to taking on the holders of power, but also to mutual learning, knowledge exchange and capacity building with the other people in the room.

The no, the yes and the how

These movements have been concerned with three key questions: what is wrong with how we are living now? What alternatives might we envisage? And how can we organise ourselves to create pathways towards them? Martin Luther King, for example, had not only a dream, but also a critique of the status quo *and* a robust organisational and experimental network. We can describe these as three interconnected moments of negation, imagination and organisation; or as 'the no, the yes and the how' of popular education as a force for social transition.[2]

The no: negation

The moment of refusal is central to popular educational practice. It is at the heart of traditions of *conscientisation* in which individuals come together to share their personal troubles and draw out from these key themes that unite them – a process that allows a richer, deeper understanding of contemporary realities (Freire, 2000). This can also be understood as a form of what British sociologist C. Wright Mills (1959) called the cultivation of the *sociological imagination*: the awareness that personal troubles are not just personal, but are part of the product of wider social arrangements. The act of negation is also present in moments of generative resistance, a form of what philosophers of science such as Michel Callon call *hybrid democracy*, in which resistance to a particular proposition or action acts as a catalyst for bringing together diverse constituencies around the issue and which, in turn generates new knowledge about the problem (Callon, Lascoumes & Barthe, 2009).

    These analytic moves of negation and refusal serve to prevent a collective educational inquiry into how we might live from becoming wishful thinking. The negation and refusal of present unacceptable conditions help to avert the risk of the search for alternatives becoming a form of pacification in which 'hope and hopefulness are offered to those to whom the world is unable or unwilling to offer anything else else' (Lindroth & Sinevaara-Niskanen, 2019). Instead, they direct mutual learning towards what Ernst Bloch, the philosopher, calls *educated hope* (Dinerstein, 2015; Siebers, 2013). This negation is fuelled by an underpinning analysis that the world is not now perfect and equally that it is not yet finished, that its structures and systems are not all that they might yet be.

The yes: imagination

The knowledge that the world is not all it might be is not simply the product of analysis and refusal but also an act of the imagination, namely, the capacity to imagine that things might be different. The education of the imagination has been central to traditional adult or extra-mural education movements that have sought to make more widely available artistic, cultural and intellectual resources. The education of the imagination is also, however, at the heart of more radical emancipatory popular education practices, seeking to sensitise individuals to their feelings and encounters with the world and to create conditions in which people might express their deepest desires and hopes. The encounter with other ways of seeing the world and the deep reflection upon values, hopes and dreams become the scaffolds for imagining other realities – see, for example, Dana Meadows' impassioned plea to environmentalists not simply to envisage their fears, but their desired future worlds.[3] The significance of the imagination is perhaps best captured by Audre Lorde's argument that: 'Poetry is not a luxury … it is the skeleton architecture of our lives. It lays the foundations for a future of change, a bridge across our fears of what has never been before' (Lorde, 1984). A popular education movement without imaginative practice is not a movement but an accounting of the problems of the status quo – there is no forward or critical momentum.

The how: organisation and experimentation

There is a third critical move in popular and emancipatory adult education: one that is oriented towards experimental *practice* and the 'how' of creating other worlds. In Freirean popular education, all education is oriented towards praxis: reflection upon the world in order to change it. Learning is never theoretical, or separated out as a set of skills distinct from life. Instead, the purpose of popular education is precisely to experiment with and prefigure alternative forms of life.

Central to the organisational strategy of successful emancipatory popular education, therefore, is an attention to the wide range of skills, knowledge, life experiences and expertise that very diverse groups of people might bring to the practice of negotiating and experimenting with different ways of living. Valuing diversity, resisting monocultural assumptions and hierarchies, and opening up the space for different perspectives to be brought together is at the heart of this educational practice. It takes

forms such as critical action research and participatory action research; as well as of longstanding traditions with strong allegiances with adult education, such as community organising and asset-based community development (see, for example, McKnight & Kretzmann, 1996). Such work seeks to create knowledge in common – it is open to reformulation of questions and to challenging of foundational assumptions. Organising and experimenting, in other words, is a collective activity – and learning to live, work and organise in community is a central part of the challenge. It is part of the difficult reality of learning to live in a village where the arguments are not only the familiar ones where everyone knows the rules (the familiar ground of climate activist and energy incumbent, for example), but where new rules, strange ideas and unexpected possibilities might have to be negotiated.

Indeed, a core component of successful social movements has been their transition from movements of protest – engaging primarily insiders – to a form of social infrastructure capable of expanding and widening participation in their collective enquiry. This 'infrastructuring' has taken many forms. The Co-operative movement, for example, required that a core percentage of its profits from its collective production activities should be allocated to the establishment of co-operative educational initiatives – one consequence of which is that, today, the movement has an international presence and touches in some way or another nearly one in nine people on the planet.

Gandhi's Basic Education programme was premised upon the creation of self-funding schools, where students developed their own products for sale to create economic autonomy for the educational practice. Universities, and in particular university settlement programmes, played an important role in attempting to address the harms of urbanisation and industrialisation in the early twentieth century through extra-mural and continuing education programmes. The Workers' Educational Association, funded initially through the housekeeping money of its founders, became both a movement of associations in Australia and an organisation core-funded by the state in the UK. In other words, historically successful alignments of popular education with social movements have depended on the creation of an infrastructure that can support long-term engagement of those outside the movement and ongoing learning of those within it.

There are, of course, risks in the transition to a form of social infrastructure – lack of autonomy, new barriers to entry – as well as gains – sustainability beyond the reliance on founders and volunteers, mobilising and convening power. The significant roles played by the Highlander Institute, the Co-operative College or the development of 'Houses of the

People' in the autonomous movements in northern Italy, however, show the importance of establishing and formalising popular education institutions. They provide intergenerational and cross-movement memory, convene diverse groups around critical issues and moments, and subsidise and reach out to wider community participation.

In summary, the *yes*, the *no* and the *how* are key elements of a popular education practice that aims to create new reality.

A popular education agenda for rapid sustainability transitions

And so, to conclude this essay, I finish with a thought experiment.

What if we imagined rapid transition towards a regenerative way of living, away from fossil fuels and towards climate justice, as a mass democratic, emancipatory and participatory process of popular education? One that was oriented towards the creation of new conversations and open-ended inquiry into the forms of living that might create pathways towards sustainable, fair societies? What might such an educational agenda look like?

Clearly, it would take many different forms in many different places – pathways to sustainable societies are unlikely to be created through epistemological monocultures (Santos, 2018). By attending to the many and diverse popular educational practices of negation, imagination and organisation that are emerging, however, we can see that we have a lot of examples to draw upon already.

The educational traditions of refusal, for example, are already powerful in climate movements' holding actions, protest and sustained resistance. Indigenous communities' Earth and land defence actions, informed by the knowledge that 'the apocalypse has already happened' (Whyte, 2018), are powerful gathering forces for collective refusal and the exploration of different ways of living. Mass protest movements from Extinction Rebellion to Fridays for Future are precisely moments of refusal and negation as a starting point for collective enquiry among both younger and older generations.

The education of the imagination is also growing rapidly, through the work of groups such as the EcoArts network and collectives such as Dark Mountain that nurture our collective capacity to imagine a world beyond economic and ecological exploitation. It is visible in critical utopian traditions of Afro- and Indigenous futurisms (Harjo, 2019). And in the creation of public participatory experiences such as the Carbon Ruins

Museum or the fictional visitor guide to 'Notterdam' which invite us to participate in a world that has weaned itself from fossil fuel dependency (Stripple, Nikoleris & Hildingsson, 2021). On the organisational and experimental side, there are the doughnut economics cities modelling transformative practices, ecovillages sharing their knowledge and skills, transition towns modelling new ways of living.

The challenge we face, however, is to weave together these interventions into a form where critique, imagination and prefiguration merge, to create a stronger web of practice that is cognisant of its educational capacity, and capable of drawing on all its resources and experiences for collective benefit. I suggest two elements are required for this weaving.

One element is a recognition of the vulnerability and weakness of any of these three educational moves in isolation: imagination without experimentation and negation is fantasy; negation without imagination and experimentation can become lost in critique; experimentation without imagination and negation risks busy-work and burnout. Creating a powerful network of popular education means, therefore, recognising what each of our practices lack as much as what they can offer, and weaving connections from vulnerabilities not just strengths.

A second element of this weaving must be the creation of sustainable infrastructures to allow growth and development over time, to ensure each new generation is learning from all that has already happened, to facilitate exchanges across difference. There are clearly already critical communication nodes – the People's Summit at COP-26, the Ecoversities network, the historical role played by Schumacher College. To ensure that this is not just a conversation with those already in the debate, however, we will need to identify and mobilise existing social anchor institutions – those groups and organisations with sufficient scale and resources to provide sustained longevity for a programme of mass popular education. This means focusing on the role of three key social institutions – universities, the large charities and green corporations, and broadcasters.

Universities have historically played a critical role in adult education – it is time for them to step up again and provide a platform for a programme of mass, participatory, popular inquiry into how we might live, as a core element of their public responsibility as universities. We can see the beginnings of this in initiatives such as Edinburgh's partnership with the British Council to offer a part-time, online climate change learning programme, or Bristol University's free sustainable futures course. But we need to go far beyond this to create placed-based, face-to-face, sustained conversations in local communities and with local businesses,

universities and civil society that start from a more open set of questions. The field of participatory action research and traditions of service learning can be drawn upon here, to start to shift universities towards a more active public educational role in this field.

Equally, we would expect to see large charities and green corporations 'tax' themselves, in the way of the co-operative movement, in order to create a secure financial basis for a mass programme of popular education towards a transition. Imagine what would happen if Ecotricity and Greenpeace, for example, committed 10 per cent of their income to popular face-to-face and place-based educational enquiries and experiments into new ways of living as the Co-operative Movement did in the nineteenth century?

And finally, broadcasters have played a hugely important historic role in offering programmes related, for example, to adult literacy and the transition to digital and internet cultures. They have yet to find their voice – other than in offering often unhelpfully simplistic documentaries – in providing a platform for the collective popular imagination, analysis of and routes towards a great transition. Mobilising these great social institutions for a programme of mass popular educational inquiry offers precisely the living infrastructure required for the scale of the transitions we are facing.

To conclude

The transition away from unsustainable and harmful ways of organising our societies will not come just from dialogue between climate negotiators and researchers, nor from confrontation between activists and those who want to keep the status quo. Nor will it come from framing the discussion as a problem of politics alone – politics in the end being subservient to events, to public moods, to the quality of the collective imagination. Rather, a transition will come only once we widen the conversation to all those concerned or affected by climate change and expand the terrain of dialogue and debate far beyond the usual suspects. This means we need to imagine and create a programme of mass, popular and critical education that enables a public conversation around the three central questions of our time: what is wrong with how we are living now? What alternatives might we envisage? And how can we organise ourselves to create pathways towards better futures? Next time I find myself locked in the exhausted logic of a late-night argument playing the 'climate activist' to the 'realist businessman', I'll turn to the rest of the room and start asking these questions. Let's see what happens from there.

Notes

1. For non-British readers, cannae means 'cannot' in Glaswegian dialect.
2. This typology is inspired by two sources – Ana Dinerstein's (2015) work on social movement building in Latin America, and Isabelle Fremeux and Jay Jordan's presentation at the Nantes Les Landes Airport as presented at the People's Summit in Glasgow, 2021 (see also Fremeux & Jordan, 2021).
3. https://donellameadows.org/archives/envisioning-a-sustainable-world-video (last accessed 19.08.22).

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7

'Right here, right now': immediacy, space and publicness in the politics of climate crisis

Eugene McCann

She sits on grey cobbles, knees drawn to her chest, back pressed against smooth grey marble. We look at her from across an expanse of paving stones, small and distant in the camera's frame. Her feet, in blue Velcro-strapped shoes that match her zippered hoodie, are bent slightly inward. Towering above her ponytailed head, the marble turns smooth pink, then abruptly into bulky, rough-hewn blocks. She is framed by two impassive windows, themselves flanked by stylised columns. This is a 'power building', designed to be imposing in its neoclassical grandeur: to put the passer-by in their place, small in the presence of the state and capital. But she doesn't look intimidated. To her left, propped almost vertically against the marble, is a large white sign with bold, black lettering: SKOLSTREJK FÖR KLIMATET (Figure 7.1).

This iconic photograph of Greta Thunberg's first climate protest on 20 August 2018 sets her within the place and architecture she chose to occupy – a small figure dwarfed by an imposing public space. It is Sweden's Parliament House, built at the turn of the twentieth century, originally to hold both the seat of national political power and the Swedish National Bank. She has sat herself down in a pedestrian thoroughfare, the Riksgatan, running between two parliament buildings. As this is a space of movement, her immobility makes her out of place. Her incongruousness is also marked by her young age, her solitude and the fact it's a school day. Her repeated presence on the Fridays that follow provokes increasing interest from passers-by, politicians, journalists and supporters, mostly other young women who quickly begin to gather in a small, but growing, knot of bodies each Friday.

Figure 7.1   Greta Thunberg's first School Strike for Climate, outside the Swedish parliament, 20 August 2018. Photo: Adam Karls Johansson.

As part of a volume that asks what it means to think about and act on the climate crisis in cities, this essay considers the role of public space and publicness in the contemporary politics of climate action. I focus on two related notions – immediacy and publicness – in my consideration of how the looming climate catastrophe is being reflected and responded to in climate protests that take public space to demand a decent future and in the calls for public control over the unsustainable economy to turn it back from the precipice. I will begin by exploring immediacy and publicness as frames through which to understand contemporary climate protests. I will then explore the role of immediacy and publicness in the policy prescriptions of the Green New Deal. I will conclude by exploring the problems and limits of my key categories to underscore the complexities and uncertainties of the politics of climate action.

Immediacy, space and the 'climate public'

> And these children that you spit on
> As they try to change their worlds
> Are immune to your consultations
>
> David Bowie, *Changes* (1971)

This essay's title is drawn from Thunberg's speech to the United Nations in September 2019:

> People are suffering. People are dying. Entire ecosystems are collapsing. How dare you pretend that this can be solved with just 'business as usual' and some technical solutions? … We will not let you get away with this. Right here, right now is where we draw the line. (Thunberg, 2019)

'Right here, right now' invokes the immediacy of the crisis. It is a phrase that contrasts sharply with the seemingly endless consultations and deliberations that characterise mainstream climate change policymaking at the national and international levels (recall the recent COP-26 non-event in Glasgow). The pace of these deliberations, and the targets they produce, suggest that the height of the crisis is far in the future, that it is not immediate, even as anticipatory actions and politics mean that 'the future is constantly being folded into the here and now' (Anderson, 2010: 778). Appeals to immediacy have also been a consistent element of the scientific discussion. Writing in *Science*, Hagedorn et al. (2019: 139) argue, 'It is critical to immediately begin a rapid reduction in CO_2 and other greenhouse gas emissions … Politicians have the huge responsibility of creating the necessary framework conditions in a timely manner.'

Intervals of time and distance no longer mediate between climate change and the daily lives of increasing numbers of people, particularly poor and racialised people. The crisis is immediate: It directly touches more and more people. Reflections on the fifth anniversary of the Paris Agreement in December 2020 emphasised that the crisis is indeed growing rapidly (Carrington, 2020; Harvey, 2020), a point poignantly underscored by Tuvalu's Minister for Foreign Affairs, Simon Kofe, who gave his speech to COP-26 standing knee-deep in ocean water. His address juxtaposed 'the Cop26 setting with the real-life situations faced in Tuvalu due to the impacts of climate change and sea level rise' (Kofe, quoted in *Guardian*, 2021).

While immediacy is most commonly understood by this temporal connotation, it is also spatial: not only right now, but also right here, as Kofe's speech illustrates. Tomlinson (2007) argues that:

> immediacy suggests … a distinct *quality* to cultural experience … an increasing sense of connectedness with others, or as a prevailing sense of urgency … We might put this in terms of an *ostensive* (important qualification) 'closure of the gap' that has historically

separated now from later, here from elsewhere, desire from its sat-isfaction. (Tomlinson, 2007: 74, emphasis in the original).

Yet, while Tomlinson is concerned with speed in culture, I suggest we can use the idea of immediacy to think through the politics of protest in general, and the recent climate protests in particular. The 'closure of the gap' is an ostensible one for Tomlinson because it is never fully realised, yet radical politics is partly about striving to highlight, define and recon-figure certain gaps – temporal, spatial, material – in service of social, or climate, justice. The political question is whether the 'condition of imme-diacy' can change 'assumptions and expectations about how life is to be lived, and what we may reasonably expect it to deliver' (Tomlinson, 2007: 75).

Moreover, as the first published studies of the climate protests sug-gest, they are bound up with various forms of socialised 'world-imagining' (Bowman, 2019: 301). Friend networks, more than political parties or formal environmental organisations, have brought many young activists into public spaces (Wahlström et al., 2019). Their networking has them

> standing with one foot in the public arena and one in the private. They demonstrate as a way to take instrumental political action to influence decision-makers and also to express themselves. They build organizing networks of issue-oriented social control and also attend the march with friends. This complexity and in-between-ness is familiar in young people's politics generally, and in young protest politics specifically. (Bowman, 2019: 301)

In turn, their protests are intended to directly contradict the long-standing and ineffective liberal politics of incremental change involving individual acts of voting and consumer choice. Their public collective action is part of their political point, according to those interviewed by Pickard et al. (2020). By acting in the public spaces of adults and the powerful, whether in the Riksgatan, where a lone protest soon became a small collective one, or in mass protests across multiple cities, they strive to be radically kind and peaceful and also disruptive through vis-ible gatherings, speeches, chants and placards, breaking rules (from leaving school to attaching themselves to infrastructure and blocking traffic), and engaging in creative performances such as die-ins (Pickard et al., 2020).

These all attract attention. They bring concerns that may usually seem remote to passers-by into their immediate vicinity; they make the

crisis visceral, close and urgent, while bonding like-minded protestors. These actions are involved in creating a 'climate public' (McCann, 2020), in the sense that 'publics' are groups of strangers who develop knowledge and bonds through communication to support common political action (Anderson, 2006; Cody, 2011). Some publics take on a 'contestatory function' (Fraser, 1990: 67) against hegemonic structures, norms and ideas. They act as 'counterpublics', criticising the present and proposing often radically different futures (Fraser, 1990: 67; Warner, 2002).

Media and immediacy

The preceding discussion of spatio-temporal immediacy – being incongruous in public – as a strategy and goal for the contemporary climate public demands a consideration of media in the movement's geopolitics. How can contemporary movements, so defined by their use of media, also be so tied to the politics of temporal and spatial *immediacy*? In some ways, this is not a new question. Mansbridge (1996: 57) has noted that all publics 'oscillate' between public protest and communication in private spaces and through often low-circulation media, from newsletters and zines to books and films (Fraser, 1990). And, since the advent of the internet, discussions among scholars of public space have grappled with the relative publicness of privately owned message boards, social media platforms, etc. It is, therefore, worth briefly discussing the productive tension between immediacy and media.

First, as Iveson (2008) argues, media are public spaces that facilitate the formation of publics. Second, Butler's (2015) discussion of political 'assemblies' relates to this first point: immediacy and media are fundamentally linked in contemporary public protests like the climate protests. A point of protest is to reverberate further than a single locality, like the Riksgatan, and various media are tied up in this 'geopolitics'. 'The media requires those bodies on the street to have an event, even as those bodies on the street require the media to exist in a global arena' (Butler, 2015: 94).[1]

Yet, and this is the third point, protests are still subject to hegemonic media framings. Editing power in this context remains largely outside the control of those who are protesting. For example, a study of German mainstream media's representation of Fridays for the Future in 2018 and 2019 notes that 'sixty percent of the articles analysed represent climate change neutrally, frame it in terms of adaptation, or do not mention climate change at all' and the study's authors conclude that coverage 'feeds into the wider climate change discourse towards de-politicization and adaptation,

compromising a systematic understanding of intergenerational climate inequality' (von Zabern & Tulloch, 2021: 42–3). It's not surprising, then, that respondents to Wahlström et al.'s (2019: 40) survey of climate marchers in the UK, for example, reported relatively little trust in mass media.

Media and immediacy are intertwined with material and political effects of various types. Therefore, taking temporal and spatial immediacy seriously should not discount the various forms and structures of mediation in which politics occurs.

Immediacy, publicness and policy

Protest movements are, among other things, intended to influence policy. Therefore, it is worthwhile considering the links between publicness and policy through the frame of temporal and spatial immediacy. In a policy context, publicness connotes redistributive measures, public investments, collective politics, rights claims and so on. For example, the Green New Deal demands 'structural (governmental and inter-governmental) changes, not just behavioural, community or technological change' (Pettifor, 2020: 7) to quickly reduce emissions, strengthen ecosystems, guarantee jobs in building green infrastructures and gain public control over globalised financialised capitalism to end its provision of cheap credit to extractive industries.

Aronoff et al. (2019) develop similar themes of speed and publicness. They augment the broad contours of the US Green New Deal (United States Congress, 2019) with detailed proposals for policy change regarding fossil fuels and energy generation, labour, built environments and global supply chains. They argue for change in climate politics at a 'scale and speed … [that] can seem overwhelming, but … there is no other option' (Aronoff et al., 2019: 5). Moreover, they advocate for 'egalitarian policies', led by unions, non-profits, community organisations, social movements, Indigenous movements and racial justice activists, that 'prioritize public goals over corporate profits, and target investments in poor, working class, and racialized communities' (Aronoff et al., 2019: 5). This approach would 'have to make climate action viscerally beneficial, turning victories into organizing tools for yet greater political mobilization – and for ongoing liberation' (Aronoff et al., 2019: 6–7). The notion of the visceral resonates with immediacy: both terms suggest bringing crisis, politics and responses closer to those who have most to lose and to gain, to bring them close to hand, to feel them in the gut, to encourage support for change. Right here, right now.

Aronoff et al.'s (2019) discussion of transformations to the built environment – including redesigned and repurposed public spaces – continues this theme by addressing how daily experience could be enhanced while energy use is reduced. For example, their vision of carbon-reduced, mostly shared transit mobilities typifies the Green New Deal's attempts to enact speedy first steps that will, in turn, support more fundamental changes. They envision urban regions connected by free, frequent and high-quality public transportation – largely using electric buses driven by unionised drivers – that reduce reliance on and increase support for the phase-out of private petrol-powered cars. The enhanced system would be shaped by a well-funded public authority using quality algorithms and app design to create large-scale, efficient and convenient transit systems across cities and suburbs. More immediately, as a first step, they advocate simply painting dedicated express and local bus lanes. Technology is part of the response, but it must not be fetishised (or privatised!): 'We don't want to live in the pathetic neoliberal green dream of anonymous shiny cities swarming with driverless Teslas' (Aronoff et al., 2019: 129).

The example of urban mobilities policy underscores immediacy and publicness: as the climate crisis becomes increasingly firsthand for more people and as street protests make its threat to young, racialised and poor victims more viscerally evident, responses must appear immediately beneficial to large portions of the population, if they are to gain political support. But if they are to lead to a more just world, they will need to avoid the pitfalls of becoming a new form of 'green capitalism'.

Problems of immediacy and limits of publicness

The crisis is not hypothetical, it is not distant, it's immediate, just as responses must be. Yet thinking through climate protests under the twin rubrics of immediacy and publicness only gets one so far.

While immediacy, in its temporal and spatial senses, is a valuable aspect of protest, it could also connote a problematic ephemerality. The year 2019 saw a powerful wave of street protests crash over the world. Not surprisingly, that flow has now ebbed. This would have almost certainly happened anyway – the level of protest would have been hard to maintain under the best of circumstances – but it was further dampened by the COVID-19 pandemic. And what have the protests changed? Thunberg has reflected on their limited impacts, arguing that they 'achieved nothing' in terms of provoking government action in their first year (quoted in Harvey, 2019) and, more generally, debate continues

over the political efficacy of public protests. Moreover, the immediacy and visibility of protests draws mainstream politicians to them and opens them up for co-optation. Canada's prime minister, Justin Trudeau, joined the protests, for example. There he was, out on the street, protesting his own government's policies! This is not to dismiss the way in which genuine protestors have used the immediacy of their presence in public spaces to great political effect and to inspire further counter-public growth, but these strategies must be assessed carefully and critically.

Furthermore, and perhaps more crucially, it is important to avoid romanticising or fetishising publicness. The notion of a singular 'public' is spurious and politically dangerous. Queer and feminist political theorists have led in developing the notion of counter-publics (oppositional and multiple) precisely in recognition of the problematic liberalism inherent in some public sphere theory (Fraser, 1990; Mansbridge, 1996; Warner, 2002). Indigenous and other racialised activists and scholars as well as their colleagues concerned with poverty, refugees and so on have emphasised the fact that not all climate protestors speak with one voice and there can be no universal vision of what will be good for 'humanity' in the face of the crisis (Wainwright & Mann, 2018).

In one sense, the climate protestors have questioned the notion of uniform effects on a single humanity by highlighting their youth and their gender (most of the leaders of and participants in the movement are young women, according to researchers: Wahlström et al., 2019). Moreover, while Thunberg has been the focus of more vitriol from the right than anyone should have to experience, the movement she inspired garnered much more positive media attention and far less criminalisation and violence than those of Indigenous land defenders and pipeline protestors, for instance. Furthermore, the controversy over the cropping of Ugandan activist Vanessa Nakate from a photo of climate protesters in Davos further emphasises the racial politics that continue to plague mainstream media's representation of the movement (Dahir, 2020).

Indeed, I can be accused of something similar as I have centred a white middle-class activist in my account. Thunberg has been careful to acknowledge these issues in her speeches and in her travels across North America, in which she engaged with Indigenous communities as she went. And the movement, in general, has tried deliberately to create an alliance across many types of difference. Like all publics, the climate public is multiple and emergent. As the speed of the crisis accelerates, immediacy and publicness are useful concepts to help in a critical analysis of the politics of climate action, but they also must remain open to critique and reformulation in the service of an unknown, but ideally better, future.

Acknowledgements

Note

1. While mediation extends spatial and temporal immediacy to some extent, it also has other essential site-specific roles in protest, including co-ordination (through various messaging apps), surveillance (of counter-protestors, of the police) and documentation (of friends, allies, placards, etc.).

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8

Carefully transforming our institutions: how they change, how they listen

Scott Bremer and Eleanor Johnson

In this chapter we put forward that climate change is fundamentally transforming how communities think about the places they live, their values and identities, and their everyday practices and routines. The IPCC's Sixth Assessment Report shows us that the *idea* of climate change – as scientific warning, experienced change, news headline, policy imperative, local stories and so on – is ubiquitous in societies around the world. We, the authors of this chapter, have listened to people voicing climate concern in such dissimilar settings as major European cities, villages in Bangladesh and India and communes in rural New Zealand. In these places, communities' transformation is well underway, with dramatic shifts in peoples' cultures and understandings of natural and social order in the space of less than 20 years. But processes of cultural transformation are rarely smooth. They are complex, contested, contradictory and contingent on the conditions in different places. And this can give rise to changes that are both intended and unintended, desirable and undesirable.

It is important to pause and critically learn from those communities that are already rapidly transforming in response to climate change. What is the potential for undesirable changes, and how do they arise? And how can we take more care in effecting transformations? Environmental activism makes well the case for transformation, capturing the interrelated issues of social injustice and environmental degradation under the umbrella of climate justice (Johnson & Haarstad, 2022; Ranganathan & Bratman, 2019). Research shows, however, that translating activism

and science into governance decisions and policy is difficult terrain: for instance, there are studies showing the effects of 'naive' green gentrification in cities around the world (Anguelovski et al., 2021).

In this chapter, we focus on how climate change ideas are transforming the embedded temporalities, cultures and ways of knowing in communities' institutions. We look at the city of Bergen in Norway and show how the culture of local government is being altered relative to how people come to 'know' local climate change at different timescales, their sense of vulnerability, and their relationship to city inhabitants. We conclude by suggesting that communities like Bergen adopt an ethics of care in navigating transformations and responding to matters of (climate) concern (de la Bellacasa, 2011; Corbera et al., 2020).

Tracking a change of climate in Bergen's local government institutions

Bergen city sits encircled by seven mountains on the west coast of Norway and is described as the 'Gateway to the Fjords'. It is Norway's second-largest city and has a long history (950 years old in 2020) influenced by international trade, notably as part of the Hanseatic League from 1360 to 1775. Today Bergen is the country's busiest freight and passenger port and a marine industry hub, a centre for higher education and research, and in 2000 it became a European City of Culture. Of course, the city is also a key port supplying the Norwegian offshore oil industry, and we acknowledge this contradiction of values as a rocky underpinning of all Bergen's transformational efforts. Bergen has a long-standing cultural identity as a 'city of weather' (Bergen Kommune, 2018) and is often portrayed as Europe's rainiest city: an identity reinforced by meteorology, the media, histories and practices (Meze-Hausken, 2007).

We worked with colleagues (Bremer et al., 2020) to map how global climate change emerged and stabilised as a matter of concern across Bergen's public spheres from 2000 to 2010, arguably remoulding the city's cultural identity from a weather city into a climate city. This concern is mutually generated at the convergence of various influences, including from climate science institutions, municipal policy, political leadership, social movements and activism, media attention, cultural performances and people's direct experience with nature. Climate change, and perceived vulnerabilities to sea-level rise, flash floods and landslides, are today ever present in discussions about Bergen's future, across institutions. What's more, this climate concern is doing something to the city's institutions and the people operating in them: changing how people act,

and even how they think. This chapter draws on our past mapping work – our interviews, observations and archive analysis – to comment on some of these complex changes to institutional cultures.

We focus our attention on local government institutions: Bergen municipality, Vestland county and the county governor's office. For us, institutions are the sets of tangled rules, norms and cultures that steer how we – as individuals, groups or organisations – act in the different social spheres that we move through each day (Scott, 2008). Some institutions are quite formal, like courts or government departments, and the rules and norms may be codified in strict processes and procedures. Other institutions are more informal, like the unsaid ways for acting 'appropriately' in a gardening collective, and we need to learn these ways by being in these institutions and watching what others do. Institutions are a good focus because they can be targeted for investigation, to dig down into the deep-rooted ways of thinking and acting that people take for granted.

Whether formal or informal, institutions have a culture that influences how people act. There's little agreement on what culture is, but three features stand out (Abramson, 2012). For some, culture is societies' *collective representations* or symbols of the world – something like worldviews – and what that world means. For others, culture is about collectively held *values* of what is a good way to live. Others still see culture as the things we do, the objects that we use and our daily *practices* (Shove, Pantzar & Watson, 2012). Importantly, institutions' cultures both help and restrain people in how they think about climate change. As a resource (e.g. Swidler, 1986), people (consciously or unconsciously) choose from a repertoire of worldviews and practices for making sense of climate change, but as a script (Douglas, 1986), cultures can blinker us as to how to think in certain circumstances, making some ideas about climate 'unthinkable'.

Several studies – including our own – have shown how climate change is causing long-lasting transformation in local government cultures. We focus on four changes illustrating how fundamental and complicated they can be, and not entirely desirable.

Transformation is tricky: four challenges for Bergen's local government

Transforming ways of knowing Bergen's climate

There is ample evidence of Bergen's 'weather culture' in its local government. It comes up in brochures and policy briefs, for example (e.g. Bergen Kommune, 2018), *representing* Bergen as 'a city of weather' and

implicitly *valuing* its residents' resilience, 'accustomed' as they are to outdoor lifestyles in all conditions. A weather culture is similarly apparent in the long tradition of stormwater infrastructure and management *practices*, lauded as the oldest in Norway (Bremer et al., 2020). Such cultural references give glimpses into the ways local government actors have come to 'know' the local climate through situated and accumulated experiences. They allude to histories of city governance, lived understanding and traditional routines or logics, for example. They also speak to statistics, accumulating decades of data on Bergen rainfall from which to design stormwater pipes or zone the city.

But ideas of climate change are putting local government's accumulated knowledge in jeopardy. Government policies (e.g. Bergen Kommune, 2010) suggest that cultural representations of Bergen's climate no longer hold, with there coming 'even more water – both from the sea and from the sky'. Disastrous landslide events are labelled as unprecedented, and symptomatic of climatic change impacts. And existing practices and infrastructures are predicted to 'reach the limits of their capacity [so that] many systems will have problems in the future' (Paasche et al., 2017).

Since 2000 we see a shift towards knowing Bergen's climate through the mid- to long-term projections of climate sciences. This took off with early efforts at the CICERO Centre for International Climate Research in Oslo to tailor projections to the city scale to highlight the differentiated vulnerability of communities. At the same time, the Bjerknes Centre of Climate Research was established in Bergen. Together, this has seen climate science become considerably more accessible and actionable as legitimate evidence for decision-making (Ryghaug, 2011). Since then, local government has established close relationships with science institutions, built on regular meetings and networking events, expert advisory roles and participation in research projects. Policies put a priority on basing decisions in the best available science.

This has resulted in changes in how local government represents Bergen's climate: from being a place of particular weather conditions, to being one data point in a global circulation model. Rainstorms are no longer a local occurrence, but an expression of something much larger, more regional. And efforts to mitigate greenhouse gas emissions are framed as having global benefit – 'a 1.5°C world' – rather than local significance. Of course, a corollary of such a global climate framing is that it is only knowable via the apparatus of climate science. Global systems are beyond the bounds of locally accumulated understandings. Surely historic, cultural and local ways of knowing persist in local government, but

the 'epistemic shift' to climate science is undermining their worth and diminishing their use.

Transforming temporalities

Climate change is transforming the rhythms of local government activity, and the timescales in focus. This can be starkly seen, for instance, in the seasonal pattern of activities. Local government is seen to operate (consciously and unconsciously) according to a seasonal framework of scripts, used to anticipate seasonal conditions, coordinate different activities and provide cues for how to act at certain times or in certain situations. Seasonal frameworks have wide-reaching influence on the management of public spaces (e.g. planting the flowerbeds before the National Day on 17 May), water management (e.g. maintenance schedules or sizing systems for rainfall events) or the patterns of social activities over the year (e.g. the timing of the Bergen International Festival), for instance. But shifting regimes of rainfall are throwing some of the city's rhythms into doubt. And scientific seasonal projections are packaged into three-monthly seasonal categories, which are largely incongruent with local government's seasonal organisation. There are signs of a mismatch between seasonality as codified in practice, and as experienced or 'known' through science.

Climate change is stretching the timescales framing local government planning and policy. Bergen and its history are increasingly couched in the wider context of epochal changes in climate, biodiversity and geology, seeing the city's present condition relative to the long-wave cycles of Earth's warming and cooling. Coastal development, for instance, is now planned with consideration for sea-level rise. And historical buildings such as the UNESCO site of Bryggen Hanseatic Quarter are facing new challenges to their preservation, from a wetter climate with decreasing periods of dry weather, and a warmer climate amenable to new species of wood-mites. Such long cycles of change to landscapes or climates have until recently not usually been considered relevant to planning cities. The speeding up of these epochal-scale cycles, in a period some have termed the Anthropocene, extends concern to a new category of hitherto overlooked rhythms.

Climate change is fixing local government's focus firmly in the future. While planning functions of local government have always been future-focused, this future was arguably anticipated from an appreciation for the stock of accumulated past experiences in the city. But now climate science is telling us that the past is no longer analogous to the

future. Past water-management practices no longer offer a template for new development, for example. New water-management plans need to be drawn up for shifting patterns of rainfall. This future focus introduces a greater appreciation for uncertainties, and potentially changes the practices of planning and development. As voiced by local government planners, there is a greater need for muddling through and remaining flexible to changing conditions.

Relationship to city inhabitants

So if local government institutions are a set of cultural beliefs, we start to wonder 'whose beliefs'? By asking the question 'Who is the transformation for?' we can look 'not just through beliefs but at them' (O'Brien, 2021). Evidence from our fieldwork in Bergen with local activists as well as city planners suggests that beliefs about the climate and environmental challenges facing us are shifting rapidly, and in diverse directions (Wanvik & Haarstad, 2021; Johnson & Haarstad, forthcoming). This is in no small part due to the affordances of social media, which enable citizens not only to challenge overarching narratives but also to leverage what appear to be competing beliefs with some success. For instance, following the actions in Bergen from the non-violent civil disobedience group Extinction Rebellion, Bergen municipality declared a climate crisis. When speaking to activists, we discovered that some were unsure of the political implications of this declaration. Was it meaningful, or was it an empty promise? At the same time, local policies designed with environmental progress in mind have been met with strong criticism from other citizens, prompting the emergence of the 'no to road tolls' party FNB.

We can track this complicated process of translating knowledge about the climate across institutional boundaries, from scientific 'matters of fact', to activism and matters of concern, and into governing policies: where do ideas catch on? Where do values of justice, fairness and *listening* fall short? This is the process that de la Bellacasa (2011) described so well as moving from 'matters of concern, to matters of care'.

Interviews and fieldwork with climate activists in Bergen reveal how quickly groups of people can become disenchanted with the status quo. The local school strikers are a clear example of this. They asked, 'Why should young people attend a school they fear cannot prepare them for the futures scientists are projecting?' People care for their institutions when their institutions care for them – less so if they feel they've been let down. What we do know is that trust in institutions is vital for their

legitimacy and existence, and for democracy to flourish. At the same time, pressure and influence from exogenous actors to instrumentalise change is both possible (Scott, 2008) and vitally important for pushing the parameters of the possible. As much as there are insiders and outsiders when it comes to institutions, this push–pull mechanism can move new beliefs into a community's governing nucleus.

Perceived vulnerability

Within a relatively short space of time, shared beliefs about Bergen city's vulnerability to climate change have significantly transformed, including in local government. Early downscaled climate projections (O'Brien et al., 2004; Sygna et al., 2004) targeted Bergen like a bullseye for increased autumn rainfall, generating some anxiety in an already wet city (Meze-Hausken, 2007). And a series of deadly landslides in built-up areas have seen local government scrambling to map areas of landslide risk and instil new risk and vulnerability assessment and water-management plans in land-use planning (Groven et al., 2012). The implication is that Bergen residents' inherent resilience to weather cannot prepare them for unprecedented conditions and risk profiles.

Perceived vulnerability is linked to beliefs about climate change and its severity. We see an emergent sense of vulnerability and foreboding challenging the impasse of socially organised denial described by sociologist Kari Marie Norgaard in her ethnography of western Norway only a decade ago (Norgaard, 2011). But at the same time, data from the Norwegian Citizen 2021 panel reveals that Norwegians continue to disagree on climate change and its impacts or risks (Gregersen, 2021). Researchers are beginning to understand better the impact that political leanings, age and education can have on beliefs about the climate (Poortinga et al., 2011). Similarly, research from the United States has shown how easily climate scepticism can be sown (Jacques, Dunlap & Freeman, 2008). Attention to these sprawling information webs of (dis) beliefs, subject to constant shifts in power, is key. Our empirics are rooted in Bergen but our findings demonstrate the inevitable pull of global seachanges. For activists in Bergen, the movements that started in both Sweden and the United Kingdom inspired action at the local and national levels that changed the nature of climate debate in Norway. These currents of informal political activity are in constant flux, encountering and shaping one another as they jostle for space, including in local government settings.

Such ruptures and disagreements are vitally important for governing institutions to grapple with. We even speculate that political alliances and beliefs about the climate might in the near future mutate and present in unusual and unexpected ways. Social media is a powerful mechanism for rapidly remapping and then condensing beliefs about the climate. Government institutions can be sluggish, bound by the sets of social and legal rules we have outlined above, making the pace of social movements and their digital infrastructures look like lightning forces in comparison. The social sciences must be equipped to understand these digital landscapes of changing climate beliefs and how they in turn impact cultural and institutional traditions. Further, these disciplines can continue to use the affordances as a go-between for citizens and their governing institutions.

Concluding with care

Change is a curious thing. Sometimes we find ourselves in the throes of great chaos, knowing that we are living through a defining moment. The longer arcs of the story, however, are more difficult to grasp, the pieces of the puzzle much more evasive. This chapter has attempted to tease out the longer perspective, and to highlight the subtler but important changes that societies around the world can be alert to as they grapple with the serious implications of living in an already changed climate.

One commonly remarked transformation (which we showed in Bergen too) is towards re-establishing governance based on the scientific projections of global climate change, in a process that is eclipsing localised knowledge of climate, seasons and weather garnered through many generations. What we have tried to depict here is this shift from localised knowledge past to globalised knowledge future. These temporal shifts in how beliefs are framed are, of course, a logical reorientation of cultures as they adapt to a drastically changed context, where science and information infrastructures are globalised and so reshape the peripheries of the worlds that citizens inhabit. In short, ideas of climate change, coupled with other influences, are rapidly changing institutions' cultural-cognitive foundations: how people come to know and attribute meaning to the world in social spheres.

One problem is that communities may find themselves in a cultural interregnum. While Bergen's local government may be in the process of discarding many of its inherited cultural representations, values and practices as defunct, there is not yet the infrastructure of science and

technology in place to take up those old cultural functions. Climate science remains too uncertain and imprecise for many governance decisions, and ill fitted to others; should climate projections steer decisions on Bergen's calendar of festivals? What about the design of stormwater management? Is there nothing worth salvaging from 950 years of experience of living in place? And what matters of concern are simply beyond the remit of science?

When we centre an ethics of care, we can search for what the scientific measurements do not account for, strive to integrate principles of deep listening and allow institutions to account for messy and unprecedented social transitions. Theoretical innovations in science and technology studies have equipped researchers to map out these surprising interactions between people, the climate and technological interventions. Social media affords institutions a go-between, so research and scientific knowledge can be more easily exchanged, and citizens equipped to make informed decisions about living with this strange new climate. We can ask questions such as how researchers can leverage social media not only to educate but also to mediate *without* compromising on scientific method and rigour. Where do scientific communications fall short, again and again? What works, and what hurts? And if institutions can think, then can they listen, too?

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9

Experimenting with ecological civilisation on the ground: the green transformation of a resource-based city in China

Ping Huang and Xiaohui Hu

China's national strategy of ecological civilisation is a response to the climate emergency facing the world today. Integrated into China's core national agenda in 2018, ecological civilisation refers to establishing sustainable production and consumption patterns, to achieve human–human, human–nature and nature–society harmony, emphasising the interdependence, mutual reinforcement and coexistence of human society and the natural environment (Zhang, Li & An, 2011). Building ecological civilisation entails fundamental and structural transformation of local economies and lifestyles. Under this national strategy, changes are unfolding at an unprecedented pace (Huang, Westman & Broto, 2021). Looking at the decade from 2007 to 2017, the 10-year average growth rate of renewable energy consumption in China was 41 per cent, much higher than the global rate of 16 per cent (BP, 2019). While the benefits of low-carbon transitions are often enormous, they inevitably incur various social and economic costs, particularly when the transition is fast and radical.

This chapter explores the experimentation with ecological civilisation in China, focusing on the green transformation of a resource-based city, Huzhou, in northern Zhejiang province. In the early 2000s, Huzhou decided to cope with local environmental problems by implementing a coercive measure of shutting down all mining factories. Given Huzhou's proactive endeavour of green transformation, Huzhou was designated as

a national demonstration area for ecological civilisation construction in 2014. Since then, the city has gained status as successful in implementing ecological civilisation on the ground, and the progress has been labelled by the government as the 'Huzhou Model'.

China's national agenda of ecological civilisation construction

Ecological civilisation has been used first and foremost by the Chinese Communist Party (CCP) (Goron, 2018), particularly by the Ministry of Ecology and Environment (MEE, formerly the State Environmental Protection Agency). As early as 2000, Xie Zhenhua, the former director of MEE, delivered a speech about green schools and mentioned that 'ecological civilisation' was an important component of modern civilisation.[1] In January 2005, at the National Environmental Protection Work Conference, promoting ecological civilisation was regarded as a key task in environmental protection.[2] In October 2007, 'ecological civilisation', as a term, first appeared in the report of the 17th National Congress delivered by the then president of China Hu Jintao. Ever since, ecological civilisation has been assigned an increasingly prominent and important role in China's national agenda (Figure 9.1).

In 2012, the 'Five-Sphere Integrated Plan' was put forward as a national agenda in the report of the 18th National Congress, adding 'ecological civilisation construction' to the previous 'Four-Sphere Integrated Plan' (economic construction, political construction, cultural construction and social construction) (Huang & Westman, 2021). Meanwhile, the 18th National Congress adopted the revised Constitution of the Communist Party of China and 'build a socialist ecological civilisation' was added to the Party Constitution. As illustrated by Table 9.1, key policies have since clarified the general requirements, goals and visions and key tasks, put forward the institutional reform of the ecological civilisation system, and laid out the roadmap and timetable for the construction of ecological civilisation.

By the end of 2021, a total of 498 demonstration zones had been nominated for ecological civilisation construction (Figure 9.2). The experimentation programmes have delivered fruitful results. In November 2020, the central government released the National Ecological
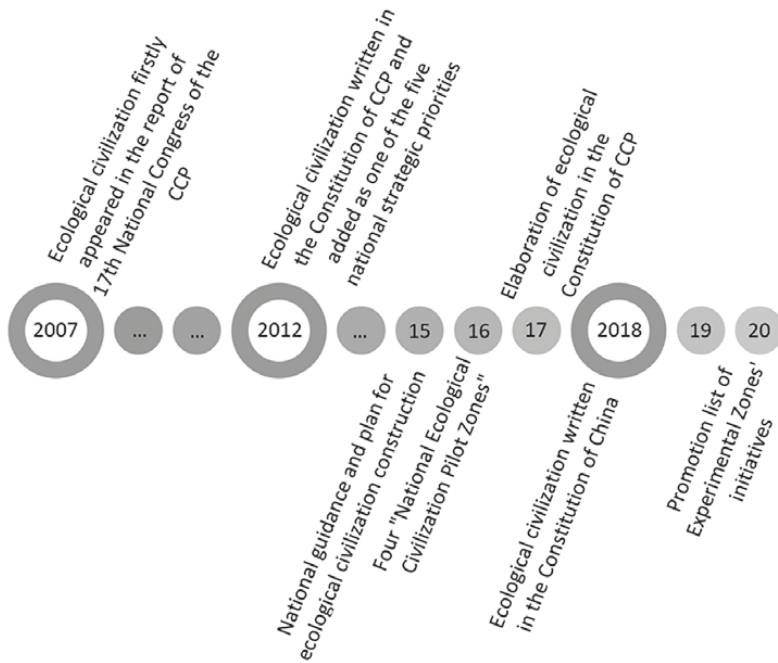
Figure 9.1 The evolution of the policies of ecological civilisation.
Adapted from Huang & Westman, 2021.

Civilisation Experimental Zone Experience Promotion List, which included 90 replicable and promotable reform initiatives and experiences for the construction of ecological civilisation.

Huzhou has been designated as a demonstration area in various national demonstration projects by several ministries. Since Huzhou is an important ecological conservation area in the Taihu Lake basin and the Yangtze River delta, the construction of a demonstration zone in Huzhou was deemed conducive to improving the regional ecological capability, and of great significance to ensuring the regional ecological security. At the same time, after years of transformation, Huzhou has entered a critical period of green development. Carrying out the construction of a demonstration zone in Huzhou and exploring a green, circular and low-carbon development model are the practical needs of Huzhou's own development, which can further inform the economic transformation of other cities in similar situations.

Table 9.1 Top-level design of ecological civilisation

Key policies	The 'Opinions on Accelerating the Construction of Ecological Civilisation' (2015) The 'Overall Plan for the Reform of Ecological Civilisation System' (2015)
Overall objective	By 2020, to build a systematic and complete ecological civilisation system consisting of eight institutions, to modernise governance capabilities, and to move towards a new era of socialist ecological civilisation.
Basic ideas	• Respecting nature, conforming to nature, and protecting nature; • Unifying development and protection; • Lucid waters and lush mountains being invaluable assets; • The concept of natural value and natural capital; • The concept of spatial balance; • Mountains, rivers, forests, farmlands, lakes, and grasslands form a community of shared life
Key tasks	A total of 47 tasks proposed in the 'Overall Plan for the Reform of Ecological Civilisation System'
Institutional guarantee (eight institutional systems)	• Build a property rights system for natural resources assets with clear ownership, clear rights and responsibilities, and effective supervision; • Construct a national land space development and protection system based on spatial planning and land use control; • Build a nationally unified, interconnected and hierarchically managed spatial planning system with spatial governance and spatial structure optimisation as the main content; • Build a comprehensive, scientific, standardised and strictly managed resource management and conservation system; • Build a system of paid use of resources and ecological compensation that reflects market supply and demand and resource scarcity, as well as natural value and intergenerational compensation; • Build an environmental governance system oriented to improve environmental quality, with unified supervision, strict law enforcement and multi-party participation; • Build a market system that relies more on economic leverage for environmental governance and ecological protection; • Build an ecological civilisation performance evaluation and accountability system that fully reflects resource consumption, environmental damage and ecological benefits.
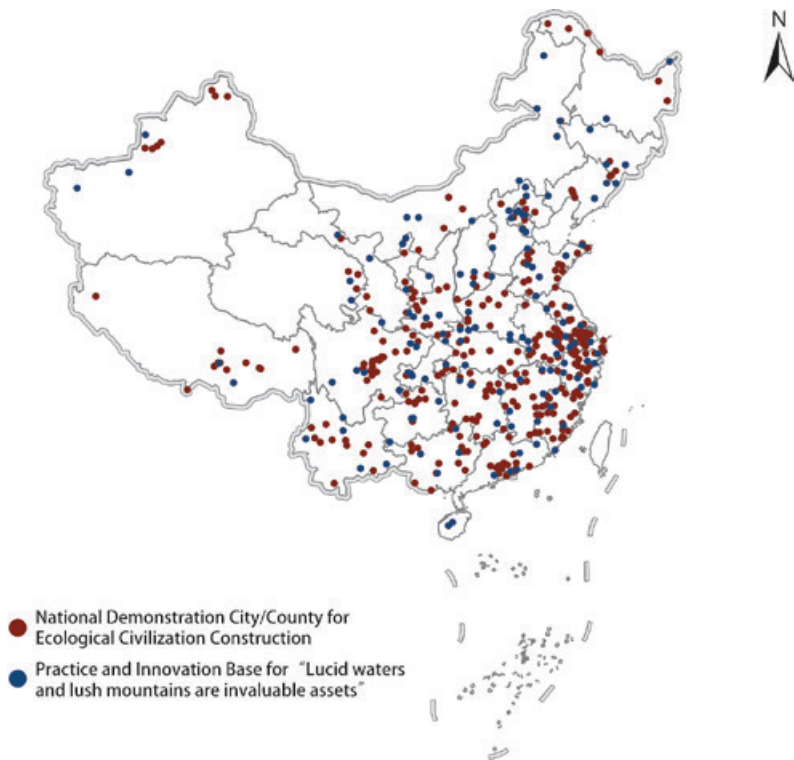
Figure 9.2 The spatial distribution of the 498 designated demonstration areas for the construction of ecological civilisation. Source: Xiaohui Hu.

The 'Huzhou Model'

Huzhou is located in the northern part of Zhejiang province, with an area of 5,818 km². The primary industries of Huzhou include textiles, wood processing and wood products, electrical machinery and equipment manufacturing. It is also cultivating emerging industries such as digital, new-energy vehicles and new materials. Although Huzhou was initially designated as a Pilot Demonstration Area of Ecological Civilisation in 2014, its green transformation started long before that, as early as the 2000s. The policy experiment with ecological civilisation in Huzhou has focused on two key arenas: the institutionalisation of ecological civilisation and industrial upgrading.

Institutional innovation

Institutional construction has been a top priority in the demonstration of ecological civilisation in Huzhou. Huzhou has established a 'three-in-one' institutional system for ecological civilisation, including legislation, standards and institutions.

In terms of local legislation, Huzhou obtained the legislative power in 2015. Thereafter in 2016, the first comprehensive local regulation on ecological civilisation construction, Regulation on the Construction of the Pilot Demonstration Area of Ecological Civilisation in Huzhou City, came into effect.[3] Later in 2017, the Regulation on the Management of the City Appearance and Environmental Sanitation in Huzhou City was promulgated and implemented.

Standardisation is another key aspect of the institutionalisation of ecological civilisation. Focusing on the actual needs of ecological civilisation construction, Huzhou has implemented 10 standardisation projects in sectors such as residential settlement, green finance, green intelligent manufacturing, tourism and ecological agriculture.[4] In 2018, the Guidelines for the Construction of Ecological Civilisation Demonstration Areas was officially released. This is the first local standard for the construction of ecological civilisation demonstration areas in China. The standard includes construction indicators in eight key aspects: spatial layout of ecological civilisation demonstration areas, urban and rural development and integration, green industry development, resource conservation, recycling, ecological environmental protection, ecological culture and institutional mechanism construction. The standardisation of ecological civilisation construction supports the effective and efficient application of innovative local practices. Through various standards, the achievements and experiences obtained in Huzhou can be consolidated and quickly replicated in other areas.

Many institutional reforms have been initiated regarding ecological civilisation construction. For instance, Huzhou has experimented with institutional changes in the cadre (i.e. government officials or public servants) assessment system. The indicators for cadre assessment have been refined, focusing more on the achievements on environmental protection and rural revitalisation, while weakening indicators for economic development. Anji County, for example, applies a so-called double assessment approach, taking into account both economic and ecological performance; while for remote villages and towns in mountainous areas, only

the achievements in ecological protection are assessed. Through such an assessment mechanism, towns and villages that do not have the conditions for industrial development are completely freed from the pressures of GDP assessment, and cadres are encouraged to take responsibility for ecological protection and environmental conservation.

Industrial transformation

As a city rich in mineral resources such as limestone, one of the pillar industries of Huzhou used to be the mining industry. Nevertheless, extensive and intensive mining activities have caused serious damage to local ecological environmental. In the early 2000s, Huzhou started the process of industrial upgrading. The first step was to shut down mining enterprises. According to statistics released by the government, by 2016 the number of mining enterprises in Huzhou was reduced from 612 to 56. Moreover, Huzhou is the first place in the country to systematically and comprehensively carry out the treatment of abandoned mines.

In December 2005, the Huzhou municipal government took the lead in proposing the construction of greener mines in the region, and gradually formed a complete set of standards for the construction of greener mines, characterised by water saving, dust-free, tailing-free and low energy consumption. In accordance with the principle of adapting to local conditions, Huzhou has completed the treatment of more than 300 abandoned mines. In 2018, Huzhou officially published the country's first local standard for green mine construction. According to the standard, the green coverage rate should reach 100 per cent of the area that can be greened, the recovery rate of open-pit mines should reach 100 per cent, and the comprehensive utilisation rate of resources should reach more than 99 per cent.

As can be seen, Huzhou has initiated a radical transformation of its local economy. During such a rapid transition, there are surely social and economic costs. For instance, in many villages, because of the shutdown of highly polluting factories, the local economy was hit hard. Many villagers lost their jobs and had to seek other sources of income. Thus, industrial upgrading not only affects the local economy, but may also endanger the social stability of local communities. Here we present the case of the successful transformation of a resource-based village in Huzhou, the Yu village, to show how local residents accommodate structural changes in the pursuit of sustainability.

The green transformation of Yu village

Yu village, with a population of roughly 1,000 people, is located in Anji County in Huzhou. It is known as the birthplace of Xi Jinping's 'Two Mountains Theory', which is key to the conceptual construction of ecological civilisation in China's national agenda (Figure 9.3).

After the reform and opening up policy in the late 1970s, township enterprises proliferated in the vast rural areas in China, particularly in coastal provinces. Meanwhile, rapid urbanisation in the Yangtze River delta generated huge demand for building materials. Against this background, Yu village, which is rich in limestone reserves, began to embark on a development path of resource exploitation (*Beijing News*, 2019). Until the 1980s and 1990s, Yu Village was the largest limestone mining area in Anji county. One-third of the villagers worked as miners. The mining industry had made Yu village the 'richest village' in Anji, with the annual income of the village collective reaching three million yuan. Nevertheless, the ecological environment of the village had been severely damaged. There was a time when the mountains and forests were riddled with holes and the mining activities caused environmental pollution in the village. Many villagers who worked in factories and mines at that time suffered from health problems such as back pain and pneumoconiosis.

Figure 9.3   A local memorial museum for the 'Two Mountains Theory'. Photo: Xiaohui Hu.

At the end of the last century, the village started to realise that the resource-extractive mining economy was unsustainable and that transformation was imminent (*Huzhou Daily*, 2014). In 2002, Zhejiang province proposed to build a 'green Zhejiang'. In January 2003, Zhejiang became the fifth pilot province for the construction of an 'ecological province' in the country. At the same time, Huzhou started the process of mine remediation. Ever since, Yu village has taken prompt or even radical actions in promoting green transformation of the village. Since 2003, the factories and mines in Yu village were shut down one after another, and were then reclaimed and re-greened to restore the ecological functions of the mountains.

Nevertheless, the green transformation has never been easy. The decision to shut down all the mines initially encountered strong social resistance, particularly from villagers who were employed in the mining industry. Since mining is the village's main source of income, after closing down the factories and mines, the collective income of the village dropped from more than three million yuan to 200,000 yuan, and even the salaries of village cadres could not be paid. As recalled by a government official in the Huzhou Municipal Bureau of Land and Resources, during the mine closure period, many villagers came to them and asked the government for an explanation of the decision (*Beijing News*, 2019). Because villagers have long been accustomed to a life revolving around mining activities, they did not know what to do after shutting down all the mines and had to leave the village and make a living instead in larger cities.

In 2005, when the transition encountered substantial difficulty, Xi Jinping, then secretary of the Zhejiang Provincial Party Committee, made a visit to Yu village. During the visit, Xi re-emphasised the importance of ecological conservation and green transformation. Ever since, the shutdown of factories and mines has proceeded more smoothly. Meanwhile, village cadres vigorously carried out comprehensive environmental improvement of the village. They demolished all illegal buildings along the stream, implemented projects such as village greening and courtyard beautification and improved the living environment of the village. After the environment gradually recovered, the village was divided into different functional areas, including eco-industrial areas and eco-tourism areas.[5] The once pitted mines were built into heritage parks for sightseeing.

Over the years, Yu village has successfully transformed from a mining village 'relying on the mountains and eating the mountains'

into an ecological village. It has created a rural tourism development model, with a booming eco-tourism economy. After years of mine management and transformation, Yu Village is now a well-known tourist attraction in Zhejiang province, with thousands of tourists visiting the village every day.

Looking back, it is widely agreed among local people that shutting down all the mines was the right decision to make. For the village, in addition to the ecological and social benefits, the economic benefits are also impressive. In 2018, the collective economic income of Yu village was 4.1 million yuan, and the per capita net income of the villagers was 41,378 yuan, which was 10,000 yuan higher than the per capita income of rural permanent residents in Huzhou in 2018 and about 14,000 yuan higher than the provincial average level (*Beijing News*, 2019). Many villagers who left the village have returned because they can easily find a job with the booming of the village's eco-tourism.

Conclusion and discussion

Policy experimentation with ecological civilisation is currently being implemented in China at a national scale. The full implications of this national scheme are yet to be seen. How it is going to transform China and what it means for the global struggle against climate crises are important but unanswered questions. This chapter represents an initial effort to understand ecological civilisation in China, particularly from the practices on the ground. From the case of the 'Huzhou Model', some important lessons can be drawn.

The first lesson is the importance of institutional construction in implementing ecological civilisation. Huzhou has experimented institutional innovation in legislation, standardisation and institutional reforms, particularly the cadre assessment system. These institutional arrangements represent key steps in the institutionalisation of ecological civilisation in China, which have provided critical legislative and regulatory guidance to key actors in the practice of ecological civilisation.

The second lesson is the principle of adapting to local conditions (*yin di zhi yi*), which can be regarded as a key feature of China's ecological civilisation experimentation. China is a country with significant regional disparity. Huzhou is merely one of the hundreds of ecological civilisation demonstration areas in China. Each demonstration area might provide a specific 'model' in terms of ecological civilisation construction. For instance, in the industrial transformation of Yu village, the

abandoned mines have been rebuilt into heritage parks, not only so that the abandoned mines find a new role in the village's eco-tourism, but also so that the practice represents respect to the village's history and villagers' collective memories.

Huzhou has managed to carry out a green transition within a relatively short period, in less than two decades. There are surely social issues that have emerged during the green transformation of Huzhou. While the success of Huzhou has been well acknowledged, it does not come without any social and economic costs. As mentioned, there have been social unrest and struggles, especially during the early stages of transformation. However, when looking at the outcome in the longer term, it is fair to say that the costs have been paid off by the benefits gained from the green transformation. Through the practices of ecological civilisation construction on the ground, we can see that multi-level Chinese governments adopt a quite pragmatic view of and approach to low-carbon transitions. Policymakers in China acknowledge that a transition inevitably incurs social injustices and creates winners and losers. Therefore, the focus is not placed on avoiding any occurrence of injustices, but on the actual *delivery* of transition in a way that is as just as possible. Here, the underlying belief is that (realising) transition *is* justice, justice *is* transition.

Acknowledgements

Notes

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Part III
Countering alienation under rapid change

10

The good, the bad and the beautiful? The role of aesthetics in low-carbon consumption

Jesse Schrage

Urban transformation towards just and low-carbon societies is one of the greatest challenges of the twenty-first century, and reaching those ecological and social imperatives represents a monumental task in and of itself. But attaining them through rapid, deep and just urban interventions points to a need – also the aim of this chapter – to explore new and alternative forms of consumption.

Contemporary consumption is now commonly characterised by many social commentators as pertaining to a culture of excess – and rightly so. Over the last decades, we have observed a global rise in consumer demand, and thrusts to consume are part and parcel of contemporary living, through good as well as through tough economic times. Our productive time, it has been argued, is locked into the making of a material culture, which stops us from more worthy pursuits such as family dinners, friendly chats or nature walks. There are cultural, economic and technological forces at play that increase the speed and rhythm of everyday life. These forces impose specific politics of time and of consumption and are experienced as a general acceleration of the pace of social life. In this view, society, culture and an increasing number of aspects of our everyday lives are governed by an aesthetic of speed and frenetic consumption.

These trends form the context for this chapter. I aim to understand forms of consumption that are both alternative and dissatisfied with consumer culture, and that offer forms of resistance beyond that specific aesthetic. In this context, the role of aesthetic judgement needs

to be understood as experienced social and political practice. For if Marcuse (1978: 3–4) is right in pointing out that 'the need for radical change must be rooted in the subjectivity of individuals themselves, in their intelligence and their passions, their drives, and their goals', then understanding the contribution of the role of aesthetics in this debate is a requirement for deep and rapid social transformations.

In this chapter I explore how aesthetic concerns help us understand dynamics of change in everyday consumption: how are notions of beauty, taste and feeling playing out in creating new everyday aesthetic experiences? To answer this, I build on ethnographic data collected in a series of urban households in France who reduced and rearranged their consumption patterns, and interrogate how aesthetic concerns are mobilised in the process.

A need for novel aesthetics

Over recent decades scholars have repeatedly portrayed consumerism as paradigmatic to our everyday lives: it is the logic through which we express ourselves, through which we communicate and socialise with each other and find meaning in today's world.

But while everyday choices, and the subjectivities that support them, are shaped by social and institutional forces that celebrate consumerism (Boström, 2020), consumer culture is not without its discontents. Sociological analysis has highlighted how consumption has become a politicised terrain for alternative politics, and how consumers increasingly make consumption choices based on normative stances. Daily shopping decisions involve more than economic considerations, and the consumption of food, clothing or household items is also guided by ethical, political and wider social issues (Micheletti, 2003). In reaction to this, many anti-consumption discourses have emerged, and practices such as voluntary simplicity, simple and slow living or tightwadism stand today as forms of disaffection with consumerism itself. Rethinking consumption practices offers an opportunity for what Soper (2008: 581) calls 'aesthetic revisioning', a chance to explore modes of living 'aligned with a general re-thinking of pleasure and the good life that would be achieved through a "green" renaissance'.

Many sociologists have contributed to an understanding of the underlying social dynamics influencing consumption of aesthetic goods and experiences, notably art-based or cultural artefacts. But how are aesthetic concerns mobilised in everyday consumption practices such

as cooking, housing and mobility? Here aesthetics can be understood as a 'means of apprehending the world via sense-based and affective processes – processes that touch bodies intimately and directly but that also underpin the emotions, sentiments and passions of public life' (Bennett, 2012: 3). In other words, we have to understand forms of consumption that are both alternative and dissatisfied with consumer culture, and that offer forms of resistance beyond that specific aesthetic.

Here, I discuss a study on how aesthetic intentions are employed in households deliberately operating consumption choices for reducing their carbon footprint. Throughout the interviews I focused purposefully on the relationship that the interviewers had with the desirable aspects of low-carbon aesthetics.

Aesthetics in everyday life

Varying literatures have come to explain and understand the role of aesthetic experiences in everyday life. Early contributions highlighted how aesthetic choices in daily activities emphasised the deeply cultural dimensions of consumption: styles, forms of expression and personal identity were perceived as communicated through the purchasing of goods as they pertained to specific cultural symbols and references.

But aesthetic experiences are also practical and emotive: already since Dewey (1934) has the notion of aesthetics as a subjective experience been developed, allowing cultural theorists to understand how everyday non-artistic, personal experiences also reveal aesthetic dimensions (Light & Smith, 2005; Yuedi & Carter, 2014). For Saito (2007), interaction with everyday artefacts also goes beyond mere functional use, and the sensuous qualities of an object, whether being its size, shape, color, texture, arrangement of parts, or even smell, all come to matter in how we appreciate its value. For Haapala (2005), everyday aesthetic experiences are in fact conditional for the development of routines, and contribute to the development of a sense of familiarity, a sense of place.

Importantly, these aesthetic choices are not only the product of subjective experiences, but should be understood within a social context as having both moral and political implications. Our aesthetic experiences will change as we understand the environmental, ethical or social implications of their construction or use. The experience of a mobile phone or a diamond ring might therefore change as the environmental and social consequences of their production is revealed, shifting the moral associations developed with that object (Saito, 2012).

Thus the oppositional and political character of some forms of consumption (through practices of, for example, fair trade, ethical, sustainable or slow consumption) reveals the aesthetic concerns developed by consuming differently. An aesthetic appreciation of everyday consumption choices allows therefore to tie critical societal discourses with everyday choices: individual acts of consumption are recast as political acts of collective action (see Soper, 2020).

What role do aesthetic concerns play in low-carbon living?

This study engaged with five households in France which aimed at reducing their carbon footprint through a range of different strategies and change in practices. Three of these households were biparental families with one or two children, while the other two households were composed of one couple each. Repeated interviews and home visits were carried out over a period of one year and targeted their recent attempts at developing alternative consumption practices in relation to the domains of food, housing and mobility. Overall, the households displayed high levels of educational and professional capital with on average more than five years of higher education per adult. The semi-structured interviews were coded by emotional responses and focused on the unproblematic and challenging aspects of changing everyday practices. The names used below have been changed.

In what follows, I argue for a particular attention to how aesthetic intentions provide a theoretical basis through which one can understand how routinised acts of consumption fit within broader moral and political considerations. Throughout the interviews I focused purposefully on the relationship that the interviewers had with the desirable aspects of low-carbon aesthetics. In the coming analysis I therefore use aesthetics as including acts and practices of everyday life, and which encompass notions of taste, form, creativity, perception, feeling and sensibility. Based on the data collected, I find three ways through which aesthetic intentions were raised in relation to low-carbon living.

Low-carbon aesthetics as a sensory experience

First and foremost, aesthetic experiences for the different households interviewed were often equated with forms of hedonic pleasure. Here participants' sensory experiences in changing consumption habits were

mentioned by all members of the household interviewed, notably in relation to the consumption of food. Here Daniel, father of two and living in a two-bedroom apartment, notes how reducing his meat consumption affected his physical well-being:

> The simple desire to buy meat once a week to cook it well is a lot more attractive to me … and no more. For me, it's more a question of physical feeling, not to eat too much of it, and not every day, I feel a lot better and it gives me more energy.

Similarly, Emily, a part-time health worker, explains that her weekends spent with her family, where meat eating is a lot more common, make her feel ill:

> Every time we come home from our parents, where they cook so much meat, and where we are in another mode of consumption, I would say we're completely … we come back, and we say to ourselves, but in fact, those weekends are killing us. We eat too much, we are not well and we feel so bad afterwards.

Alternatively, aesthetic experiences were also mobilised by households when they talked about the desirability of buying and consuming certain products. Here Vincent explains that shopping seasonally has become important for him, not necessarily for its ecological gains, but also for the better tastes that seasonal vegetables offer:

> So my father has a garden, and we often go to help ourselves in vegetables and fruits. And now, I just couldn't go back … For example, buying tomatoes. For me, it is a heresy to buy tomatoes in the supermarket. For me, I prefer to deprive myself of tomatoes the entire year. I will eat them in the middle of the season, but to buy them out of season … that's stuff … it's unbelievable, the taste is not acceptable.

The pleasure associated with changing their consumption habits was not only associated with a specific diet or type of food, but was also expressed when asking about how participants thought about the design of their own houses. Here Lucas explains the selection of building materials and paint used in the renovation of their living room:

> The idea of this clay is the warm colours it brings, and it plays a lot on the 'feng shui' side of the house. I don't know what other word to

use, and I don't know if that makes sense … But I feel much better in a room with natural materials than with polystyrene for example. You feel it right away, even in the mood of the room.

For Lucas and for others, aesthetic experiences in their house were important because they contributed to a sense of familiarity, intimacy and safety. Related to this were also the numerous instances where aesthetic motives were associated with health benefits, and contributed to the notion that their interior was safe from pollution. This was particularly present in households with children.

A second, related element that was brought up during house visits was how changing consumption patterns entailed a different way of relating to the producers, and a different purchasing experience altogether. Emma explained how she stopped her online shopping and has come to prefer face-to-face exchanges. She explains that:

Now it is a necessity that 80 per cent of what we consume in food is organic. There are things that you can't consume organic because … it's not close by and so it's not worth going to the other side of the planet to look for organic … Me, I don't order stuff from the internet any more, I make direct purchases because it's nice to meet people there, and to chat with the farmers.

She describes a similar feeling with regard to her choice of furniture, which she selected from a second-hand market and by contacting sellers directly. For many, developing a relationship with sellers contributed to a feeling of conviviality and authenticity, and was often depicted in opposition to the experience of supermarket shopping.

Finally, household members detailed how changing their consumption patterns had come with feeling more creative and thoughtful about what they bought. Here, in relation to food, William explains how his membership of a community-supported agriculture scheme, through which they receive weekly seasonal and organic food boxes, changed the way he thinks about cooking:

And then you discover other vegetables too, some that you would never have bought in normal times if you would have been at the market or something else … And there, you have them in your basket, so you are not going to let them go bad. And we started to buy less in supermarkets, because you do with what you have. And it's true, we very rarely buy extra vegetables.

Novelty and creativity were mentioned by the informants as important in their everyday life: it was a subject of daily conversation in the households and contributed to a feeling of excitement.

Whether for their hedonistic qualities, the pleasure of face-to-face interaction or for their novelty, the different elements brought up suggest that sensory experiences were an important part of the aesthetic experiences of engaging in low-carbon activities. And while we could qualify those as having personal and instrumental value, in the following set of responses we also see that aesthetic choices are influenced by a desire to engage with collective norms.

Low-carbon aesthetics as a matter of signalling

A second set of intentions that were expressed by the participants relates to how aesthetic concerns allowed them to express who they are, and were seen as a way to communicate affiliation with others. Consumer research has indeed since long described how consumer choice is dictated by the desire to communicate affiliation or detachment vis-à-vis a social group, though in most cases these concerns the purchase of conspicuous goods (such as works of art, a new car or fashionable clothes). Here we observed how a similar dynamic also played out in relation to more everyday shopping decisions.

First, for many of the participants, social occasions were the moment when aesthetic choices were primed. Whether the visit of a friend and family, or through occasion such as birthday parties or dinner, participants explained how social occasions became ways to talk about different eating practices:

> At my parents', it is inconceivable to make a meal without the starter or without dessert, and the main meal will certainly have meat. I see that with us, it is very common that the food is just vegetarian … And there will be no starter, just a main course, and perhaps cheese. I like that.
>
> Q: What do you like about that exactly?
>
> [Emily]: Well, we want to be more careful with what we eat. And I like that it questions my parents so much for example … It's a bit like I can start a discussion with the food that is on the table.

Aesthetic attributes were mentioned not just for their hedonic qualities, but also for the symbolism they upheld. For the participants, low-carbon endeavours and products had come to acquire a positive status

and imaginary, giving them symbolic properties and communicative value. For the households in this study, it was their choice of food that notably constituted a way to negotiate the meaning associated with its consumption.

Second, the symbolic value of certain consumption choices also contributed, for those involved, to particular consumption behaviours. Some participants described how reducing their car travel made them engage with their neighbours more than before. Sophia explains that reducing her car travel has been a way for her to socialise and keep social ties with neighbours:

> Yes, suddenly, there are four of us to take the vegetable basket there so we only have one person getting them for everyone. So when it's my turn to go, I take the vegetables, the bread and we make one trip instead of four and as we are all in the same area we bring back the shopping for everyone. It's so nice because then people come here to pick up their boxes and have a coffee.

For Sophia as for others, the consumption of certain goods provided multi-sensorial stimulation that caters to a certain imagination of solidarity and low-carbon living, but also notably contributed to the creation of cultural and symbolic meanings. The creation of these forms of consumption was experiential and sensorial, but also in particular underlined a specific idea of what cooperation and food provisioning was about.

Together, these perspectives add weight to the notion that it is not only cultural goods such as films, art works and literature that can be understood as forms of cultural consumption. Everyday choices in food, interior design and clothing also have symbolic power, and allow people to link aesthetic processes with forms of cultural consumption.

Low-carbon aesthetics as critical political intentions

A third and final way through which aesthetic concerns have come to materialise is for expressing critical political intentions, notably in relation to high consumption and industrialised modes of production. For many, these were articulated as resistance against an imperative to consume, but also pointed towards specific values the households upheld.

Throughout the interviews, specific aesthetic judgements were often entangled with political intentions. Here aesthetic choices therefore figured more as conceptual categories that defined ideas about what beauty and taste could be, but also informed the feelings that participants

had about specific products or materials. Here, Lucas explains how engaging with a community-supported agriculture scheme was a way to show more solidarity towards local food producers. He explains that his preferences are motivated by a necessity to support local farmers:

> The interest that I see in buying veggie boxes is the fact that there is a support for the producers and the fact of being able to say to a producer, 'I want to guarantee a part of your income over the year' … Then he can devote himself to his gardening work and then feel relaxed about the marketing side of his business. And he knows that he will have the support of the community if ever there is a moment when he does not produce vegetables.

The necessity for solidarity was expressed through themes as wide as the selection of building materials, furniture or clothing. While notions of solidarity figured prominently, all households also expressed a need for frugality and thrift in their consumption. But while economic aspects were emphasised, a number of participants also stressed that thrift was necessary in relation to incessant calls to consume more. This was the case for Emma, for whom engaging in local food consumption was also a matter of not engaging in what she describes as 'a madness':

> It's a madness to have things come from so far. If all your stuff comes from less far, in terms of transport it is less important [in terms of emissions]. If they bring beef from Argentina instead of from here … The cow from here just came from the mountains, while that of Argentina took the plane to get here … So you see it's mostly things like that that I pay attention to.

What tastes for the twenty-first century?

What aesthetics are needed for the twenty-first century? Deep and rapid urban transformations will inevitably require a readjustment of our aesthetic sensibilities. In facing aesthetics of speed and high consumption, we are challenged to think and perform alternatives to dominant conceptions of fulfilment, and these will need a novel set of everyday aesthetics. However mundane they might be, changes in norms, subjectivities and practices have implications for creating different political rules, social expectations and more broadly shifting the boundary of what constitutes a 'good life'. These will include a variety of anti-consumerist approaches,

from novel forms of gratification and hedonism, to forms of resistance to current 'imperial modes of living' (Brand & Wissen, 2021).

In such transformations, changing everyday practices is not limited to individual- or household-level changes in behaviours. They also entail a deep politicisation of resisting undesirable practices, while engaging, performing and allowing for the emergence of novel ones. For the participants interviewed in this research, everyday consumption constituted an arena of agency for alternative forms of aesthetic enjoyments, and became a way to challenge and reappropriate the nature and context of consumption. Low-carbon and anti-consumerist forms of enjoyment provided the needed context for experimenting with different cultural meanings of everyday life.

So, unlike the spectacular and visible forms through which consumerism is maintained, the emergence of alternative aesthetics might arguably come through changes and transformation in rather unspectacular and mundane everyday activities. Micro-level changes, regardless of how small and private they might be, do hold utopian aspirations of what low-carbon and just urban living might be. For the participants interviewed, these entailed forms of living that are both ecologically safe and socially just, but also aesthetically pleasing.

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11

Sustainability from the ground: urban gardening with children as means to environmental change

Sofia Cele

The idea that gardening, which most often is portrayed as a harmless activity, can be an agent in political change is alien to some people. I suggest that urban gardening with children is an embodied approach to political and behavioural change. It is a mundane activity through which values are expressed and alternative spaces are produced (McKay, 2011). Gardening based on organic principles, and particularly gardening with children in this way, is a means to induce change in environmental knowledge and behaviour. This change can help create more sustainable behaviours in the face of climate crises and biodiversity loss. Gardening, as Isis Brook (2010: 13) puts it, has the ability to improve both people and land.

As humans face the greatest environmental challenges in our history, we are less connected to nature than we have ever been. This means losing both knowledge of, and the emotional bonds to, nature. There are increasing reports of plant blindness – that is, an inability to see and understand the surrounding nature (Jose, Wu & Kamoun, 2019). When contact with nature is lost, plants blur together in a vague and unimportant greenness. If people do not understand *and feel* why they need to change their behaviours then environmental care is reduced to a good deed, but it is not felt: it has no meaning.

The awareness children have in their meeting with places is a good starting point for ecological literacy and connection to nature. A child's curiosity and sense of wonder are reasons why gardening is an excellent tool to teach children the importance of nature and the connection between nature and human culture.

Gardening is a slow culture but the connection between child and nature is instant. Though gardening follows nature's constantly changing rhythms, it still manages to evoke feelings of stability and safety. To be immersed in natural processes means encountering myriad tiny mundane miracles. Great plants can grow from tiny seeds, butterflies can land on your shoulder and plants turn to soil in the compost. Moments of surprise, expectation and joy triggers a sense of belonging, care and curiosity for the natural world. These practices of care are key to political change.

Gardening in urban contexts

Gardening as well as farming has historically always been part of urban life (McKay, 2011) as it has been necessary to have access to food. It was only during the twentieth century that these practices disappeared from urban areas, although the extent of this varies in different parts of the world.

In the current debate on gardening in urban contexts, various forms of gardens are referred to such as urban farming, community gardens, allotments and guerrilla gardening (Tornaghi & Certomà, 2019; McKay, 2011). Urban gardens are commonly discussed in terms of what they can produce and whether they can present a solution to the food crisis by providing locally grown, cheap and organic produce.

Without downplaying the importance that cultivation of food can have in urban areas, I argue that it is a mistake to view gardens only in the light of what they can produce for crops. Rather, a key benefit is gardening itself. This is namely through the connection to place and nature that it offers, and the processes that these connections evoke within the gardening human. This means that the potential benefit of gardens lies as much in what gardens do to people as what people do to gardens (Brook, 2010).

What is a garden?

A garden can be many things. I depart from the understanding that gardens are made out of natural objects and subjects, and especially living organisms, which are arranged to constitute a specific experience (Barwell & Powell, 2010). To garden is to connect to a place through its soil, site, weather and climate. When I refer to gardening, I mean organic

gardening, which implies following ecological principles and staying away from pesticides and peat. The backbone of organic gardening is healthy soils with a rich micro-life and high degree of organic matter. This means using compost-based practices where garden waste is composted and brought back to the soil. Gardening demands an understanding of plants and their life cycles and the various paces at which plants grow. The result might be beautiful, edible or both, but, crucially, the practice of gardening affects people as well as place.

I see gardening as an embodied practice. It is felt and it involves dirt under the fingernails, hard work and the care of, and interaction with, non-human subjects such as plants, insects and animals. Experiencing and recognising local wildlife has been shown to be an extra stimulant for emotions such as joy and happiness and shaping an emotional bond to place (Folmer, Haartsen & Huigen, 2019: 401). Gardening allows people to create vernacular landscapes as well as 'doing things as they like it' in a space that society will not interfere with (Crouch & Ward, 1997), something which is strongly connected to identity and ideology (Bhatti et al., 2009; Cooper, 2006). Keen gardeners often describe gardening as a practice that produce spaces that counteract dominant discourses. Further, it challenges the urban–rural dichotomy as well as neoliberal understandings of urban life through the vernacular landscapes and countercultures it cultivates (Taylor, 2008; McKay, 2011). We know also that gardening is beneficial to human health (Soga, Gaston & Yamaura, 2017) and that garden spaces in themselves are important for biological diversity (Osborne et al., 2008; Barthel, Folke & Colding, 2010).

Temporality

Gardens are temporal places. The garden at any given moment is dependent on the practices of the past, while the activities of the present are very much focused on making a garden for the future. Most gardening means to accept, work with and anticipate change. Gardens are supposed to develop. Gardening cultivates patience, as there is a delay between action and result, whether we are 'planting radishes or an avenue of trees' (Brook, 2010: 20). This delay also makes the process of waiting and hoping for the end result dependent on what happens to the place of the garden, and this constant process of change makes the passage of time visible (Barwell & Powell, 2010).

Time is present in multiple ways in gardens. Plants follow the changing of seasons and daylight and hence follow the rhythm of chronological

time. But gardening as practice is often described in an experiential way (Miller, 2010). It involves feelings of losing track of time as well as feeling that time slows down as you emerge in it. Gardening is slow, but the feeling of being immersed in place and losing track of time means that the gardener connects instantly to the garden. Such an experience of a gentle slowness and connection to nature results in immediate meaning-making and a will to care for the environment, which is why gardening is so useful as environmental education.

Gardening with children

Gardening with children has historically been used in schools to teach children about crafts, food production, political ideology and national identity (Earl & Thomson, 2021: 15). It has involved instilling the value of hard work and moral character, to learning about horticulture and agriculture in the nineteenth and twentieth century, to growing food during war, and also promoting healthy living and knowing where your food comes from and preventing food scarcity in the twenty-first century.

The doing of gardening has been central and how this adds something that theoretical knowledge cannot. In one study by Earl and Thomson (2021: 96) children describe how gardening makes them 'feel calm', that they are 'able to breathe more freely' and 'that things would be okay'. The ability to amend spaces to fit their purposes and to be allowed to create and care for their own places is something children often actively wish for (Cele, 2019). Research has also shown that embodied interaction with nature increases children's ability to develop affective relationships towards nature (Barthel et al., 2018).

Making space for urban gardening with children

However, gardening with children in urban settings presents challenges in terms of accessing land and also how to get children engaged if they have no prior interest. City gardens have to compete for urban space (Jahrl, Moschitz & Cavan, 2021) with the space available for non-commercial activities and greenery rapidly decreasing due to urban densification. For children this decreases their ability to spend time outdoors (Shaw et al., 2015).

Therefore, gardens can be seen as ideological in that they allow for certain voices, subjects and practices to flourish within other more

dominant and competitive urban narratives. Making space for urban gardens in a contested urban landscape is a political statement, and gardens need support and resources if they are to become something more than the temporary spaces they are often allocated to (Tornaghi & Certomà, 2019). Proper garden spaces are place-bound and develop over time. This calls for some form of stability in the urban landscape.

Traditionally gardening with children has been undertaken by schools as part of the curriculum (Earl & Thomson, 2021). Although this is a useful approach, it also presents challenges in terms of time, space and maintenance. Another approach is to use spaces and competences that already exist and to invite the children to these gardens. An example of this is the garden of Rosendal in Stockholm, Sweden. A project called '*lek, odla, väx*' ('play, cultivate, grow') is carried out, where school and pre-school classes visit the garden at six different times during the year. Each day has a theme aimed at following the seasons and the horticultural year, such as soil, sowing, planting, harvesting and tasting, composting and putting the garden to rest for winter. In this way it is possible for a large number of children to participate in gardening and by 2021 more than 3,000 children between the ages of four and six had participated (Rosendals trädgård, 2021). Other gardening spaces can involve community gardening, or schools with allotment plots for the children. Many botanical gardens also engage with children, but there are definitely possibilities to develop children's engagement in gardening projects further and there is a need for more land, funding and engagement in this issue.

Why gardening can induce environmental change

So, what are the main reasons why gardening should be included in the work to create a more rapid change towards sustainability?

Relationship to place

A key reason why gardening helps to facilitate change in environmental behaviour is children's relationship to place. Compared to adults, children feel, touch, climb and investigate much more, as well as think about and describe their place experiences in a more multi-sensuous way (Cele, 2019). As Tuan (1974) has described, the relationships we create with places are affective, and we create meaning in and through the places and materiality we interact with. Sack (1997: 132) calls this the 'web of

self and place'. This means that as we engage in places, they also become loaded with meaning. For children this embodied process is particularly strong, and it has been shown that plants and animals are especially important in this process. It is, for instance, not unusual that a child has a tree, a stone or particular object as a friend (Cele, 2019). This way of connecting to the environment is based on curiosity, a will to interact and explore and an openness to the sense of wonder and ability. Children interact with the environment, but the environment also interacts with the children (Rautio, 2013).

In gardening, the relationship with place becomes very direct (Cooper, 2006). Gardening necessitates an understanding of the garden and the processes that shape the garden. This can involve the location, relationship to the surrounding landscape and other more specific things such as type of soil and existing flora and fauna. This embodied way of knowing is what decides how the garden will develop and what it is possible to grow there. Just these very basic conditions of a garden involve noticing aspects of place that most non-gardeners do not notice, and particularly not in an urban setting. Understanding place is a learning process, and in gardening with children this means fine-tuning a sensibility to the place they are in. This is a pedagogic process that is naturally engaging, and that easily develops into environmental care.

Embodied connection to nature

Based on how gardening connects people and place, I believe that it is a hands-on approach to connect to and learn about nature in a meaningful way. Connections between humans and the environment can not solely be produced in the mind, but must be experienced in the meeting between mind, body, culture and environment (Barthel et al., 2018). Gardening provides this connection and is different from many other encounters with nature that children may experience, as the garden calls for acts of care and is co-created in relationship between the gardener and nature. Additionally, gardening in urban settings means meeting local wildlife, something that often raises interest and feelings of enchantment and attachment (Folmer, Haartsen & Huigen, 2019: 399). It is this engagement with 'other living things', as Brook says (2010: 19), that increases bonds to the environment.

Learning is facilitated when children can interact with what they study, as this easily opens up their interest. By teaching children what plants need in order to grow and how composting garden waste is a

means to create soil it becomes possible to simultaneously discuss what soil is made of and show them the difference between healthy soil, with a rich micro-life, and unhealthy soil. This discussion can be developed into how insects, fungi and micro-life cooperate to decompose garden waste and how they help plants to 'eat and drink' from the soil. This is then easily connected to how human activity leads to unhealthy soil and pollution, the extinction of biological diversity and the negative effects of using peat rather than composted garden waste for soil improvement.

The compost heap is also useful as a pedagogical tool as it is possible to experiment with composting different materials, such as wood, kitchen waste, plants and plastic. In Rosendal Garden, the children experimented with putting different materials in the compost bin. At the end of the season, they investigated which materials had decomposed and which remained the same. This provides visible evidence for what happens with various materials. The realisation that plastic remains unchanged during decomposition facilitates understandings of how human waste impacts the environment. But the composting process also reveals how ecological processes work and how easy it can be to enrich depleted soils.

A great advantage of this method is this positive and solution-based pedagogy and the fact that the children experience as they learn. Gardening is best learned by showing and doing, and by learning how to tend to a garden you also learn about larger ecological processes. By learning how soils can come alive again and by building nesting boxes for birds and insects or digging a pond, children acquire tools to handle the doom and gloom of the environmental crisis. This caring aspect and being able to connect to plants and animals are particularly important aspects, as research shows that many children experience anxiety and depression related to the climate and biodiversity crisis (Ojala, 2012).

Experiencing the environmental crisis

Dealing with new and surprising incidents is part of gardening. A sudden touch of frost, a ravaging deer or a heavy downpour of rain can ruin your efforts, but dealing with these surprising events is part of the process.

The direct effect that a change in conditions has on gardening practices means that the environmental crisis changes from theoretical to lived experience. Both weather and climate events have real and tangible effects in the garden. Can we water if there is a watering ban during a drought? How will the soil cope with massive changes in rainfall? How

can soil improvement help manage the water-holding capacity and/or drainage of the soil? How will climate change affect what plants we can grow? What pests and diseases will spread when the climate changes? What happens to the insects and birds? These are tangible aspects of the environmental crisis that materialise as direct challenges and problems to gardening practice. Gardening presents opportunities for grounded understandings of how nature works and, when connected to a pedagogical approach, facilitates understandings of what disturbances to ecosystems mean.

No single action can solve the environmental crises we are facing. Rather, multiple changes in both societal systems and human behaviour are needed. It is crucial that social and ecological sustainability are not seen as conflicting in this process (Samuelsson et al., 2018). All our landscapes need to support both humans and nature. Gardening is particularly useful for this, as it offers us the possibility to bridge actions to save climate and biodiversity through direct experiences of nature. This is crucial to keep in sight as climate actions often involve densifying urban space and sacrificing green space, which can hinder children's connection to nature.

Gardening, and particularly urban gardening, has the ability to help children connect to nature and ecological processes while at the same time building meaningful relationships. If children are presented with knowledge of nature and how to practise environmental care, it will form part of their own value system, helping to shape their own, and potentially also their families', behaviours. This makes the slow processes of gardening a valuable tool to achieve fast change in environmental attitudes and behaviour.

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12
Refashioning the supercyclical city

Eleanor Johnson

'So using what you have around you. Introducing a touch of creativity to make it unique and special. That's the strategy that we are using.'

I am interviewing Yayra Agbofah – founder of THE REVIVAL, a sustainable design project focused on upcycling textile waste from the Global North that makes its way to Accra, Agbofah's home city (Figure 12.1).[1] He is describing how to source materials from Kantamanto, a two-acre market in the city where vendors trade bales of second-hand clothes:

> [Kantamanto] is where I used to get most of my supplies from if I have any clients that need styling – because my style of styling is mainly vintage. So that's where I get all the good stuff. I've been visiting this market for about 15 years now and as time went on … about four or five years ago I realised that I always stepped on piles of clothes and, every day, the piles get higher and higher. When it rains, it's terrible. I kept looking on the floor, I kept looking on the ground, and I kept finding clothes that I needed. Vintage Dior, Vintage Versace … on the floor. It's literally trash. It was two ways: out of frustration and out of curiosity.

The global textile infrastructure developed during the industrial revolution is one of the founding pillars of the contemporary world as we know it. Still, its glamorous veneer masks centuries of unhappy truths: the human and environmental costs of clothing production are overwhelming (Siegle, 2011). What is more, these truths are increasingly obvious to consumers and producers alike. Additionally, scholars, journalists and writers have brought the violent colonial beauty ideals upheld by the industry to the fore, and have been successful in reaching audiences

Figure 12.1   Photo courtesy of Yayra Agbofah, founder, THE REVIVAL, Accra, Ghana.

outside academia (hooks, 2014; Barber, 2021). What I argue here is that we are witnessing a shift in the fashion industry and in wider consumer attitudes at large, with new business and production models emerging in urban pockets around the globe.

I situate this transformation in what I call the *supercyclical city*, the gathering place where we meet to tell, sell and, ultimately, live out stories, where our values and wants are traded as consumer goods that one day are treasure and the next are stuffed in bin bags. I write about this place to tease out some of the temporalities and ideas that bind these stories together and to help us see how actors in the creative industries can contribute to transforming agreements on what constitutes successful urban living. Already, pressure factors such as climate change, supply chain difficulties due to COVID-19 and other disruptions are beginning to tear at the fabric of the supercyclical city. So what is next?

The supercyclical city

Among philosopher Guy Debord's radical portfolio of ideas, posited in 1967 when he wrote *Society of the Spectacle*, was the idea of

pseudo-cyclical time. Debord's idea was that modern economic survival hinged upon a kind of dependence reminiscent of the seasons which guided the rhythms of human life in preindustrial societies (see Debord, 1994 [1967]). Within his larger argument that society had become not just lost but 'drugged' by its own image, he observed that modern dependence on consumption fostered a peculiar temporality of its own. He argued that once populations moved into the cities they created an economic oasis upon a warped rhythm of sustenance. As consumerism speeds up, so does the gloss, the Instagram posts, the adverts touting so-called green products. Industry rhythms were once reminiscent of the seasons, with fashion houses releasing seasonal collections. Today, many design houses and high-street stores follow a seasonless mode of production, releasing collections on a rolling basis. I call this the *supercyclical* city, the city without seasons, through which goods pass rapidly, entangling themselves in webs of technology and cultural practices, which in turn shroud these goods in fleeting value.

So we produce, so we create and fashion beauty in the image of the moment, filling our cities with the debris of the day's lust. When the trade season is over, we see our ghosts in the landfills and ask the questions: who are we and how do we want to live together in the city? What, other than rubbish, are we left with when the city slows?

A loophole

In a seasonless production line, where are the acupressure points for transformation?

Here is what Ursula M. Franklin has to say on instigating massive technological transformations within complicated socio-technical systems:

> I prefer to think in terms not of systems but of a web of interactions. This allows me to see how stresses on one thread affect all others. The image also acknowledges the inherent strength of a web and recognises patterns and designs. Anyone who has ever woven or knitted knows that one can change pattern, but only at particular points, and only in particular ways, so as not to destroy the fabric itself. (Franklin, 1990, 52)

What threads then, can be pulled, and what does this unravel? Though commonly overlooked in policy circles, it is through creative expression,

through generating spectacular new narratives for social media, clad in upcycled costumes, that activists around the world have been afforded the chance to push back against consumer mythologies. Younger generations of activists and protesters in particular, are tugging at the web. This is the nature of what my colleague and I, Håvard Haarstad, have elsewhere called the 'amplified public space', where citizens use powerful spaces in the city and the very mechanisms of spectacle which emerge from the supercyclical city. By leveraging mechanisms of spectacle, activists are able to penetrate media infrastructures in order amplify new stories (Johnson & Haarstad, 2022). I argue, in addition, that it is the very pace at which our cities move the material that enables new ideas to surface and to be shared. The spectacle created by the supercyclical city, and the media technologies and norms which emerge from this hasty assemblage of stories and material goods, offer wing space for new narratives about sustainability to rapidly emerge.

What is a beautiful city?

Taking steps towards transformation is not only a matter of sounding the alarm. It is also a matter of reframing what is considered valuable, desirable or even glamorous, and leveraging these shifting social norms to activate new modes of conducting business in cities around the world. Artists and designers, lateral thinkers, are particularly well equipped to draw these new frames for collective desire up against the possibilities of the material. For instance, the Irish designer Richard Malone uses third-life fabrics, which are initially made from regenerated polyester, for his seasonal collections shown at London Fashion Week. He also works with yarns spun from recycled plastic bottle waste. The results are captivating. The artistry and craftsmanship emerging from upcycling culture set themselves apart aesthetically: from graffitiing trashed wedding gowns in Accra to stitching scraps of velvet in London, designers are transforming what is considered to be beautiful – which after all is bought only 'by judgement of the eye', as Shakespeare wrote. It is couture for the decade that matters. Fashion as a medium can carry us through what O'Brien (2018) has called the three spheres of transformation: from the personal, to the political, to the practical. In this way, consumer goods can begin to act as a thoroughfare between the place and the self, and back again – to create for the body by using what is available around us is to inscribe the self upon the shared city space, to open up the doors of the imagination.

Which brings us back to our opening interview with Agbofah, the fallout from the Global North's cycles of overproduction and the opportunities from textile waste that entrepeneurs are now beginning to leverage for change. Creativity, curiosity, frustration – Agbofah takes an artist's approach to sustainable urban tranformations. So often words such as creativity or beauty are missing from policy discussions about sustainability, yet they are a vital key to urban transitions. It is, after all, a radical act to cultivate beauty on one's own terms, at one's own pace, at odds with dominant modes of production and criteria for what is considered desirable.

Curiosity, in particular, is a driving component of transitions that creative interventions can help cultivate: enabling us to think in new ways through the act of creating. Such reflexivity is also crucial for facilitating the act of listening. For instance, while the second-hand industry has negatively impacted the Ghanaian textile industry (James & Kent, 2019) and caused a series of local environmental crises, such as sprawling textile landfills, the market is still an important source of income for many citizens. As these shifts in trade and waste management are navigated, and patterns rewoven, activists, policymakers and researchers can continue to hold these tensions up to scrutiny. As my colleague Scott Bremer and I write elsewhere in this volume (chapter 8), there can be no room for naivety, however tempting it may be to paint pictures of green utopias.

Cultures of upcycling textile waste in cities from London to Accra, offer us insight into how sustainability can be rewoven into landscapes of waste. Activists and designers around the world are taking up upcycling and incorporating it as an aesthetic into their daily lives. At the time of writing, #upcyclingclothes has 2.6 million views on TikTok, with content creators of all genders and backgrounds contributing knowledge and inspiration to the world of reuse and refashioning. These patchwork creations each express an individual understanding of shape and colour, within the material limits of the world of waste into which generations are now being born. As with the feminist movement in the 1960s, and with other political movements, a shift in ideology is naturally accompanied by a shift in aesthetics. Take, for instance, the 2019 Extinction Rebellion protests against the British Fashion Council in London, where activists staged protests costumed in 'corporate rebel wear'. These patchworked, thrifted and upcycled outfits at once marked the protests out as stylish, creative and *counter* to linear industry production norms.

These shifts in aesthetic values point to a shift in cultural values. This joining up of the dots requires a creative approach to the balancing

of art, science and engineering. Not least, cultivating a counter-imaginary through both alternative style and business models facilitates a knowing and a reorientation of the self against the story of the supercyclical city, which can be scaled up to loftier infrastructures, architecture being one obvious example.

What is a circular city?

As attention around the world is turned to circular economy initiatives, academia can contribute an understanding of the realities of the circles and cycles by which we already live and sustain our livelihoods. The fashion industry itself is often referred to by scholars in the field as a data desert – commonly under-researched and under-theorised, despite being recognised by philosophers as a powerful driver for rapid social change (Simmel, 1957). But we are not there yet: estimates from the European Environment Agency (2019) suggest that 'clothing, footwear and household textiles is the fourth highest or fourth worst ranked pressure category for use of primary raw materials and water (after food, housing and transport) [and] the second highest for land use and the fifth highest for greenhouse gas emissions'. Textiles are a key area of focus in the European Union's Circular Economy Action Plan (CEAP), with the EU having launched their Strategy for Textiles early in 2021.

So one can begin with a remapping of the fashion industry, by following textiles from 'cradle to cradle', as they are circulated through cities around the world, accumulating, losing and accumulating value again as they find their way into new hands – from hands that grab, throw, dump to the hands that fix, that bring back to life. In 2020, the All-Party Parliamentary Group for Ethics and Sustainability in Fashion was established in the United Kingdom. Their 2021 'Cleaning Up Fashion' report cites the need to improve the extension of the life of clothes through investment in infrastructure (All-Party Parliamentary Group for Ethics and Sustainability in Fashion, 2021). In particular, the group cites online shopping, which saw a notable increase in growth during the pandemic, as being culpable for a sharp increase in textile consumption. So we see once again, as Debord predicted, this interaction between the online images we consume and the speed at which we consume fashion. The report also cites the opportunities that these sustainability challenges present for good jobs and further value creation. This framing, this *seeking out of opportunities*, is fruitful.

Economist Kate Raworth (2017) describes this as *generous* design, arguing that by 'creating enterprises whose core business helps to connect nature's cycles … that gift as much as they can', we can reorient the creative industries to more sustainable models of production. Similarly, the report emphasises the need to equip people with the skills necessary for sustaining livelihoods, and cites recent governmental cuts in funding for the arts and education as shortsighted for equipping workforces with the skills necessary to create high-quality and, more importantly, *durable* garments.

Where are the opportunities?

Far from imposing limits, working within the remit of sustainability offers creative potential for artists, designers, engineers and scientists to think up wild and wonderful solutions. In particular, biomimicry, where designers and producers mimic biological patterns, promises opportunities for reimagining the way the deepest infrastructures facilitate the textile industry. If fashion and technology have always gone hand in hand, designers' intrinsic commitment to preserving biodiversity, reversing climate and ecological damage and enhancing human welfare around the world makes fashion a powerful leverage point.

The most well-known example of biomimicry in contemporary fashion technology is Velcro (Wood, 2019; Ceschin & Gaziulusoy, 2020). Inspired by the way that burr seeds covered in thousands of tiny hooks attached themselves to the microscopic loops that cover fur, hair and clothing, Swiss engineer George de Mestral invented Velcro, a technology now used in industries around the world. Other examples of biomimicry are cropping up the world over, such as repurposing food waste for textiles. For instance, one company in Italy is repurposing the 700 million tonnes of waste from the Sicilian orange juice industry for the creation of yarns that can be used in knitted and woven fabrics (Wood, 2019). As Wood points out, however, these initiatives involve several stages of chemical processing and are not therefore necessarily sustainable. Ceschin and Gaziulusoy describe this as 'reductive biomimicry', and call for biomimicry design to be undertaken at the ecosystem level, allowing 'nature to redesign not only our commodities but also our psychosocial patterns' (Ceschin & Gaziulusoy, 2020: 70). Seasonal guides can offer a way into thinking about how global, seasonless patterns of textile trade impact lifestyles at the local level. For instance, Agbofah describes how

winter clothes which are not suited to the local climate find their way to Kantamanto market and end up as trash:

> Winter clothes are a no-no! Nobody wears winter clothes here, it's hot here. Leather gets thrown away … If it's a T-shirt, it needs to be in good condition … It wouldn't be a problem if these things were sorted properly and the right things come into the country, it would do so much good.

Conclusion

> It is, after all, the 'human thing to do to put something you want, because it's useful, edible, or beautiful, into a bag, or a basket … or what have you, and then take it home with you' (Le Guin, 1986: 167–8).

Anthropologist Anna Lowenhaupt Tsing closes her book, *The Mushroom at the End of the World*, about collaborative, interspecies growth from the ruins of capitalism, with this quotation from the speculative fiction writer Ursula Le Guin. This closing idea captures what it is that makes us human: to covet, to transform the humble and the ordinary into something extraordinary. We live to weave new patterns into our surroundings, to alchemise the mundane into majesty, to tend our gardens and each sew our own unique expression of what it is to be alive into our material surroundings, into the places and upon the bodies that we call home.

Perhaps sustainability trips up on the idea that it is downhill from here, that there is too much to be done and so little left to work with, that people must give up the things they love and deprive themselves of the beautiful. Yet to nourish creative curiosity offers us the gift of abundance (Remme, 2021), opening up the space to search for small, personalised solutions that not only amount to but in fact propel us towards bigger systemic changes. Free creative expression can be the grounds upon which new narratives for regenerative living are built, and these acts of artistry can be tied to the local rhythms of the changing seasons: spring, summer, autumn, winter, spring again. This chapter is an opening enquiry into how researchers and designers can use the rhythms offered by the seasons, and by the creative self, to highlight the speeds at which we produce and consume and some of the issues and opportunities that arise from this haste.

To revive is a creatively ambitious and thus transformative endeavour. Could we imagine a different experience of time in our cities? Could we seek out a change in what we believe to be beautiful, or valuable, and if we could, how would this redraw the limits of what we believe we are able to create? We can use these questions as tools, tools to take responsibility for the goods we design, for the urban blueprints we draw up for everyday life. Agbofah phrases it best: 'We create this way through art.'

Acknowledgements

Note

1. Disclaimer: I serve as a board member for THE REVIVAL. The role is unpaid and this chapter is supposed to present ideas which have resulted from our research endeavours as a collective, otherwise known as ethnography-by-design (Cantarella, Hegel & Marcus, 2019).

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13

Environmental injustices unfold in urban sustainability projects in Istanbul

Mahir Yazar

In a transcontinental country straddling Europe – with long-time candidate status to join the European Union (EU) – and Asia, Turkey is far behind the EU climate and sustainability agendas for urban settings. The megacity of Istanbul, with 15.4 million people, is extremely vulnerable to the impacts of climate change, especially heatwaves and flash floods. The city has also long been a battleground between socio-economically vulnerable communities, local governments and private developers due to the large-scale urban development projects.

Urban transformations provide a means to advance the United Nations' Sustainable Development Goals (SDGs), such as SDG 11, 'make cities and human settlements inclusive, safe, resilient, and sustainable' (Daniel, 2015). However, efforts to generate urban development projects with a sustainability focus may result in re-greening practices only for affluent citizens (Dooling, 2009; Curran & Hamilton, 2012). Urban development projects in Istanbul, for instance, have been one of the major economic growth engines and highly profitable. Yet they are drastically changing the metropolitan area's landscape, and these development plans are largely perpetuating environmental injustices mostly due to forced evictions of socio-economically vulnerable residents that have happened for decades.

Environmental injustices manifest themselves through the inequitable distribution of urban green spaces across scales and political processes, such as urban sustainability projects that exclude the most economically vulnerable local communities while espousing urban green

infrastructure to aim for sustainability (Dooling, 2009). These socially excluded sustainability implementations can cause green gentrification. This does not necessarily only occur due to revitalising 'undesirable areas' but also relates to specific low-carbon upgrades such as energy-efficient buildings (Bouzarovski, Frankowski & Tirado Herrero, 2018), which raises questions of equity and justice in terms of which groups decide the greening practices in the cities and for whom (Curran & Hamilton, 2012).

In Istanbul, the largely EU-influenced and nationally endorsed 2007 Energy Law informs the local governments' climate mitigation targets for residential buildings. The mitigation targets in the law gave momentum to the ongoing urban development projects promoting a sustainability vision and lifestyle for wealthy Istanbulites and foreign investors. Consequently, the sustainability angle in urban development raises concerns in terms of the unfair and spatially dispersed effects that these visions cause to the city's urban planning and design. More importantly, these development projects fail to address environmental, climate and social concerns and exacerbate environmental injustices and social accessibility.

The processes and implementation of urban development projects with a sustainability focus often reflect unequal power relations exacerbated by elite political actors and developers, while less powerful participants, such as unorganised locals or less well-known groups, with fewer financial resources, may be ignored. In this chapter, I will focus on two deliberative urban transformation solutions, supported by the local and national governments in Istanbul, which increased unequal distribution of environmental goods and services among vulnerable social groups but also triggered civil society and locals to act collectively to resist these deliberative plans and programmes.

Pitfalls of sustainable residential projects

The energy efficiency law enforcement in Turkey concentrated on big and emerging businesses especially in Istanbul's housing sector through the concepts of energy-efficient buildings and sustainable neighbourhoods. Such concepts are often driven by profit rather than sustainability. Certain urban transformation projects in Istanbul with sustainability and energy efficiency angles, for instance, have become a tool for attracting wealthy people and displacing socio-economically vulnerable tenants who cannot afford the increased rent prices (Lelandais, 2014; Uysal, 2012).

There were around 80,000 individuals directly affected by the urban development projects in different urban renewal districts in Istanbul, and more than 13,000 houses were destroyed (Cabannes, Baysal & Hasan, 2009). Also, addressing the earthquake risk, enactment of the 2012 Law of Transformation of Areas at Risk of Disaster aided in the expansion and consolidation of Turkey's building industry, and accelerated the institutionalisation of private property regimes particularly in Istanbul, where the number of unplanned public and private landholdings and seismically vulnerable buildings are highest (Karaman, 2013; Yazar et al., 2020b).

Gaziosmanpasa, one of the 39 districts of the Istanbul metropolitan area, is a great example to illustrate the vision and drive behind the sustainability approach supported by the former mayor to boost the wealthy population to increase the profitability of urban transformation in the district (Yazar et al., 2020a). The urban transformation phase in the district, with a new so-called green angle, has resulted in green gentrification through parcel-based residential improvements with green amenities, and the exclusion of existing residents who lack title deeds or the financial means to purchase new residences in the green redeveloped areas. Such development projects based on constructing energy-efficient buildings and private green areas for prospective affluent residents exacerbate displacement and inequality in the district, culminating in green gentrification.

However, the powerful coalitions between the national government, local government and developers in urban transformation triggered grassroots mobilisation in the form of the neighbourhood association. These bottom-up collective actions, supported by urban planners' professional associations, civil society groups and academics, aim to resist the exclusionary transformation agenda and to create an inclusive and democratic urban transformation structure, while still filing legal actions against the urban transformation project that cause social exclusion and increased inequalities (Ay, 2019).

State interventions versus community engagement

Similar to urban transformation projects, 'landscape urbanism' in Istanbul is highly intertwined with local and national politics. The ruling national party in Turkey – the pro-Islamic Justice and Development Party (Adalet ve Kalkınma Partisi) – has been implementing urban agendas to replace the urban infrastructure built during the secular Republican era, by building new monuments that espouse a conservative and authoritarian

vision. Against these visions, local resistance through community activism is central to the urban green infrastructure narrative in Istanbul.

The most recent and socio-politically impactful uprising against the national government's intervention in urban green space in Istanbul was the 2013 Gezi Park Protest, where locals protested against the national and local governments due to a shopping mall project that was intended to be built on one of the few and well-known urban green spaces in the urban core. The shopping mall plan was cancelled shortly after the protest, but national authoritarianism has increased due to 'administrative tutelage control' over the local governments and interventions towards professional associations by marginalising and excluding them from the governance structures at multiple administrative levels.

Despite this political turmoil, collective resistance has been seeking to protect culturally important urban green practices linked to place-making and a sense of belonging to the city. The protestors formed informal and formal organisations and networks to increase activities around the existing urban green infrastructure in tandem with concerns around environmental justice. Against this backdrop of community activism and engagement, the 2018 general election campaign oddly included the plan 'Let's Build a Greener Turkey Together', which aims to build 'national gardens' (*millet bahceleri*) across the major cities in Turkey: a declaration that conveniently preceded the announcement of snap elections of 2018. For instance, the President of Turkey opened a large urban green park in Istanbul before the local elections in 2019 and condemned the locals and activists who joined the Gezi Park protests as 'those who vandalised in the name of environmentalism … They should come and look at these gardens and see what real environmentalism looks like' (Durgun, 2019).

Nevertheless, the local activism focused on conserving existing green parks and establishing new green spaces in multiple urban areas. Since then, efforts to conserve urban green space and urban agriculture and food networks have reached a point where several neighbourhood community associations have been formed, and groups have agendas for the urban landscapes. For some, the best-case scenario has been to conserve the urban green areas from real estate projects; others want to help local agricultural producers. For instance, activists and locals, either within or outside their neighbourhoods, attempted to unite vulnerable groups under formal structures (for example, by establishing associations). These efforts included work with professional organisations that used formal and legal channels to open court cases against local and

national authorities or help agricultural producers to access formal networks to find opportunities to fund their activities.

Future pathways for governance learning from the grassroots?

The Istanbul case in this chapter highlights two key insights regarding urban sustainability transformation initiatives. First, the power asymmetries in urban transformation projects limit sustainability primarily to economic development, exclude local residents from the practices of participation in urban governance and cause green gentrification. Second, as sustainability 'best practice' is being formulated and replicated through top-down political elites, local activism and collective actions are emerging to resist the government's deliberative sustainability plans and programmes.

Casting urban sustainability as a central imperative to promote urban competitiveness dominated by urban political elites ignores the broader urban environmental injustices (that is, the distribution of green infrastructure among vulnerable communities and lack of access to urban green space), and consequently marginalises or ignores grassroots and activists, who demand change in restructuring the urban fabric (Béal, 2012). In the case of community organisations in Istanbul, non-governmental and citizen-led organisations engaging in coalitions that include environmental justice are more likely to advance access to urban green infrastructure for vulnerable communities than those outside coalitions. Thus, when considering urban sustainability transformation, we must recognise the agency of communities as they use their networks and skills to link local to international spaces, connect adjacent policy domains, and shape environmental justice action within coalitions.

Although urban development projects with a sustainability angle in Istanbul are superseded by the rise of energy efficiency and the EU residential mitigation targets, this chapter shows that the recent urban environmental restructuring in Istanbul lacks urban climate adaptation measures and actions. The unequal distribution of and limited access to green spaces in socio-economically deprived neighbourhoods consequently increase vulnerability and affect locals' adaptive capacity during and after extreme weather events. For instance, the expected increase in average annual temperature in Istanbul is between 1 and 4.5°C, coupled with an additional 1–2°C increase due to the heat-island effect triggered by the megacity's urban density (Yazar & York, 2021).

The prominence of rent-seeking solutions of private developers and the symbolic green and sustainable strategies produced by both national and local elites seem to become dominant narratives and stronger obstacles to proper adaptation. In this context, there is an important role for grassroots and activist coalitions in advancing climate actions, especially in climate adaptations through urban green infrastructures.

At the same time, leaving urban climate adaptation actions in the hands of bottom-up movements that lack financial and political power amid supply-side policies and the influence of economic actors might leave future climate adaptation uncertain. Yet grassroots-related knowledge and neighbouring actions can contribute governance learning to implement *in situ* climate adaptation actions in cities. Thus, there is still some potential for such governance learning, in which district governments in the Istanbul metropolitan area can learn about how to design urban sustainability and to implement socially accessible green urban infrastructures through interacting with grassroots organisations.

Cities epitomise both challenges and opportunities for sustainable solutions amid climate emergencies. Environmental injustices unfold in urban sustainability projects in Istanbul due to the current sustainability pathways that prioritise the short-term economic interests in urban development. The environmental injustices exacerbated by powerful political elites in decision-making need to be resolved in future transformation pathways for 'just' climate actions.

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14

Inclusive sustainability: gaming as a tool for participation in urgent planning

Tarje I. Wanvik and Håvard H. Bjørnstad

Changing the rules of the game

Games and gamified experiences are steadily gaining acknowledgement as innovative participatory tools in urban planning (Ampatzidou et al., 2018). Games may strengthen community engagement and attend to the underlying problems such as social conflicts, power struggles, agreements behind closed doors, over-representation of some groups, lack of expertise and motivation, and the difficulty of including socio-economically disadvantaged groups (Uittenbroek et al., 2019). Sustainability transitions are challenging participatory urban planning along several dimensions. Increasingly, climate policymakers are urging citizens to live their lives differently, with a smaller carbon footprint: using less energy, travelling shorter distances, using primarily public transport, spending less on luxury and living in smaller apartments, closer to each other.

The urgency related to the changes is increasingly diminishing the room for participation and proper democratic processes. This can be said to foster opposition and upheaval among the electorate concerned with sustainability policy implementation, as exemplified by the *gilets jaunes* in France and the 'Enough is Enough' protests in Norway (Wanvik & Haarstad, 2021). With less space and time for proper democratic processes, the field of influence has been left to stronger stakeholders and interest groups with resources to advocate for special interests (Beck, 2008): either by influencing the actual policy development (Haarstad, 2016), or by advising on the implementation of the policy (Shi et al., 2016;

Nagoda & Nightingale, 2017). The danger of such practices is that marginalised groups with little influence on traditional political processes are even less able to participate.

How can we better include marginalised groups – groups that are under-represented in political activities, community work and the organisational life of the city – into sustainability planning processes and into participation processes? (Glucker et al., 2013; Angelidou & Psaltoglou, 2019; Uittenbroek et al., 2019). And can it be done in ways that acknowledge the urgency of the sustainability challenge?

By developing and introducing a simple board game as a starting point for discussions, we have sought to create an arena in accordance with the notion from collaborative planning (Healey, 2006), where power struggles are less important and where no-one has control over the process itself. We believe the exploration of an analogue game lowers the threshold and conjures participants to discuss and cooperate on a more levelled playing field. The aim of the game has been to lay the foundations for fruitful discussions where the participants freely discuss problems and challenges related to sustainable urban planning, climate mitigations policies and city development.

Playing by the book

Even though serious games have a history in land use planning since the late 1960s, these early incarnations were mostly simulation games used and developed by and for planners, where the outcomes were quantifiable (Feldt, 1995). In the last couple of decades other types of serious games have been employed in planning practices and research. Innes and Booher (1999) make the point that role playing is a good way of resolving policy conflicts, where participants can explore and consider strategies that normally would not be thought of: that is, by creating packages of recommended actions through collaborative bricolage or tinkering, rather than goal-directed analysis, trade-offs and the like.

Games have significant potential for learning, negotiation and cooperation (Ampatzidou et al., 2018; Devisch et al., 2016; Gordon & Baldwin-Philippi, 2014). They create a balance between entertainment and learning, which can stimulate civic participation and engagement. So there are several games and gamified experiences that aim to tackle challenges in urban planning and climate mitigation. But there is still a lack of willingness to put games into use. Yet around Europe there have been some trials with both analogue and digital games. In Vienna, board

games, role-playing games and gamified street use have been used in urban renewal processes, while in Groningen a GIS-based game has been used to find which services are needed around the city (Ampatzidou et al., 2018; Gugerell et al., 2017).

However, there has also been the critique that games may be an over-simplification of the real world or that the games may be biased because of the game designers' position (Sanford et al., 2015). Over-simplification may lead to lack of transferability to the real world, and there may also be an issue with players participating in a realistic way. A third challenge may be that the themes or topics that games try to work with may be outdated in the moment it is actually played. This challenge may be met by constantly changing and tinkering with the games.

Our take on these challenges has been to design a board game as closely in accordance with the everyday experiences of the players as possible. By including urban transport modes common to most people, and obstacles along the way that introduced the various sustainability topics, we have designed a game setting that most citizens in our case city of Bergen, Norway, may relate to.

Who are the marginalised?

Identifying particular groups of urban citizens as marginalised is certainly challenging, and in many respects impossible. However, it is a fact that certain parts of the public are less active and less likely to participate in urban planning processes. We based our definition of marginalisation on highly pragmatic, empirically based criteria. First, we narrowed our scope based on a living condition survey of Bergen, identifying the most under-privileged neighborhoods and suburban areas. Then we chose a couple of characteristics that might influence participation in public planning processes. We came up with what we called 'politically marginalized groups', characterised by four main features: lack of network (socially marginalised), lack of regular income (economically marginalised), lack of Norwegian language skills (linguistically marginalised) and age (youth without voting rights). This led us to several venues: from a local bingo hall, where we could meet people in all of these groups (apart from children/youth), to what is referred to as 'Robin Hood house, a drug-free, secular haven for social security clients, network-seeking and economically challenged people'. We also held workshops in a local high school with young people from minority backgrounds, several public libraries, a local activity centre for

youth and at a social security service with young adults with various challenges. Furthermore, we used snowball sampling, where players in these venues led us to other informants.

Levelling the playing field?

Designing our board game took place in two separate periods, over a span of almost two years. The first version of the game was designed based on the ongoing political turmoil in Bergen, where topics such as the conflicts around the city light rail or the toll roads played a strong part in a heated urban planning discourse. With these conflicts in mind, we developed our game based on Monopoly, being a recognisable game that most people, both young and old, can quickly relate to. The less we as game masters had to interfere the better, as this made the participants able to discuss and converse more openly and freely. Simulations in the game were events like 'celebrate the anniversary of the light rail', 'sell your car' and 'discuss the reasons behind, and the effects of, the slow-driving demonstrations by car-friendly activists'. Other challenges would be when the players were forced to make decisions such as having a bus lane on all major roads in Bergen or to remove the toll booths around the city. In other words, in the first edition of our game the topics revolved around taking sides: for or against different climate policies, with different consequences for the game and the players.

Our second iteration was based on experiences from the first round, and on extensive fieldwork by one of the authors, as a political advisor for the urban development commissioner in Bergen (see Wanvik & Haarstad, 2021). Our main aim was to include a justice dimension into the game, based on ideas of distributional and procedural justice and the differentiated effects of climate policy implementation on various citizen groups. To do this we added game simulations where the participants were given facts about climate change, distribution of emissions and distributional and procedural effects. Most of these simulations included examples from a wide variety of situations related to both direct and indirect emissions, and how these emissions correlate with income patterns. The board game sessions worked similar to focus groups, where one can bring several participants together to discuss topics of interest for the participants, only these were introduced by a game rather than a moderator (Kitzinger, 1994). By playing, it became quite evident where there were agreements and where the participants

disagreed. It also led to negotiations as to what and how one should decide which action to take or not take. After each session we had short dialogues about the experiences the participants had, and in the later ones we intended to let the participants write a short note with advice to the local government.

Playing games

Because we used the well-known board game basis of Monopoly, the need to prepare the participants was minimal. All but one of the participants in this study had basic knowledge of how to play the game of Monopoly – and the one who had not, could quite easily understand it by observing a player before her turn. By approaching the different topics of sustainable urban practice through playful means, it was up to the participants to what extent a given topic was explored and discussed.

One memorable session started with a complete lack of interest in the game, at a drug-free, neutral meeting place for the financially and socially disadvantaged. In order to approach the clientele, we had to hang around to chat with some of the lunch attendees. After some time, they spotted our gaming pieces and started wondering why we brought them to lunch. This gave us the opportunity to explain our project, how the game should be played and the reasoning behind it. Four attendees quickly took interest and wanted to play and discuss. Several others did not quite get the idea and chose to continue reading their newspaper and eating their lunch.

The game session started with quite a temper, as in the first few moves one of the participants landed on 'the urban light rail is being celebrated'. This led to a heated debate, where one participant was clearly opposed to the light rail: '*Bybanen* [light rail] shouldn't be celebrated, it should rather be mourned, and in addition it is extremely hideous – we talk a lot about sound and light pollution, but *Bybanen* is almost a pollution of view, all you see north of Nesttun are these ugly electrical supply structures.' The other participants disagreed, as one participant said, 'I wish it ran past where I live,' and another hoped that they would soon start building it towards the north of the city as well. After some back and forth regarding the future of the light rail, one participant expressed the view that the light rail was both effective and predictable, hence it is all in all a positive addition to Bergen. The opposition to the light rail was suddenly not so hard, as it became evident that the real opposition

was pointing towards the toll ring financing the light rail – where it was believed that if one was against toll roads, one had to be opposed to the light rail as well. The session continued in a civilised fashion: the heated discussions led to a compromise where they could find common ground – even when it came to the controversial toll ring!

While this game session was ongoing, the aforementioned newspaper readers were watching with increasing interest. Several of them joined the discussion when claims or comments was made that they did not agree on.

In another gaming session the starting point was quite the opposite. Here the participants showed up to a local library because they responded to an advertisement we put up several days in advance. The discussions in this session were not as heated, as there for the most part was agreement around the topics raised during the session. Yet they were surprised to hear some of the facts around social justice and climate – 'I knew rich people polluted more through plane travel and electricity, but I didn't know it was that much more!' or as one said: 'I'm never going for fast fashion again.' There were, however, some participants who did not think that games could help in regard to their voices being heard. As one said: 'I don't think they [the municipality] would bother going to these lengths just to hear what I think in these matters.'

One of the recurring claims made in our sessions was that when they actually had tried to give input, they experienced a lack of feedback on whether their input was taken into account or not: 'A common theme when I voice an opinion to the municipality or others is, "we'll take it to those that it may concern". Afterwards I never hear anything.'

Through our gaming experience, we sought to create a simulation where ordinary citizens, without common knowledge of the planning system of the city, actually might both feel the consequences of climate policies, and also make decisions based on the limited knowledge presented to them through the game. We found that the game worked well as a tool for educational purposes, through concept clarifications, inclusiveness and social interactions. As Healey (2006) notes, social learning is at the core of changing power dynamics. In our experiment, people exchanged and developed knowledge and 'experience' of climate policy and planning through interaction with each other through gaming, and hence created their own opinions on contemporary planning issues in the city. Participants claimed that the gaming methods were 'much nicer than going to boring meetings [= hearings] about planning', while others

again were elaborating on the educational effects: 'It is much easier to understand things in this way.'

Gambling on futures

European cities are facing major challenges in terms of climate adaptation to an increasingly wilder, wetter and warmer climate, but also in relation to political ambitions of massive greenhouse gas emission reductions from transport, construction and trade. Urban life is undergoing major changes, and these changes are happening fast. Political as well as administrative processes are stretched and worn out under pressure from various social groups who feel their interests are threatened – or subject to changes that they themselves have no control over: changes that come faster and with more intensity than previously as a result of escalating climate change and subsequent political urgency. As a result, city governments are scrambling their resources in order to plan for changing times and looking for new ways to create public support for transformative policy measures.

Concerning sustainable urban planning processes, questions have been raised whether standard consultation processes are serving their purpose of including the citizenry in urban planning (Lerner, 2014). These questions are even more potent as we experience increased urgency in sustainable urban planning due to climate change and demanding adaptation and mitigation policies. Our experiences at the gaming sessions pointed to several important values relating to active participatory processing of sustainability planning in cities. By the game design itself, the easy access for ordinary citizens without much background competence in urban planning gave great opportunities for active discussion of quite complex sustainability topics.

Our choice of venues also pointed to the fact that bringing planning out to where people live is key to participation. The combination of soft marketing of the gaming sessions and the fact that we played in public venues pointed towards our hypothesis that decentralised serious gaming may motivate otherwise silent voices to participate in discussions on city planning and in planning processes. Whether or not playing games can level the playing field remains to be seen, but what we can say is that our gaming sessions indeed distributed sustainability discussions to 'remote planning venues' and invited otherwise silent (or ignored) groups into sustainability planning processes.

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Part IV
Contesting the speed of urban change

15

Small measures, large change: the promise and peril of incremental urbanisation

Andrew Karvonen and Jonas Bylund

In May 2020, the local government in Milan announced an ambitious scheme to retrofit several streets in the city centre with low-cost, temporary cycling lanes (Laker, 2020). The scheme contributes to a broader global trend of retrofitting cities to encourage low-carbon lifestyles. Meanwhile, a South London cooperative organisation has completed three community-based renewable energy projects over a four-year period.[1] The work involved organising stakeholders to create new opportunities for locally produced, renewable energy to support the local economy while enhancing energy resilience and security (Caramizaru & Uihlein, 2020). And in American cities such as Portland, Austin, San Francisco and Los Angeles, there is a growing movement to design and build accessory dwelling units such as tiny houses in backyards and apartments over garages in existing residential neighbourhoods. The approach leverages the interstitial spaces of the built environment to provide more affordable housing units, to supplement the income of homeowners and to densify neighbourhoods.[2]

The above examples suggest that contemporary modes of urban development are inspired less by cohesive, long-term visions of twentieth-century urban planners and more by locally focused interventions that are transforming cities through incremental processes. Of course, urban development has always been influenced by discrete, incremental activities. Homeowners, entrepreneurs, public works employees and neighbourhood activists engage in a wide range of small actions on a daily basis that continually reinvent cities. However, over the past two

decades, incremental change has been promoted by urban stakeholders to realise more sustainable, resilient and just urban futures. Proponents of urban experiments and living laboratories as well as pop-up and tactical urbanism are sceptical of 'urban development as usual' and its ability to address the multiple challenges facing twenty-first-century cities (Karvonen, Evans & van Heur, 2014). Instead, discrete local interventions are needed to demonstrate the possibilities of realising new urban configurations in a short amount of time (Torrens & von Wirth, 2021). These activities are instigated by a combination of bottom-up community groups and top-down government organisations, resulting in a dynamic and diverse landscape of small urban changes.

In this chapter, we consider these contemporary practices of 'incremental urbanisation' and their potential to realise deep and long-lasting transformations in cities. We focus specifically on the governance implications of these activities and the embrace of emergence and self-organisation as new drivers of urban development in the twenty-first century. Incremental urbanisation offers multiple opportunities for stakeholders to realise long-term ambitions to realise low-carbon, socially just and economically prosperous cities but also raises significant questions about the governance of cities, the power dynamics between different urban stakeholders, and the commitment to protecting the public good. Ultimately, incremental urbanisation has the potential to support transformative capacity building in cities and empower stakeholders to contribute to the creation of improved urban futures.

The rise of incremental urbanisation

Contemporary cities are increasingly framed as key sites of social, ecological and technological transformation. They provide an attractive and manageable platform to diagnose problems as well as design and implement solutions that are tractable and actionable. Vertical gardening, digital platforms, sharing economies, renewable energy generation and mobility-as-a-service are a few examples of the many agendas that are being designed, developed and executed by urban stakeholders to transform the way that cities function. While many of these activities rely on conventional governance mechanisms of regulations, policies, financial incentives and grassroots engagement, there is burgeoning interest in urban living laboratories, testbeds, place-making and related small-scale interventions to trial and demonstrate

new configurations of cities in everyday life settings (Evans, Karvonen & Raven, 2016).

Small-scale urban interventions can be found around the world with a wide range of goals, scales, timeframes, practicalities and modes of action. Some can be characterised as grassroots innovations that are initiated and driven by individuals or engaged community groups to support civic empowerment (Smith et al., 2016). Others are informed by private-sector entrepreneurs who see business opportunities in the provision of new ecological and digital services (McNeill, 2017). Meanwhile, local and regional governments use small-scale interventions to enhance their public services while promoting resident engagement (Eneqvist & Karvonen, 2021). Finally, academic researchers use cities as real-world laboratories to trial new configurations of technologies, residents and ecosystem services (Evans et al., 2015).

Some of the most influential and outspoken advocates of incremental urbanisation are non-profit organisations and design firms that have developed a wide range of concepts and methods to inform and catalyse bottom-up modes of urban change (see Table 15.1). These organisations draw on a range of different inspirations including New Urbanism, resilience thinking, circular economies, neighbourhood empowerment, human-centred design, complexity science and co-production to inform their concepts labelled variously as 'lean urbanism', 'massive small change', 'radical incrementalism' and 'small-scale urbanism' (Campbell, 2018). The groups design, build and maintain urban development projects at various scales ranging from individual buildings to city blocks to neighbourhoods, and also develop manifestos, toolboxes, guidebooks, policy recommendations, case studies and training services. Collectively, they represent a groundswell of interest in bottom-up modes of urban development.

While there are many significant differences between these various approaches to urban innovation, they all share several important characteristics. First, these small-scale interventions are framed as alternative modes of urban development to inform more sustainable, liveable and/or resilient futures. There is a collective frustration with the pace and scale of change and a shared desire to realise urban configurations that are substantially different from existing conditions. Second, the actors champion action-oriented interventions to demonstrate that change is possible. There is a tendency to 'stay small and impactful' through shortened timeframes and restricted geographies. And finally, these actions are intended to inspire fundamental changes to existing systems of provision

Table 15.1 Examples of organisations that promote bottom-up modes of urban change

Organisation	Description	Example activities
European Network of Living Labs (ENOLL) enoll.org	'An international non-profit association which aims to promote and enhance user-driven innovation ecosystems, more precisely the Living Labs concept globally'	E-courses, toolkits, webinars, podcasts
SelfCity selfcity-project.com	'A platform for initiatives and actors who are self-organised pioneers of change for climate protection and sustainability'	Transition Towns, eco-social learning, energy cooperatives, neighbourhood groups
Placemaking Europe placemaking-europe.eu	'We develop and share knowledge; develop, test and use tools; exchange ideas; and actively shape projects together. We support and collaborate with organisations who want to work on placemaking, social life, human scale, and a better eye level experience'	Knowledge exchange on placemaking, tool prototyping and development (e.g. community oriented co-design approaches), policy briefs
Latitude Network latitude.network	'A strategy and social impact consultancy that helps social organisations to improve performance and scale evidence-based solutions to complex social problems'	Reform of homeless services, social impact bonds, philanthropic investment
Eutropian eutropian.org	'An organisation providing support with advocacy, research and policy to support inclusive urban processes. Our areas of expertise include specialization in urban regeneration, cultural development, community participation, local economic development and social innovation'	Urban regeneration, community activism, local and economic policy development, social innovation

Table 15.1 (*continued*)

Organisation	Description	Example activities
Project for Lean Urbanism leanurbanism.org	'An international campaign to facilitate small-scale economic development and enable neighborhood revitalization'	Zoning code alternatives, comprehensive planning tools, house hacking catalogue, financing strategies
Opticos Design opticosdesign.com	'Urban designers and architects who believe in the transformative power of beautiful, sustainable, walkable communities for all'	Affordable housing, form-based codes, neighbourhood kits
Incremental Development Alliance incrementaldevelopment. org	'Helping locals strengthen their neighborhoods through small-scale real estate projects'	Infill neighbourhood development projects, real estate development workshops and bootcamps
Better Block Alliance betterblock.org	'Educates, equips, and empowers communities and their leaders to reshape and reactivate built environments to promote the growth of healthy and vibrant neighborhoods'	Parklets, community events, tactical urbanism interventions, collaborative neighbourhood masterplanning

by making direct links between incremental actions and radical change. There is a strong emphasis on scaling up, amplifying and rolling out the findings of small-scale interventions to achieve influence at the urban, regional and national scales (Lam et al., 2020). In effect, these actions provide an evidence base to support conventional government policies, regulations and guidelines, and realise broader systemic changes. More radically, these small changes have the potential to produce a new ethos of urban governance based on principles of self-organisation and autonomy (Moroni, Rauws & Cozzolino, 2020). Incremental urbanisation recognises the potential of small and more diverse measures to agglomerate into large changes.

The promise and peril of incremental urbanisation

Replacing conventional planning practices of visioning, masterplanning, policymaking and regulating with an ad hoc suite of discrete interventions is simultaneously compelling and troubling (Karvonen, 2018). The emphasis is less on developing and implementing a linear series of integrated interventions to achieve 'the big picture' than to 'let a thousand flowers bloom' to inform urban development (Evans, 2011). It is a conscious move away from an end state of city building and instead focuses on 'cities in the making'. In this sense, cities are less like machines that can be programmed to function in an idealised state and more like organisms that continuously evolve through a multitude of interrelated processes (Batty, 2018). This latter perspective resonates with ideas from complexity theory and the emergent properties of socio-ecological systems (Zellner & Campbell, 2015). It recognises that attempts to control and steer urban development patterns are partial at best and instead, the city is a precarious achievement that is realised through indeterminate, incomplete processes of 'muddling through' (Durose & Lowndes, 2021).

Incremental urbanisation embraces the messiness and plurality of cities. This is in marked contrast to the twentieth-century canon of urban planning theory and practice that is based on singular, linear and logical assumptions about urban development (Ahern, 2011). Instead, there is an emphasis on multiple pathways, with plurality as an asset rather than an impediment to the realisation of alternative futures (Karvonen, 2017). This is akin to a kind of 'swarm intelligence' where the dynamism of the city is an outcome of multiple overlapping actions. The unexpected and the uncertain are unavoidable and desirable qualities of cities (Kaker et al., 2020) that allow urban stakeholders to design and execute situated interventions through practices of tactical urbanism, 'meanwhile' land and building use, and similar actions (Madanipour, 2018). At best, such approaches can produce urban robustness by supporting multilayered, redundant systems of provision. They suggest the potential to replace the monocultural approach to urban development with a polycultural approach that builds upon the congruent and agonistic dynamics of cities to empower stakeholders (Bulkeley et al., 2018).

From a pessimistic perspective, these new proponents of incremental urbanisation could have the inadvertent effect of shifting power and influence towards those who are most adept at securing funding for small interventions. In effect, these actors could capitalise on a 'Wild West' of chaotic interventions to favour some while leaving others behind. This would serve to further exacerbate existing democratic deficits and create

more uneven social and material conditions (Karvonen, Evans & van Heur, 2014). At the same time, incremental urbanisation raises the fear of fragmentation and the abandonment of a comprehensive, long-term perspective. The twentieth-century approach to city building provided a single, coherent storyline of progress to mobilise resources and stakeholders around a common goal. With the embrace of mess comes incoherence and a reduced capacity to comprehend change processes and to assess their long-term implications. The championing of plurality and an emphasis on the emergent properties of urban development raise new questions about the governance of cities and the agency and influence of different urban stakeholders.

For optimists, incremental urbanisation has the potential to open up opportunity spaces to empower underserved communities and to construct new coalitions between disparate stakeholders. The focus on collaborative actions has the potential to replace local governments as the primary engines of urban development with diverse coalitions of stakeholders who share a desire to enact changes on the ground. This would entail a more passive role for the state as curator and supporter that 'allows broader coalitions of urban "agents of change" to emerge' (Swilling & Hajer, 2017: 1). The private sector, academic researchers and civil society groups have an opportunity to exert greater influence on urban development processes through 'an adaptive approach to planning and design, in which innovation is pursued through responsible experimentation, developing a culture of monitoring, and learning from modest failures' (Ahern, 2011: 342). This move towards decentred agency suggests that collective intelligence and distributed cognition are better suited to tackling contemporary urban challenges.

Conclusions

In the 1920s and 1930s, Austrian philosopher Otto Neurath developed a post-positivist, anti-foundational notion of scientific practice and knowledge development. He argued that 'we are like sailors who must rebuild their ship on the open sea, never able to dismantle it in dry-dock and to reconstruct it there out of the best materials' (Neurath, 1959 [1932/3]: 201). Neurath's metaphor has multiple parallels with contemporary practices of incremental urbanisation and the need to act in the face of hardship and uncertainty through 'learning by doing'. It recognises that theorising and modelling will only take us so far and being active agents of change can invigorate new approaches to urban governance.

The broader dynamics of emergence and self-organisation that are championed through incremental urbanisation present an intriguing and ambiguous alternative to twentieth-century urban planning and development. The aversion to linear logics of urban development in favour of staying small and effective draws upon a wide range of alternative twentieth-century thinkers including economist Ernst Schumacher ('small is beautiful'), urban theorist Jane Jacobs, architect Christopher Alexander, philosopher Ivan Illich, economist Leopold Kohr and bioregionalist Kirkpatrick Sale.

In an ideal world, the ultimate goal of incremental urbanisation would be to foster cultures of learning and knowledge-sharing among urban stakeholders (Klein, 2021). As Wolfram (2016: 128) notes, 'practical experimentation in urban contexts offers a crucial mechanism to develop transformative knowledge and catalyse social learning'. It is through multiple, varied interventions that urban transformative capacities can be realised. However, it is important to continually reflect upon the implications of this new mode of urban governance to democratic accountability and the public good. What do we give up when we abandon rational urban planning in favour of a collection of iterative and recursive local actions? Are we simply offloading governance to civil society or ceding control of urban development to private companies with little or no public accountability and oversight? As with any approach, method or tool there is no failsafe way to use small-scale interventions, and thus it is essential to scrutinise how incremental urbanisation is taken up and practised in different contexts. The long-term implications of incremental urbanisation are unclear but they point towards a new dynamic of urban development that is simultaneously inspiring and troubling, progressive and regressive, emancipatory and oppressive.

Notes

1. See https://brixtonenergy.co.uk (last accessed 19.08.22).
2. See https://accessorydwellings.org (last accessed 19.08.22).

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16
Make way for efficiency: sustainable mobility and the politics of speed

Jakob Grandin

At a World Bank seminar on 'Transforming Transportation', Addis Ababa's vice-mayor for transport Dr Solomon Kidane underscored how increasing efficiency in urban transport would lead to a cascade of economic and social benefits. Arguing for the displacement of Addis Ababa's popular minibus-based transit system with a large-scale bus rapid transit, Dr Kidane noted that the overall economy would benefit even if the transport sector might contract in terms of job opportunities:

> Personally I believe that if we can make the transport system more efficient, then the economy will solve it. It will generate other job opportunities that would benefit us much more than simply focusing on an inefficient transport system that creates job opportunities just for drivers and a few kinds of managers.[1]

Vice-mayor Kidane implicitly articulated a central tension in the sustainable mobility projects currently pursued in Addis Ababa through ambitious investments in public transport and walkability: namely the vision of an efficient city and the tension between that vision and allegedly 'inefficient' urban elements. Grand notions of the sustainable city are tightly interlaced with notions of speed and temporality.

From the ephemeral initiatives of experimental urbanism, the idea of fast policy transfer through international sustainability networks, to the deliberate pacing of the slow cities movement, the different temporalities of urban sustainability intervention are also engrained with their own politics. There is, as Hubbard and Lilley (2004) put it, an urban politics of speed and pacing at play as different temporal logics influence

both who gets to participate in the sustainable city and who wins or loses from the sustainability transformation.

This chapter explores one such temporal logic, namely the 'politics of efficiency', and how it plays out in the planning of sustainable mobility projects in Addis Ababa, Ethiopia. This logic seeks to do more with less and emphasises fluid movement and rational use of scarce resources. As such it links to the broader 'valorisation of speed' which permeates modern societies (Adam & Groves, 2007). However, as we shall see, speed and efficiency are in the eye of the beholder. As I will argue in this chapter, the temporal logic of efficiency creates a tension between the allegedly 'fast' systems that are seen to increase urban efficiency and the 'slow' actors who are rather seen as barriers to smooth flows in the city.

There is a strong case to be made for doing more with less. Cities in the developing world are faced with the triple task of meeting climate mitigation and adaptation needs at the same time as they manage rapid urbanisation and work to increase quality of life. Addis Ababa, the capital of Ethiopia, is a case in point. While numbers are uncertain, the population, estimated to be 3.6 million in 2013, is projected to more than double to 9.8 million by 2037 (World Bank & GFDRR, 2015). In spite of grand visions, actors on the ground have to relate to a city which is currently characterised by scarcities and insufficient infrastructure. This is particularly the case with regard to urban mobility services. Public transport is only able to meet a small fraction of the demand, leading to long waiting times and a high proportion of pedestrians in an urban environment where the risk of traffic accidents is high.

A number of high-profile urban mobility projects – including the development of a bus rapid transit (BRT) network, a walking and bicycling strategy and measures to improve road safety – are currently working towards improving access to mobility services in the city. This links to broader trends, where Addis Ababa is an arena where the developmentalist aspirations of modern Ethiopia are showcased and materialised (Weldeghebrael, 2020). This has led to a proliferation of inner-city redevelopment initiatives such as slum clearance and high-rise buildings, public housing developments in the urban fringes as well as ambitious public transport projects – often framed as symbols of modernity. However, as we have seen, this puts the activities of the formal municipal authorities on a collision course with other, often small-scale or informal, actors such as the operators of Addis Ababa's minibus-based para-transit system which currently meets the bulk of public transport demand.

This chapter examines how these tensions are negotiated in the remaking of Addis Ababa into a purported climate-friendly, attractive

and safe city. It draws on evidence from 26 semi-structured interviews with urban policymakers, participation at meetings, seminars and webinars as well as a close reading of policy documents and reports connected to urban mobility in Addis Ababa. It seeks to understand how various financial, spatial and environmental scarcities (Nikolaeva et al., 2018) are mirrored by a 'logic of efficiency' which occasionally clashes with informality and the ways in which the city is currently produced. Thus it adds to the discussion of urban mobility transitions by interrogating the shifting governance arrangements involved in the 'urban politics of speed' (Hubbard & Lilley, 2004), and the implications of grand mobility projects for actors that are not regarded as 'efficient'.

Efficiency in the legible city

Addis Ababa's history has been shaped by a succession of megaprojects which 'have collapsed Ethiopia's political history into an urban bricolage of shifting ideologies and new priorities' (Terrefe, 2020). In recent years, the proliferation of inner-city redevelopment initiatives, slum clearance and the development of prestigious high-rise buildings in the city centre has led to critique of the 'Dubaification' of the city (Angelil & Hebel, 2016). Critics observe that these megaprojects are predominantly run in a top-down manner. Lack of involvement of local stakeholders and coordination with relevant bureaucracies (Terrefe, 2020) has led to the risk of losing local architectural heritage as well as tearing apart the social networks of displaced urban communities.

This urban transformation links to the rationalities through which the city is seen and rendered legible. As Scott's (1998) seminal account of planning practices in the high-modern state demonstrates, such efforts depend on a variety of practices, including measurement and standardisation, through which the state is able to 'see' the city and render it legible. These practices necessarily emphasise some aspects of a phenomenon at the expense of others. In particular, they generally tend to be poorly tuned to capture the slender informal threads which bind together the different social, material and spatial forms which produce a city. Hence, according to Tonkiss (2013: 6), a city tends to be shaped by unintended consequences of planning, as 'most city-making happens under the radar of official designs' and conventional actors such as planners, engineers and architects may have relatively little power over how the city is produced.

However, this does not curb ambitions to govern the city through high-modern planning interventions. Here, as outlined by Scott (1998),

the city is understood as an efficient machine, focused on the streamlined delivery of social services as well as social and political control. Here the ways in which authorities selectively render the city legible often lead to the actual transformation of space, for example when Haussmann demolished large parts of Paris in order to create boulevards (Scott, 1998). Weldeghebrael (2020) demonstrates how the energetic slum clearing programmes in Addis Ababa connect to this vision of a more efficient and legible city.

Such efforts to render the city legible and governable for city authorities are often underpinned by an aesthetics of efficiency and rationality (Hubbard & Lilley, 2004; Weldeghebrael, 2020). Efficiency is not new to the sustainability discourse. Prominent sustainability discourses are often underpinned by notions of 'eco-efficiency' (Krellenberg, Koch & Kabisch, 2016). Others, such as Sachs (2010), interpret sustainable development as a critique of a (sole) focus on efficiency and optimisation and warn against the 'gospel of global efficiency' which is underpinned by a 'hidden reductionism which turns ecological politics from a call for new public virtues into a set of managerial strategies' (Sachs, 1988: 22).

Such ideas about efficient and rational use of scarce resources also underpin the planning of urban mobility. The urban mobility transitions literature has highlighted how a 'logic of scarcity has been a driver for mobility planning as the scarcity of oil, finance, space, and time are invoked across the world as stimuli for aspiring to greener, "smarter", and cheaper mobilities' and has been 'invoked as motivation to accelerate transition or as an excuse to hinder change' (Nikolaeva et al., 2018: 346, 350). For Nikolaeva and her co-authors, this 'logic of scarcity' – which seldom questions the overall logic of the mobility system and emphasises individual adjustments rather than systemic change – is often met by a 'logic of austerity' which implies the contraction of mobility services (e.g. public transport) and 'curbing individual behaviour in response to large-scale societal crises'.

In this context, my purpose is therefore not to argue against efficiency per se. The critique against efficiency seems to be grounded in privileged settings in the Global North. In resource-constrained settings, such as the rapidly growing cities in the Global South, efficient use of scarce resources in order to increase the provision of public services is a legitimate goal.

My argument is that these discourses of efficiency reinforce a temporal politics of speed and slowness which tend to speed up planned movement at the expense of existing flows of unplanned movement (Scott, 1998). As Hubbard and Lilley's (2004) account of high-modern

transport development in Coventry surfaces, urban redevelopment efforts are underpinned by a 'politics of pacing'. They observe how the modernist mid-twentieth-century planning interventions focusing on 'speeding up' the circulation of private vehicles led to a 'city centre increasingly moving to the rhythms imposed by a bureaucratic elite' (Hubbard & Lilley, 2004: 273). In a similar way that mobilities depend on immobilities (Cresswell, 2010), then, these politics of speed implied that 'technocentric conceptions of timespace that became dominant in this period bequeathed a city that sped up for some, but slowed down for others' (Hubbard & Lilley, 2004: 273). For instance, women, who rarely had access to a car, often experienced that the time needed to perform everyday tasks, such as grocery shopping, increased. When put to work in the analysis of urban sustainability transformations, these insights shed light on how temporal ideologies engrained in visions of the sustainable city have direct implications for who gets to participate in the transition and who should – quite literally – get out of the way. We will now examine how these dynamics play out in Addis Ababa's mobility transition.

Scarcity and efficiency in Addis Ababa's mobility transition

When I was interviewing officials in Addis Ababa, they frequently noted that urban mobility was constrained by scarcity. At an overall level, scarcities relating to infrastructure (quantity and quality of roads as well as a reliable supply of electricity), road space and finance as well as the sufficient skills and knowledge in the local administration were highlighted as key barriers to the implementation of sustainable mobility. The overall argument is succinctly summarised in the city's Resilience Strategy (Addis Ababa City Resilience Project, 2020):

> Commuters are having to wait longer at bus stops and are experiencing longer and less reliable travel journeys due to the combined effect of road traffic congestion and the lack of appropriate bus prioritization measures. As a result, access to jobs and services across the city remains heavily impaired.

The demand for public transport in Addis Ababa is rapidly increasing and current capacity is only able to meet approximately half of this demand. Walking is therefore the most common mode of mobility, accounting for

more than half of trips, while private cars are relatively unimportant at less than 5 per cent. Three-quarters of the public transport journeys are covered by a network of privately operated minibuses, while larger buses (mainly operated by the public companies Anbessa and Sheger) cover around a quarter of the trips. Accordingly, as vice-mayor Kidane noted, a key ambition is to increase urban mobility:

> The numbers show that society is immobile … One measure is that we want to increase [the] number of trips per day and length of the trip in the city. If transport becomes better [this] will increase [the] number of trips: not only work–home but for other activities.

To meet this challenge, the need for efficiency was widely emphasised both in planning documents and by research participants. In contrast to the 'logic of austerity' discussed by Nikolaeva and colleagues (2018), there was wide agreement that this depended on the ability to expand the municipality's role as a provider of subsidised public transport in order to facilitate affordable mobility. The need for high public involvement was also underscored, since public transport was not seen to be financially sustainable based on ticket fees alone, but depended on public investment in infrastructure and operations.

In this vision, public transport is to be supplemented with walking and bicycling, while private car use is discouraged. For instance, the city's masterplan emphasised the need for a transport service which is 'delivered through economical use of the city's scarce land resource, [and will] reduce traffic congestion and accidents' (Addis Ababa City Planning Project Office, 2017). Similarly, the non-motorised transport strategy (Addis Ababa City Administration, 2018) argued that '[w]e must design our streets and infrastructure to more efficiently serve the mobility needs of this growing population with safe and sustainable transportation options that don't rely on private vehicle use'. Hence, arguments building on efficiency are prominent in both overall transport strategies and the strategies for walking and bicycling.

Thus, the *logic of efficiency* in Addis Ababa's urban mobility transition played out in multiple domains: for instance, the environment (with regard to emissions), finance (regarding e.g. fuel subsidies), the use of road space (connected to the speedy and unrestricted movement of pedestrians and buses) and the economy (where improved mobility would lead to more jobs than the ones lost in the operation of minibus taxis). Hence, there were significant efforts to reallocate urban space to pedestrians, bicycles and public transport at the expense of private cars.

As part of this striving for efficiency, scarcity was often mobilised as an argument against other modes of transport. For instance, the minibus taxis were often described as leading to congestion and thus as being an inefficient use of scarce road space. There were also efforts to regulate the import of private vehicles. At the time of my fieldwork, municipal transport authorities were fighting to regulate ride-sharing technologies. Here, arguments relating to financial scarcity were mobilised since ride-sharing was expected to increase the number of private cars, which in turn would lead not only to more congestion but also to financial pressures due to increased expenses for fuel subsidies.

Fast and slow actors

This logic of efficiency creates a tension between *fast* and *slow* actors. The temporal logic of efficiency is connected to different practices by the municipal administration to make the mobility system legible. As Scott (1998) observes, such state practices in rendering something legible also involve a simplification where certain things are made visible while other factors and relationships may be obscured. In the case of Addis Ababa, municipal authorities tended to emphasise travel times and the daily volume of travellers in public transport. This reading of sustainable and efficient mobility assumes an implicit vision speed and unimpeded urban flows.

When I talked to practitioners involved in different aspects of Addis Ababa's mobility transformation, they would repeatedly highlight how different barriers for pedestrians, such as piles of construction material, illegal parking, open holes and broken urban furnishings, lead to inconvenient and potentially dangerous situations for urban residents. Planning documents share the same assessment. For instance, the street network plan warns that '[e]xisting walkways and streets are congested due to on-street parking, passenger and goods loading/unloading activities, and informal trading activities' (Addis Ababa City Planning Project Office, 2016). Thus a tension is constructed between the notion of 'fast' and smooth urban mobility and the 'slow' activities which impeded this vision. Hence certain groups and actors tended to be positioned as obstructions and hence displaced from the sustainable mobility transition. This was particularly the case for small-scale and informal actors, which might not be as legible (or easy to regulate) as large public transport systems.

For instance, the privately operated system of minibus taxis which currently meets the lion's share of public transport demand in the city was seen as leading to congestion and pollution. Furthermore, municipal officials warned that the small-scale nature of their operations meant that owners were unable to invest properly in the system, which led to an ageing fleet that was not able to implement new innovations such as digitalisation. Similarly, private cars were generally regarded as an inefficient use of limited road space and as potential barriers to smooth flows of pedestrians and public transport.

Another example is the street vendors. Since they mostly operate on pedestrian walkways, they were seen as a potential barrier to efficient walkability in the city. They were also seen as a potential traffic safety concern since they 'may cover the walk way, forcing pedestrians out on the street which creates unsafe conditions' (Addis Ababa City Administration, 2019). The city's Street and Network Plan warned that 'if the trading system continues like this, it will worsen to clog the mobility system, cause delays, accidents and uncomfortable pedestrian movement'. Accordingly, municipal transport actors emphasised the need for improved management of street vendors. Begging was understood as leading to similar obstructions in the streets. Here, the masterplan was particularly unforgiving, arguing for the need to 'inculcate into elementary level education or launch awareness raising programs in schools to teach children that begging is a dishonourable and shameful act' (Addis Ababa City Planning Project Office, 2017).

Efforts to make the urban transport system more efficient also disregard other aspects of urban mobility, for instance the role of paratransit operators for local employment. Similarly, the fact that urban residents overall seem to appreciate the flexibility of minibus taxis with regard to bus stops may not fit the new efficient vision of the transport system as promoted by municipal authorities. Addis Ababa's efforts to create an accessible and sustainable transport system through increased public investment are therefore underpinned by a very particular understanding of urban mobility. This brings us back to the 'politics of efficiency'. Through a highly selective construction of the meaning of urban efficiency, urban transport actors reinforce particular sustainability pathways which correspond to how municipal authorities render the urban mobility system legible.

Addis Ababa's urban mobility transformation is fostered by vision of a sustainable and affordable mobility which strongly prioritises pedestrians and public transport. As such it breaks with the twentieth-century

high-modern urban transport interventions, which tended to give precedence to private vehicles. However, this shift from automobility to walking, biking and public transport is nevertheless still underpinned by similar rationalities of efficiency. Here, private vehicles and minibuses are seen as an inefficient use of scarce resources, including fuel, finance and road space. The focus on facilitating a smooth flow of planned movement – which is shaped by the particular ways in which urban authorities 'see' the city – similarly remains. Here, informal or unplanned urban activities, such as street vending, begging and private small-scale public transport operations are constructed as 'slow' actors which obstruct efficient urban mobility. This leads to an urban politics of speed where the movement of certain actors is prioritised while others should rather get out of the way.

Note

1. All quotations from Addis Ababa's vice-mayor Dr Solomon Kidane in this chapter are from a presentation at the 'Transforming Transportation' conference, organised by the World Bank in Washington, DC on 17–18 January 2019 (plenary session on 'Will new mobility deliver sustainable transport for all?').

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17

The geography of the 'world's greenest cities': a class-based critique

Ståle Holgersen

It is carrots and not sticks that seem to be the preferred method when affluent cities in the Global North are confronted with the climate crisis. One well-known carrot comes in the form of national and international awards, as the world's 'greenest', 'most sustainable', 'most ecological' cities – to name a few of the celebratory labels. There has been an inflation in the number of awards, and the Swedish city of Malmö, for example, with a population of about 300,000, received between 2007 and 2014 on average two international prizes every year due to its work on saving the planet (see Holgersen, 2017; Holgersen & Hult, 2020).

The criteria for winning these prizes and being ranked on these lists are often rather unclear. Partly the criteria differ between actual prizes, and to some degree, of course, they are based on what cities have actually achieved with, for example, public transport, waste management and green spaces. Other times it is more about which policy document cities have produced. But often the criteria for winning remain a mystery. As the same cities often appear on different lists, there is reason to believe that the attention one receives when winning one prize also provides attention that helps win further prizes.

Here city branding also comes into the picture. For several years, representatives from the city of Malmö, for example, travelled the world to make contacts, create networks and attract attention to promote *their* work on sustainability. Representatives from the municipality of Malmö have been open about this in both publications and interviews: attracting professional visitors to Malmö's 'sustainable city districts' was a part of 'branding work' (see e.g. Malmö Stad, 2011: 30), and the director of city planning argued in an interview with the author that city branding

was indeed one aspect of the city's work on sustainability (see Holgersen & Malm, 2015: 280).

The lists, awards and prizes for the 'world's greenest cities' have arguably become even more important recently, as they have become prominent also in travel guides and tourist advertising.[1]

Climate change is already ongoing, it is more urgent to act now than ever, and every day that we do *not* act, the needed measures are going to become even more radical. It might be tempting to argue that this is not the moment for conflicts and disagreements: we are all in the same boat! We need good news, positive encouragement and best-case examples. Carrots, please! And it is arguably not optimal conditions for disagreements when your house is on fire. But if someone attempts to extinguish the fire by throwing more fuel at the flames, it is actually worth taking a stand. Even if time is limited.

The 'greening' of the built environment comes with a class character, and the lists of 'world's greenest cities' normally come with a particular geography. With a few exceptions – often Bogotá in Colombia – these cities are conventionally relatively affluent cities located in capitalist core countries. Cities that typically make the lists are Freiburg, Copenhagen, Stockholm, Oslo, Reykjavík, Portland, San Francisco, Vancouver and Amsterdam. This geography of the 'world's green cities' is – as we will see – highly problematic.

We know that the people least responsible for global warming will suffer the most from its consequences. But when even dwellers in the 'world's greenest cities' are affected by flooding or extreme heatwaves, one could think that the problems must have been created elsewhere. Are the 'smart', 'innovative' and 'ecologically aware' cities in the Global North only waiting for the rest of the (underdeveloped) world to follow their lead? The spatial manoeuvre of branding the most affluent cities the 'greenest' is only possible if we ignore underlying power relations such as class and ownership, and how capitalism is a global and interconnected system.

The geography of emissions

There are two main ways of measuring emissions (see e.g. *Naturvårdsverket*, 2021; Hult & Larsson, 2015). The most common is to place the emissions where they actually happen, which is called either a territorial or a production-based approach. (Territorial emissions are defined by actual borders, while production-based includes emissions

by e.g. Swedish companies also outside Sweden. For the sake of simplicity I will ignore these differences and only refer to a production-based approach.) The other main way of measuring emissions is consumption-based. Here emissions are placed where a particular commodity is consumed. The general distinction can be exemplified by a mobile phone that is produced in China and consumed in Sweden: with a production-based perspective the emissions will be placed in China, and in a consumption-based perspective in Sweden.

How to measure emissions through consumption is never unproblematic, as commodities are produced and consumed in many different countries and we lack reliable data from many countries. It is not like either the production- or consumption-based perspective is better than the other. Both are needed and they provide different information about the world. But as they show significantly different things, it should come as no surprise that people strategically mobilise their favoured way in order to promote (or excuse) their own policy.

Within a production-based perspective, cities can immediately compete with themselves (has our city improved on a given criterion?) and/or with other affluent cities (have we improved more than others?). Relevant topics become, for example, how to build better infrastructure for public transport or bicycles, how to introduce solar panels in the urban landscape or how best to manage water in escalating future storms. Here money is often a part of the solution, so these are topics where richer cities have all the reason in the world to be best. It costs to build the most energy-efficient tram or to produce the most cutting-edge policy document.

I want to stress that these are important questions and many local politicians and public servants do great work in this respect. But it is striking how different things look if we change vantage point and see capitalism as a global system with highly international commodity chains, based on uneven and combined development. When we recognise that the 'green' transformations of many so-called post-industrial cities are necessarily dependent upon commodity production *elsewhere*, we must even discuss consumption-based perspectives.

If we emphasise climate change and see the question from a *pure* consumption perspective, the awards for 'world's greenest cities' should perhaps rather be given to mega-slums outside Mexico City, Nairobi or Mumbai. Around two billion people globally live without proper access to electricity, and according to Ian Angus it would hardly have any practical impact on global warming if we removed the three billion poorest people from the earth (Angus, 2016: 112, 197; Malm & Hornborg, 2014: 63–5;

Energi og klima, 2021). Hundreds of millions of urban dwellers hardly contribute to global warming.

This is certainly not reflected in the lists and the awards. One list of five 'most sustainable cities' produced by Uswitch, a UK-based price comparison service, even included the two world's 'least sustainable cities'. One reason for declaring New Delhi, India, as the second least sustainable city was that up to '50 per cent of residents live in slums without access to proper water supply or waste management' (see Palmer, 2021). Partly this resonates with the never-ending debate on what sustainability actually is. But from a climate perspective, this is ironic as such neighbourhoods should rather be at the top of the list.

What does this mean? Should one bring TV teams to a slum of Kinshasa in the Democratic Republic of Congo and give people awards for living in the world's 'most climate-smart city'? No, that would be simply grotesque. But by posing the question in this manner we do highlight the irony of naming the richest cities the 'greenest'.

Class and the city

We also need to rethink some common assumptions *within* cities in the capitalist core. The city districts that most often have been labelled 'greenest' in Sweden are typically Västra hamnen in Malmö, or Hammarby sjöstad and Norra Djurgårdsstaden in Stockholm. These are places for (relatively) rich people. Planning for 'urban sustainability' in Sweden, according to Karin Bradley (2009: 347), is underpinned by 'middle-class norms, indirectly entailing processes of (self-) disciplining and transforming the other (foreign and/or troublesome dwellers) into well-behaving Swedes'. And individuals living in well-off neighbourhoods might indeed even have conscious lifestyles. But neither planning nor lifestyles can break the links between affluence and impacts on climate change.

Affluent people have greater emissions. Rich individuals can carbon-offset their air travel, but they fly the most; they might have hybrid cars, but they have more cars; they might have solar panels on their cottages, but they have cottages as second homes, and so on. Even the greenest investments can produce further profits that make capital travel, and one can never know where. Even money placed in a bank will be invested elsewhere, and it is hard to know where it actually goes. In terms of global warming, affluence should not be awarded with prices; it is, rather, a part of the problem. From *this* perspective we can articulate an opposite trend to what one might think if we only investigate urban

sustainable planning on the surface: the poorest city districts are most ecologically sustainable, while the most affluent are the least.

So, where does this leave us? Should the poorest and most deprived city districts in Stockholm and Malmö – such as Rinkeby and Rosengård – receive diplomas for being the most environmentally friendly? No, again, it would be utterly absurd. Poverty is nothing to celebrate. But the fact remains that people in these city districts contribute less to global warming than those in affluent part of the city.

The geography of consumption is one vantage point that questions the 'world's greenest' discourse. Ownership is another. For example, if an oil company's new headquarters is built 'ecologically', perhaps as an energy-plus building (which produces more renewable energy than the energy it imports), this could certainly be framed as environmentally friendly within the hegemonic discussions on 'green cities'. I am not saying architecture is not important, but the 'world's greenest' discourse is based on the fact that we do not open the doors and ask the people in the building what they actually are doing.

Another expression of ignoring ownership and power and focusing merely on surface is the bizarre examples of Oslo and Vancouver. Both are major centres for fossil production and fossil capital. Oslo is the political, economic, social and cultural centre of the Norwegian petrostate, and Vancouver accommodates several headquarters for oil companies in Canada. Both cities have received international prizes for their sustainability.[2]

The current hegemonic discourse necessarily emphasises surfaces and ignores underlying social relations such as class or racism. It stresses greening of landscapes and actual construction in situ, and overlooks the context where money and resources are steered from poorer to richer neighbourhoods, cities or countries. It highlights the facades of the buildings, never the people *in* the buildings.

From prices to problems?

Class differences are both important and increasing. From a consumption-based perspective we see that the richest 1 per cent in Sweden emits an average of 43 tonnes of carbon dioxide equivalents per person per year, while the average for Sweden is eight tonnes. While the poorest half of people in Sweden *reduced* their emissions by 16 per cent between 1990 and 2015, the richest 1 per cent *increased* their emissions by 11 per cent in the same period (Oxfam, 2021). And to put this into a global

perspective, averages in countries such as Congo, Somalia and Burundi are 0.03 tonnes of carbon dioxide equivalents emitted per person each year (Energi og klima, 2021). If we are going to reduce global warming to 1.5°C in a socially just manner, we need to reduce emissions to a maximum of one tonne per person each year within a decade (Oxfam, 2021). The question becomes: will there be enough carrots – also in the form of prizes and awards – to encourage the richest among us to reduce their climate emissions by 95 per cent?

Due to the urgency of the problem, it is tempting to give prizes to everyone who does *anything*. But it remains an open question to which degree these prizes contribute more to the problem than to the solution. Are they encouraging and legitimising a highly unsustainable way of life? Are they hiding class relations, global inequality and other social conflicts, when emphasising landscape architecture, building techniques and the latest technology that money can buy?

If we include class, consumption and ownership in the analysis, the most bourgeois districts – where the biggest culprits live – could be characterised as *problem areas*. I use *problem area* (Swedish: *problemområde*) deliberately. This word has been used to describe the very poorest city districts in Sweden for a while. Urban policies in these areas have recently been obsessed with policing the working class. Where the richest parts of the cities have seen investments and improvements – often branded 'green' and 'ecological' – the projects in the poorest working-class areas have rather focused on increased repression, policing and surveillance (Holgersen, 2018). This is our urban geography of class: carrots in richer areas and punishment for the poor. From the perspective of global warming, the clean, ordered and shining bourgeois neighbourhoods are the actual problem areas. More carrots won't do it. But who dares to use the stick against the billionaires?

Notes

1. For some examples, see https://travel.earth/greenest-cities-in-the-world/; https://www.afar.com/magazine/greenest-cities-in-the-world-in-2020; https://thesustainablelivingguide.com/most-sustainable-cities/; https://www.euronews.com/travel/2021/06/02/sustainability-and-the-city-these-are-the-world-s-greenest-locations.
2. https://ec.europa.eu/environment/europeangreencapital/winning-cities/2019-oslo/; https://www.glassdoor.com/Explore/top-oil-gas-energy-utilities-companies-vancouver_IS.4,28_ISEC10019_IL.39,48_IC2278756.htm.

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18

Climate imaginaries for urgent urban transformations

Håvard Haarstad

We often hear that cities have to transform in order for us to meet the climate challenge. Cities are the key sites for making society sustainable. We need to imagine and create urban transformations that respond to the urgency of the climate problem. However, I am concerned that we do not seem to have any form of consensus as to what that city looks like, or even what such a transformation means. Certainly there are visions for smart cities, compact cities, green cities and so on. But they all seem like partial answers to a larger problem that needs a more comprehensive solution. The problem of urgency elevates this even further, since all forms of urban transformation have to wrestle with the assemblage of existing urban forms, the remnants and layers of city building in the past. Therefore a key question is, what is our imaginary for urban transformations responding to the urgency of the climate challenge?

An urban imaginary is more than any single intervention, idea or innovation. It can be considered as a more coherent vision for transformation, including both material and social processes of change. Urban change is not simply about building new things – urban designs typically reflect the norms and ideals of society of their time (Bridge & Watson, 2002). For example, older European city centres testify to the past political and cultural dominance of clerical and royal power. And future observers may read the urban structures in our contemporary cities as a testament to the socio-cultural dominance of the private car in our time. These urban plans and designs were guided, implicitly and explicitly, by an imaginary of what cities should be like, what they are for and how they should be designed.

So here I want to explore how we are envisioning the future climate-friendly city and the ideas that are shaping the urban landscapes we are building. The context for my reflections will be an architectural competition for designs of the Dokken area in Bergen, Norway. This is one of the largest harbour redevelopments in northern Europe, and it has ambitions to be zero-emission. I was fortunate to be part of the evaluation committee formed by the municipality of Bergen, which produced a report with recommendations for the future developments in the area. This provides an opportunity to look at how international teams of architects, given the opportunity to 'think big', sketch imaginaries for urban climate transformations in practice. As I will elaborate, the ideas they brought to bear on the Dokken area were creative and inspiring. But ultimately, I am not convinced that even these internationally acclaimed architects are constructing imaginaries that respond to the urgency and fundamental character of the climate problem. And we need new imaginaries for urban climate transformation. Let me elaborate.

Imaginaries for climate urbanism at Dokken, Bergen

Imaginaries of future urban change reflect predominant ideologies and assumptions of the present. Not to oversimplify – there is always a range of competing ways to envision the ideal urban development (see Hall, 2014). But against the relief of the history of planning and urban design, we can point to a couple of urban imaginaries that are hegemonic in the present. One is certainly the idea of the technologically mediated city, often referred to as the smart city. Here digitalisation creates optimism for efficient, interconnected and sustainable urban environments (Karvonen et al., 2020). Another hegemonic idea about cities is what we can call urban entrepreneurialism, which holds that cities can be arenas of strong economic dynamism and growth when entrepreneurs are given the freedom to innovate. Rather than pursuing welfarist policies and public sector developments in housing, transport and other sectors, cities are encouraging private actors to develop these services and provide infrastructure. These hegemonic ideas of the entrepreneurial and technologically mediated city are well known in urban studies, and well described in classical works in the field (Harvey, 1989; Graham & Marvin, 2002).

But in this theatre of competing ideas about the urban, there are some clear emergent contenders. Climate change is becoming a hegemonic framework shaping how urban policymakers are planning and acting. It is widely accepted, at least at the rhetorical level, that climate

change sets limits for future urban development, and that cities must reduce emissions and adapt to ongoing climatic change. Of course, urban climate transformation is itself a theatre of competing ideas, where solutions involve everything from technological fixes and even more entrepreneurialism to degrowth. Scholars have already examined how climate urbanism has played out in cities and reshaped urban governance, for example by instituting various forms of carbon control (While, Jonas & Gibbs, 2010) and low-carbon experimentation (Fuenfschilling, Frantzeskaki, & Coenen, 2019; Moloney & Horne, 2015).

The future of our cities is shaped by this competition of ideas, and how they are reworked through transformations of urban landscapes. Like many other urban scholars, I am fascinated by this competition of ideas and how they coalesce into broader imaginaries. In my participation in the Dokken project in Bergen, I had the opportunity to witness this competition of ideas surrounding a concrete area. The Dokken project is a former harbour and industrial site now planned to become a zero-emission urban space. Similar to HafenCity in Hamburg and Nordhavnen in Copenhagen, as well as paradigmatic cases like Masdar City or the now defunct Sidewalk Labs' Quayside development project, it is a large area offering the possibility for 'thinking big' about future cities should look like.

To get input to its early planning process at Dokken, Bergen municipality opened a call for a competition for teams of architects to sketch visions for the area. The task was to create a sketch for the area in 2050, and to discuss how to get there. Among the questions the architects were asked to advise on were key challenges, including *What are the most important challenges Dokken can provide solutions to?*; *What are the most important opportunities we should not miss at Dokken?*; and *What are the possibilities and solutions for Dokken towards 2050?* Out of the 22 architect teams that submitted proposals, three teams were selected and asked to submit full proposals.

What is interesting about this competition is that it creates almost a *tabula rasa* for urban imaginaries. When the harbour area is vacated by the remaining industries, it will be much like a greenfield area for urban development. Planners and architects can envision these new developments *as if* there was nothing there from before, which allows them to articulate bold visions – possibly spurring rapid sustainability transformations. Freed from most of the constraints of pre-existing infrastructures, planners and architects envision an accelerated urban transformation that achieve multiple sustainability targets at once. This wide space of possibilities puts the architects and planners in the position of

sketching out what future city they envision when there are no excuses and few constraints. When planners and architects are at liberty to propose a wide range of forms of urban change in order to achieve sustainability, what forms of urban change do they envision, and how to they assume that urban sustainable transformations are achieved?

The three teams of architects delivered detailed and visualised sketches of future developments, addressing both overarching principles and details of building design. A fundamental premiss for all proposals was that Dokken, as one of the largest urban transformation projects in Europe, should put Bergen 'on the map' for new solutions of sustainability and climate resilience. It is seen by all the involved in this early stage as an opportunity to create a climate-friendly, walkable and green urban area, and few of the tempering factors of costs and interests of profitability have yet to be taken into consideration.

If the proposals by the architectural teams can be read as illustrative of a common urban ideal, there are some clear patterns that emerge. Sustainability is at the core of the future imaginary, with prominent references to the UN Sustainable Development Goals (SDGs). But just like the 17 SDGs are open to wide interpretation, the proposals also emphasise different aspects of sustainability. Yet across all the teams we see that they stress strengthening the interrelationships between the city and nature, by opening the area to the sea, building artificial islands or allowing 'wild' nature to grow in parks. They want to use natural building materials such as wood and grassed roofs, and large windows to take advantage of natural light. In terms of spatial planning, all the teams propose variations of mixed and integrated functions, with small-scale neighbourhoods, electric and public transport infrastructure, and walkability.

Interpreted as a common urban imaginary, then, the architects imagine a peopled and natured city. It is an urban space where service employment and cultural intermix. Yet there is no industry, no heavy roads and no cars. The people populating this urban space are apparently seeking social interaction and healthy outdoor activities, such as kayaking and biking. It is not always clear where sustainability will come from, or how the imagined city will be zero-emission. There is plenty of reference to sustainability, much of it visualised by imagery of rewilding and natural elements integrated into the city. Geothermal energy is suggested as the source of heat for the buildings. And one of the architecture teams, Team Advansia, proposes a strategy for upcycling, or using recycled materials for buildings and other material structures. Mobility is envisioned to be shared and low carbon.

Figure 18.1   Images from the sketches of Dokken in 2050 drawn by Team Asplan Viak/MAD. Municipality of Bergen/public domain.

Figure 18.2   Images from the sketches of Dokken in 2050 drawn by Tredje Natur. Municipality of Bergen/public domain.

The architectural teams put significant thought into the speed of the transformation process. They recognise that creating this zero-emission city is work that spans decades, while the climate challenges demand more immediate action. The proposals attempt to deal with this by *phasing* the developments. For example, the proposal by the team of Asplan Viak, MAD Architects, Probiz and Casagrande suggests that before the larger-scale construction begins, the municipality should attempt to stimulate various forms of 'temporary programmes', such as temporary art installations, and hire a neighbourhood coordinator to foster social activities. These would have to take place in vacant lots in a harbour area, but can feed off surrounding neighbourhoods such as the socially diverse Møhlenpris. In the longer run, the architectural teams envisioned more material and structural changes, such as the building of walkable neighbourhoods and integration of sustainable mobility into neighbourhoods.

In other words, we may see a typology of strategies for urban change, with different assumptions about effects over time. In the short term they rely on *experimentation* and temporary installations, which is assumed to begin transforming this industrial harbour site into a human-scale neighbourhood where people are envisioned as acting out urban and sustainable lives. Later, they rely on *socio-technical innovations*, as the latest forms of energy and transport infrastructure are used to create cutting-edge buildings. Underpinning these short- and medium-term strategies are the more *urban morphological processes*, where large-scale transport infrastructure such as light rail is integrated into the urban form in which Dokken is part.

The major unresolved question is of course that of whether the developer of the area will be public or private. The architects were mostly able to duck the question and imagine the transformation process without taking financial constraints into account, since the municipality had yet to make final decisions about whether to develop the area themselves or make deals with private developers. We were then able to imagine and discuss ideals at a distance from such tedious concerns. Interestingly, the absence of financial limitations was a constant presence – we found ourselves imposing these limitations on ourselves, implicitly accepting the assumptions that would have to conform to conventions of rational economic frames. At the time of writing, the municipality had decided to establish a publicly owned corporation to develop, manage and sell properties at Dokken. It is still unclear what will be demanded of private developers at the site.

Climate imaginaries and the possibility of sustainable transformation

There are a handful of lessons I draw from my engagement with the proposals for the Dokken transformation. One is that even when there is space to think radically about sustainability in urban transformation – here in a project with lofty ambitions and few material constraints – the imaginaries we create are still far from constituting rapid urban transformations. The architects involved here were highly creative and clearly attempted to take the task of *thinking big* seriously. Nevertheless, it is still unclear from the competition what the imaginary for urban climate transformation consists of. It appears to me that the sustainability interventions planned, while imaginative and potentially radical in and of themselves, would not make the city anywhere near sustainable. Building the neighbourhood from scratch is still a work spanning decades, and requires enormous amounts of building materials and energy. The solutions presented are still, despite emphasis on new urbanist place-making, low-carbon mobility and green spaces, within traditional modes of urban development. But we do not have, within these sketches, a clear climate imaginary for urban transformation.

The mode of development is slow and incremental, and also climate-friendly in the sense that it may reduce emissions compared to car-centric developments. The developments the proposals sketch would take a very long time to implement. The architects devised different temporal strategies for change throughout the span of the transformation process. Yet there is no escaping that even if the visions were to be realised, it would be a process spanning decades. The time horizon for the complete plans is 2050, when, according to IPCC scenarios, the whole world has to be zero-emission. It struck me that we still do not know how to envision a sustainable city or urban area – at least imagined as a single, coherent entity, built from scratch.

The problem is perhaps precisely in this way of thinking about urban sustainability, as well as how cities frame urban development in competitions like this one. Any single limited geographical area will not be sustainable by itself. Obviously, its carbon footprint will be determined by the wider systems, structures and flows in which it is embedded. Any newly built urban area catering to the tastes of high-income groups will necessarily presuppose significant material and energetic consumption. The notion of making one particular urban area sustainable without transforming the wider system is clearly fraught. It leaves

us with piecemeal solutions when what we need are broader and more coherent imaginaries.

Yet saying that still leaves open questions of *how* to stimulate this type of wider transformation, and what role urban planners and other decision-makers can play in this. In their chapter in this volume, Karvonen and Bylund (see chapter 15) argue for incremental urbanisation, a perspective that recognises the potential of small and diverse measures to agglomerate into large-scale change. This goes against the ethos of much of the planning tradition that constructed our cities as we know them, which based itself on state-led projects and public interest. There are numerous examples of failed megaprojects in city planning (see Scott, 2008). Now these types of large-scale plans have lost favour, and have in the past couple of decades been replaced by plurality, projectification and experimentation (Moloney & Horne, 2015; Munck af Rosenschöld & Wolf, 2017). There is a lot to be said for these types of small-scale incremental actions in cities, which could help city planning become more democratic and sensitive to context.

But ultimately, I believe we do need a broader imaginary for what sustainable transformation of cities should look like. Otherwise, there is a danger that these processes are driven by the rationalities of technological innovation and solutionism, rather than the aim to achieve sustainable transformation. We still need large-scale visions for urban development and transformation, and a normative and ethical basis for this vision. We need to resurrect the concern in urban planning for public and collective interest. This means renewing the commitment to shared forms of housing and mobility. In a wider sense, it means seeing the city as a commons and mobilising change around common concerns. There is a key role to play for critical urbanists and social scientists in shaping this imaginary. Engaging with architects and planners, we can help place proposals for neighbourhood development and climate interventions in larger systemic perspective.

One aspect of this that interests me in particular is that of thinking through how urban interventions in one way or another engage with the assemblages of past rounds of city building. Transformative interventions, then, are those that manage to identify capacities for change in what is already there. Perhaps what we need is not new imaginaries, but rather *reimaginaries*? We have to work with and through existing layers of city building, and we have to use the inherent capacities of existing infrastructure instead of building from scratch. For instance, cities often have historical structures built for much greater degrees of publicness than currently hegemonic ideas of smart and entrepreneurial cities allow

for (see McCann, chapter 7 in this volume). Can we resurrect the city as a commons, with public spaces and public transport as centres of urban life? It seems to me that the technological opportunities we are now afforded can be drawn in this direction, rather than the individualistic enclosures of hegemonic imaginaries of cities as entrepreneurial spaces.

Writing in 1917, the visionary urban thinker Patrick Geddes described a revolt against the engineer in town planning. The revolt, called the Town Planning Movement, was 'on this side a revolt of the peasant and the gardener, as on the other of the citizen, and these united by the geographer' (Geddes, 1917: 2). Geddes, and the Town Planning Movement, became highly influential in shaping the response to the problems of capitalist-driven urbanisation in the twentieth century, with its imaginary of cities planned to respond to poverty and class inequality. Today, it is perhaps an alliance between critical urbanists and social scientists, architects and planners that can shape a new urban imaginary for responding to the climate challenge in the twenty-first century.

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Part V
Temporalities of infrastructural change

19
Periphery everywhere

AbdouMaliq Simone

As increasing numbers of urban residents are situated at the variegated peripheries of urban cores, are we witnessing an intensification of an ambivalence or ambiguity at the heart of urbanisation processes? Across urban regions, the plurality of territories and districts that make up these regions seem increasingly to pull away from each other, rendering each other more peripheral. To what extent is the speed entailed in the growth and recomposition of these extensions a critical element of such vulnerability? Additionally, when does the capacity for accelerated readjustments, rapid changes of plans and courses of action associated with the functioning of these extensions intensify their vulnerabilities?

If climate emergency and the obdurate COVID-19 pandemic can be construed as 'portals' through which perhaps revolutionary transformations are necessitated as the grounds for ongoing survival, then such portals have been navigated for some time. In other words, in parts of the world, both liveability and impossible lives have been materialised in an intensive proximity. Here, the trajectories of development seem to carry with them their own simultaneous impossibility – they will never be what they set out to be. Whatever is planned or expected will only ever be partially the case.

Such partiality represents less an inflation of imagination or a failure of implementation than the logic of urban development itself. Development across the world takes on a seemingly generic character: the same old investments, partnerships, gentrifications, land valuations, construction styles. It would appear that the convergence policymakers have referred to for decades at least takes on the semblance of a material form, even if historical and political conditions provide plenty of differentiation. But if the proliferation of the generic is indeed the case, far from

connoting a ramifying sameness and homogenisation of urban environments, a sense of the undecidable comes to the fore.

I will come back to this later in the chapter. But for now, the point is that the periphery reflects perhaps a calculated inability to work out what is tenable or not, whether something will work or not. Regardless of the extent to which housing developments, industrial estates and commercial centres are planned to unfold in specific stages to result in specific dispositions, their development often anticipates and builds on the eventual obsolescence of these very specifications. Here, something is always set in reserve for the eventuality that something unknown, unanticipated will take place, and that urban development is itself a matter of attempting to exert control over such unknown eventualities. Thus, the periphery is everywhere, both in the ways in which whatever currently exists can be made expendable in the interest of changing course at speed and in the ways in which the current disposition of spatial products always seems to be focused on something beyond itself.

Periphery as preparation

Where the periphery was that multidimensional space of transience, interface, marginality, innovation and interconnection all rolled into one, which stood just outside the bounds of convention, normalcy and centrality, the periphery now seems to be everywhere. For example, management of the COVID-19 pandemic, reliant upon national administrations, decentralised mutual aid, the logics of contact tracing, and differing regimes of public health, has reinforced boundaries and imposed restrictions on circulation that indeed render spaces peripheral to each other. The mobility circuits that enabled an experiential sense of integration, of worlds being conjoined, at the moment are no longer able to interweave places and bodies across distances. At the same time, many persons are in motion, or at least trying. Large numbers of the precarious labourers who keep city machineries running are trying to get out, returning to villages, relocating to the far ends of urban peripheries to wait things out, and, in turn, rendering formerly crowded and busy production districts in the urban core peripheral to the present realities.

In Jakarta, workers whose small factories will likely never reopen, mobile food hawkers devoid of customers, and masses of day labourers with only a few days of reserve income have headed towards their places of origin, even when they have long lost any familiarity with them. Many profess that they will not return to Jakarta, that the COVID-19 crisis has

'brought home' a certain sense of impossibility embedded in their every-day lives. Equipped with even less confidence in the willingness or ability of government to protect them, they place their faith in the limited capacities of neighbourhood authorities in the places perhaps only their grandparents could authentically call home. Placing their faith in peripheral structures and in places peripheral to them for most of their lives, they attempt to reverse-engineer their imagined trajectories for any kind of attainment.

At the same time, across Indonesia, in the most peripheral regions of West Papua, Halmahera and Nusa Tenggara Timur, 'consortia' of military, police and developers are using the pandemic to accelerate the 'preparation' of the periphery for a massive upscaling of extraction, land conversion and population in-fill. Residual resistance movements, recalcitrant rural communities and indigenous groups are subjected to severe repression. Indonesia's ongoing efforts to 'open up' the eastern peripheries with a combination of investments in road systems, subsidised household relocation, new multilateral investment regimes centred on low carbon extraction, and rapid urbanisation protocols anticipate that the periphery will constitute a new mode of metropolitan centration. It is not just that individual cities are being cultivated to act as critical nodes in upscaled economies of mining and corporate plantation agriculture, but that a nexus of emerging cities is being designed to radically shift how the majority of the population of the eastern periphery lives its everyday life, how it uses and values land and how it maintains its cultural practices. As the pandemic amplified the popular sentiment that residence in Jakarta will become increasingly untenable, the exigency is to rapidly make the periphery available to increased volumes of resettlement.

Peripheries side by side

Of course, such resettlement and population dispersal have to be considered in relation to the exacerbation of vulnerabilities associated with the proliferation of pandemics – not only of the present but for those to come. Harris Ali and Roger Keil (2008; and see Connolly, Keil & Ali, 2020) have long demonstrated the ways in which extended urbanisation has produced forms of human and non-human intersection generative of viral transmissions. The logic of quarantine specifically aims to limit the circulation of populations. If policies and available apparatuses of containment face marked limitations in their long-term capacity to sufficiently control the spread of new infectious disease, there will be a need

to double down on effective forms of centration. While stereotypical renditions would seem to equate high density with the likelihood of viral spread, the need for effective contact tracing, health service delivery, monitoring of populations and the generation of high-impact economic innovation would suggest the importance of re-concentration.

While some observers have indicated that high-density urban living will likely be a thing of the past, perhaps more salient are the possibilities for the elaboration of 'premium' densities: the capacity of intense centration afforded to those who demonstrate the appropriate eligibility as registered through antibody testing, acclimation, adherence to lifestyles associated with proper health and disposable incomes sufficient to pay for premium urban and health services.

If prospective futures link the viability of high-density urban core residence and work to an attenuated presence of 'dangerous classes', with their reliance upon intensive relationalities as a basis for livelihood and social reproduction, then not only does the urban core become increasingly peripheral to the 'urban majority' but that majority must increasingly operate at peripheries that will avail much less opportunities for them to re-piece together the kinds of economic relations that have appeared endemic to their survival. At the same time, that same majority has endured not so much through discernible aspirations or practices, but rather through a capacity to generate differences in ways of doing things that in turn become resources for each other – generating a heterogeneous fabric of livelihood practices, ways of exercising care and authority.

In an urban world where increased value is placed on the capacity to render different facets of the environment interoperable – to more precisely determine what those different facets have to do with each other in a series of various combinations of calculation – urban majorities as aggregate practices of inhabitation and livelihood are largely *inoperable* within such logics of numeracy. It is difficult in a complex economy of affordances to work out for sure just what are the proportions of cash, debt, gift, obligation, volunteer labour, ethnic solidarity, popular sentiment, clientelism, manipulation, brokerage and so forth that make up the *popular economies* associated with the majority.

Today individual characteristics such as intellectual aptitude, social resilience, prospective career trajectories, emotional intelligence, creditworthiness and genetic profiling make up the essential variables for determining eligibility to access particular kinds of employment, resources, information and, prospectively, locations of residence. The capacity to interrelate these variables into workable profiles in real time

becomes ever more important. This is especially the case if the possibilities for high-density urban core living are to be available only to a premium class of actual and potential residents. This is not new but rather an intensification of structural conditions that have been present in many urban areas all along.

For example, Kathryn Olivarius (2019) points out that for early nineteenth-century New Orleans, the speculative, high-risk and volitional exposure to annual outbreaks of yellow fever revealed, among those who survived, a moral turpitude that made them eligible for participation in jobs and institutions that enabled them to accumulate capital – most particularly that of slaves. Surviving the epidemic for slaves legitimated their fixture as nothing more than labour, and they were often removed from 'hot zones' in order to maintain their value as capital. In an entrepôt economy that required large amounts of cheap labour, the seemingly endless availability of poor white immigrants made their survival rates insignificant as long as those who attained sufficient acclimation might remain as physically, socially and politically distant as possible.

In not dissimilar fashion, there will be significant strands of economic planning and politics that will now be oriented towards better managing the expendability of the majority through attempts to render it more homogeneous, to facilitate its emplacement within conditions that reduce its heterogeneity and internal peripheries. This is likely to be the case regardless of the capacious opportunities to steer economic redevelopment around social reproduction issues, green climate and a more judicious provision of urban services.

Peripheries have become a double-edged sword. On the one hand, peripheries are maintained as an escape route for the elite with the capacity to live and work from anywhere and, on the other, the peripheries become the locus of new centration, the building blocks for metropolitan regions that obscure the old vernacular distinctions between urban and rural, core and hinterland. Of course, these are not either–or possibilities as patchworks of territorialisation are occurring all across the world, as well as oscillating rhythms of ascendancy and decline. Brazil and Indonesia, for example, are replete with examples of boom towns going bust only to boom more slowly under different auspices. Urban cores are repeatedly hollowed out only to be swamped with new investments and built environments that require constant updating in order to just skirt bankruptcy. Yet among all these dispositions, the overarching dilemma remains as to what kinds of urban forms will be viable, and for what and for whom, into the near and medium future. What will it be worth investing in, for how long and what will be the criteria for assessing success or failure?

Remaking the periphery as periphery

As indicated at the beginning of this discussion, these questions have already been addressed in the logics of urban development of the recent past. This is most evident in the peripheries of major Global South cities where the bulk of urban expansion and resettlement has taken place for some time. While the compositions of the subsequent built environment seem to take on a generic character, as I pointed out before, this genericity is also a particular mode of appearance that makes it difficult to determine for sure whether what is implanted actually works or not. This is because the terms of reference for evaluating viability are yet to be fully invented. In other words, much of urban development at these peripheries is undertaken to address the possibility of radical alterations in present conditions, the nature and implications of which remain largely unknown.

As urban spaces extend outwards away from urban cores, and 'inwards' from towns in the hinterlands, the implantation of built environments is produced by a wide array of finance, speculative projects, auto-constructed settlements and industrial developments that work their way around and through each other often without any overarching spatial development planning or clear jurisdictional frameworks. So, while all these spatial products may sit next to each other, there is no basis for them to necessarily relate, even if a series of backward and forward linkages can be identified on paper. Even in settings that seem to be consolidated, such as an area of thousands of migrant dormitories on the outskirts of Jakarta, residents living in one 'row' may have little to do with those on the next.

Take Cikarang in Jakarta, increasingly seen as a critical node in a corridor between Jakarta and Bandung along which substantial industrial, residential and logistical developments are taking place. It is indeed an eerie experience to see the lines of high-speed rails, 50 kilometre overpasses, conventional freeways, a river, feeder roads and a light rail system all run parallel to each other in close proximity. Developers have been working in this region for a long time: there are at least 10 sub-cities, two major industrial parks, a Japanese Silicon Valley, 20 mega-development residential zones with multiple 30-storey towers, and 'dumping grounds' for low-income residents expelled from the urban core. But these are also interspersed with agriculture on yet-to-be-developed corporate holdings, tens of thousands of small migrant hostels, hundreds of working-class neighbourhoods with small pavilion-style houses, thousands of shop

houses, districts whose sole purpose is to rent dormitory-style rooms in small apartment blocks and a vast internal port processing rail and truck traffic.

The point here is not just the heterogeneity of functions, land uses, investment portfolios, governance scenarios and residential compositions that all operate in close proximity to each other. Rather, it is the reality that all of these things are literally half-full, half-empty, and in such a way that without detailed genealogies of each individual project and the elaboration of possible 'algorithmic' relations among them it is nearly impossible to assess the efficacy of any setting. Where is it going? How do we assess the viability of how such settings are inhabited?

Part of the ability of developers to raise the necessary finance for projects is to represent them as bigger and better than they have a reasonable chance of becoming. In financing schemes that have to cover debt accrued for past project development, the terms of new projects have to be inflated accordingly, so that new projects are sometimes conceived as an instrument to more firmly consolidate the asset class of those past.

While normative scenario planning, combined with speculation and financial calculations, are clearly at work in the 'half-full, half-empty' character of emerging metros such as Cikarang, there is an experiential dimension that exceeds these factors. It is not that these different built environments are not built to last, even if this is the disposition for many. Rather, implicitly these environments are being made available to potential uses and futures beyond their purported expectations. Even if, for example, laundering money is the primary motivation for putting up an additional thousand shop houses in an area that already has a glut of them, the sheer fact that they come to exist opens up possibilities for their repurposing, perhaps not now, but as a prospect that can be brokered in exchange for yet other possibilities somewhere else.

In Cikarang such a scenario took place when a South Korean consortia purchased 500 contiguous shop-house units, converting them in 37 small artisanal factories, avoiding adherence to existing industrial regulations and taxation systems, and at the same time converting a barely functioning tire manufacturing factory into storage facilities for other nearby industrial plants. The workers staffing the improvised factory system were largely already working in small artisanal workshops informally built along irrigation canals running through industrial land that was still worked by peasant farmers.

A degree of undecidability is built into the operations of industrial zones, sub-cities, new towns, worker's hostels and low-income suburban estates not only as to their viability but also as to the proportionality of what characteristics actually are at work in their construction and management. Not dissimilar to the situation of the territories of the urban majority, it is exceedingly difficult to say for sure exactly what these environments are beyond their apparent use. Clearly various modes of financing are at work: government subsidies, tax breaks, foreign investments, laundered money, personal and collective savings of various kinds, debt, secured and unsecured loans, barter, diverted funds, futures and bonds.

Yet it is often difficult to work out the proportionality of each mode within the confines of a single project, or more precisely the ways in which discrete projects are intersected by various management structures. In the industrial estates, industrial production is not just industrial production, just as farming is not just farming, recycling of waste is more than this, hostels housing migrants go beyond this function, and shop houses are rarely shop houses in these new dispensations. But to what degree and how remains largely occluded, not because it is a secret to be hidden, but because the very genericity of the specific projects themselves is able to compress so many different types of uses and possibilities in such a way not to ward off detection but to make any form of detection dysfunctional from the outset. For investigations will find what they set to find, but what will be found won't be everything that exists.

Instead, then, of seeing such indeterminacy as a deficiency of urban development at the periphery, or as peripheral to sustainable urban development, might we not engage it as a resource? Engage it as a way not to attribute definitive value to the bodies, livelihood practices and forms of care deployed by urban majorities operating in more seemingly precarious conditions. What if we considered the massive extensions of seemingly similar built environments as the possibility of suspending incessant judgements about what is more or less healthy, more or less immune, more or less eligible, more or less valuable? Where, instead, the generic connotes a space or composition capable of holding within it things and processes that may be related to each other, or not. As such every urban space becomes a periphery, living as a marginality that renders it not as something excluded or less valuable, but as the site of a potentially open-ended frontier, a way of probing into an uncertain future with the possibility of opening up new terrains of action.

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20
Reimagining urban innovation

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In urban governance networks there has been a clarion call for rapid transitions to low-carbon systems which underpin everyday life in cities by meeting demand for transport, energy and shelter. Such transitions are thought to arise from urban innovation projects which are often deliberately seeded in urban test beds (Evans, Karvonen & Raven, 2016). Urban innovation projects typically aim to foster the development of sustainable technologies and associated management approaches. These may help address specific sustainability challenges in the cities in which the projects are situated but also through 'upscaling' help resolve sustainability challenges in other cities (Wathne & Haarstad, 2020). This approach to transition is inspired by industrial innovation, where an idea is developed and diffused throughout a market to gain a return on investment.

Test beds and associated sustainable innovation projects have been established in cities across the globe (Bulkeley et al., 2019). Yet how such projects, which are often initiated at speed, proceed *in practice* and help achieve *real progress* towards sustainability remains unclear. In this chapter, I therefore examine sustainable transport innovation projects deliberately seeded in 'test bed' Milton Keynes. I focus on 'test bed' Milton Keynes (MK) for two reasons. First, in contrast to many cities which have developed over long periods and often in episodic fashion, Milton Keynes has developed rapidly over the last 50 years and thus in a singular, relatively short slice of time. Today MK is one of the UK's fastest-growing urban areas. Consequently, the need for speed and to accommodate a rapidly expanding population is deeply embedded in its urban fabric, technologies and governance networks.

Second, since its inception Milton Keynes has been a 'test bed' for urban innovations (Valdez, Cook & Potter, 2018). There is a rich,

well-documented history of technology-focused projects in MK which aim to render transport sustainable and carbon-neutral through electrification. Such approaches are emblematic of many sustainable transport innovations in cities. Thus the focus on MK provides an opportunity to reimagine urban innovation in general, so it better recognises diversity and a multiplicity of transition pathways (i.e. not just technology-focused ones) to more sustainable urban transport futures.

Sustainable transport innovation in 'test bed' Milton Keynes

Founded in 1967 as part of the new towns project to deflect growth away from cities, including most notably London, Milton Keynes is now one of the UK's fastest-growing urban area with a population of 250,000 expected to rise to 300,000 in 2050. Milton Keynes stands a little apart from many other UK towns and cities because it is a fusion of English and American planning ideas, with a masterplan informed by the sensibility of the long-standing English Garden City tradition of town planning influenced by Ebenezer Howard but also by the ideas of the American sociologist Melvin Webber, who took Los Angeles and other fast-growth areas in California as his model for the interpretation of the changing nature of towns and cities in relation to technical advances (Bendixson & Platt, 1992).

The framework of the city is based upon an American-style grid of fast roads designed to facilitate fluid vehicular transport unrestricted by neighbourhoods (Figure 20.1). It is a low-density city with land uses delineated in the spaces between the grid roads for housing, offices, light industry and distribution, retail and leisure. Indeed, there is a large shopping centre, significant central business district with offices for service industries, theatre and restaurants located in the city centre. Weather is even made in the centre of the city, in a 'snowdome' which is a covered artificial ski slope.

Throughout its 50-year history local actors have systematically sought to position MK as a 'test bed' for innovations in sustainable living: business and governmental actors can test new ideas in place in MK, setting standards for future adoption of technologies around the UK (PRP Architects, 2010). Various innovations have been trialled and developed through these test bed arrangements. For example, the Californian-style grid system upon which the city is based is an experiment in transport and choice, solar-powered homes have been trialled in the city and set

Figure 20.1   Aerial View of Milton Keynes clearly showing grid system. Photo: Destination Milton Keynes.

new UK energy in buildings standards, and more recently multiple trials have been seeded to develop the city's electric vehicle infrastructure.

There is little doubt that the grid road system enables rapid motorised transport across the city. Indeed, one can travel by car across the city at speeds in excess of 100 kilometres per hour. However, although the city's urban fabric has enabled rapid transport by car, it has simultaneously almost created an in-built reliance upon this technology for personal transport. Indeed, it is difficult to get around the city without a car. There is a system of Redways for cycles and pedestrians, but this was designed for leisure purposes and Redway routes tend to meander between various parts of the city and do not really provide an effective means of commuting. Hence the dominant 'script' built into the city is one of motorised vehicle use, principally the car for personalised transport. In this way, MK's urban form allows almost congestion-free car transport but the city is simultaneously reliant upon it to function.

MK has received funding from various sources, such as UK government departments and agencies and the private sector, for trials/demonstrator projects focused on the development of electric vehicle infrastructure (Valdez, Potter & Cook, 2019). Trials have mostly followed a twin-tracked approach that focuses on 1) making electricity networks 'smart' so they can accommodate supply from intermittent renewables and demands from electric vehicles and 2) building a concomitant

electric vehicle (EV) charging infrastructure to stimulate EV adoption and accommodate their use in the city.

Outside the major UK cities such as London, Birmingham and Manchester, MK has the most extensive EV charging infrastructure (Intelligent Transport, 2020). Chargers are situated in neighborhoods, as well as in workplaces, retail outlets and leisure facilities throughout the city. There is even a network of superfast charger hubs located at main transport intersections in the city. However, efforts to decarbonise transport in MK have not only focused on the electrification of existing infrastructure and vehicular technologies. For example, autonomous vehicles such as the MK Auto Drive pods have been trialled in the city to facilitate movement between MK's railway station and city centre. Starship delivery robots have also been trialled and are now well established in various neighborhoods in the city (Figure 20.2).

Figure 20.2   Starship delivery robot on a MK Redway. Photo: Miguel Valdez.

These and other interventions have attracted considerable investment into the city, including £19.5m for the UK Autodrive project, £1.2m for an electric bus programme, £9m for the Go Ultra Low programme, £2.5m for the Plugged-in Places programme supporting increased adoption of electric vehicles and £16m for the MK:Smart programme. As a result of this trajectory the Connected Places Catapult (2020) places MK in the top 20 per cent of potential growth centres on account of the strength of its infrastructure and the patents and trademarks resulting from its innovation processes, while the Centre for Cities ranks MK as second only to London for the most dynamic environment on the basis of a range of indicators, from business start-up rates and productivity through to skills levels and employment rates (Connected Places Catapult, 2020).

Given the strong history of MK in technological innovation, actors with national remits such as the Connected Places Catapult are now located there. Such organisations make their presence felt in MK and exert some degree of power over it. Given the UK's climate change policy focus on the development and export of urban innovations, it is hardly surprising that MK policymakers narrate the city as a 'test bed' for smart technological innovations and attract public sector funding for such projects. At the same time, MK-based actors reach out and make their presence felt elsewhere as the 'test bed MK' approach is framed as part of a wide-ranging search for new forms of sustainable urban growth (Milton Keynes Council, 2020).

Thus MK is a nodal force in the circulation of ideas and technologies for sustainable living through the UK. For example, a coalition of public sector partners developed a system of electric bus and induction charging plates in the city (Miles & Potter, 2014). The trial was positioned on a bus route in MK which has similar characteristics to those in other cities, thus allowing the development of transferable insights and technologies and ultimately the potential of standardisation and upscaling (Figure 20.3).

Is this progress?

Today the history of Milton Keynes is often framed by local government, business and planners as a search for innovation. MK has been positioned as a place where coalitions of private and public sectors can demonstrate, trial and learn about new sustainable technologies which may be subsequently upscaled to decarbonise urban environments (Milton Keynes Council, 2020). And for many commentators, MK is a

Figure 20.3   An MK electric bus approaches induction charging plates.
Photo: Stephen Potter.

place where progress to reduce carbon emissions has been made. But
I wonder if these innovation projects seeded in test bed MK represent
progress. Do they reassure populations but further embed the technolo-
gies of automobility, which ultimately have created much of the climate
change problem in the first place? Are they 'quick tech fixes' which match
infrastructures and urban fabric in general but draw policymakers' gaze

away from innovations, which may be needed to achieve the deep cuts in carbon emissions climate change will require?

Perhaps because of MK's Californian-style grid system, with its segregation of uses – housing, work, shopping and leisure – which almost presupposes automobility, it is hardly surprising that it has one of the best EV infrastructures. For governance actors in MK who work in sustainable transport, the city's urban fabric strongly frames the search for sustainable transport solutions. Such framings may be so powerful that they do not even need to be articulated but are simply routinely enacted in governance networks and reinforced by national institutions located in MK and UK government funding schemes which it has so effectively drawn upon. Consequently, transport innovations such as e-bike and e-scooter hire schemes that fall outside this development trajectory seem to be somewhat marginal concerns in the city.

Such framings may also tend to favour readily available, technologically focused transport 'solutions'. In this way, the proposition that MK's urban fabric is founded on a grid road system which may be rendered sustainable and carbon-neutral through electrification seems to be central to many innovation projects in the city. Authority for such claims often comes from exclusive technical languages and expertise which assert various forms of causality and credibility. Problems such as how to move towards lower-carbon transport in MK are cut into small discrete pieces that warrant ready-made solutions such as induction charging technologies, which are in turn owned and/or controlled by specialist organisations and individuals, such as entrepreneurs and engineers.

Crucially, in these instances alternative problem framings and solutions may be sidelined. The example of Milton Keynes illustrates a particular imaginary of innovation: technology is required to augment existing infrastructures in pursuit of improved resource use and ultimately, urban sustainability. In MK it is a 'quick tech fix' forming the next step in 'test bed' MK developments. Although actors involved in city governance networks are far from blind to other forms of innovation or social practices, technological innovation is the main focus of their work, and in a world of finite resources other pathways to urban sustainability may be overlooked and may not receive the attention they deserve.

Further, many of the innovation projects that can be found in MK are designed and implemented with upscaling in mind. The electric bus infrastructure based on induction charging plates is a good case in point. Here upscaling was not only an analytical category but formed part of an urban entrepreneurial practice to secure funding and potentially gain further returns from investment (van Winden & van den Buuse, 2017).

In this way, the potential of scalability is founded on the assumption that the efficacy of scalable solutions to 'grand societal challenges' such as the need to decarbonise systems in response to climate change can be established locally and, once proven effective, rolled out to other places – addressing essentially the same problem through more of the same. Resultant blueprints and associated best practice effectively condone not only certain solutions but also problems associated with them. Thus upscaling holds the potential to ignore the particular problems and challenges experienced in places and in turn to further alienate local populations from sustainability problems which they must ultimately own.

Finally, there is little doubt that there is much well-intentioned action in MK to make it more sustainable and the urgent calls for action on climate change have been taken seriously and multiple projects established in quick succession. However, one can gain the impression that securing government funding to set up 'test bed' innovation projects which also hold potential for upscaling may have become an end goal in itself, resulting in insufficient care for innovation projects over time. For example, a number of innovation projects have simply fallen apart when public funding is withdrawn, leaving little trace in the city.

Such high failure rates are consistent with the logic of technological innovation and suggest that a 'management of technological innovation' often found in firms has inflected urban governance (Lovell, 2019; Temenos & Lauermann, 2020). Within MK the net impact of innovation may simply be to create a city of perpetual 'fast experimental projects' (Karvonen, 2018) from which technologies and ways of working may be abstracted and used to inform developments elsewhere. There may be little lasting change in MK, meaning it only bears the cost of innovation and may not receive its benefits.

Reimagining urban innovation

Thus sustainable innovation projects seeded in cities to induce low-carbon transitions are not without challenges. Test beds can favour incumbent actors which use near-at-hand technologies to develop quick 'tech fixes' (Levidow & Raman, 2020), and the development of test beds and projects can be viewed as a policy goal in itself, resulting in a lack of care for projects, leading some cities to bear the costs of innovation. And more profoundly and worryingly, such projects hold potential to shift urban policymakers' and managers' gaze from radical innovations necessary to attain the deep structural changes needed to respond to climate change.

Thus an alternative approach to urban innovation is needed: one that acknowledges and even celebrates diversity of objects and rationalities and embraces the notion that there may be multiple transition pathways towards sustainability. In practice this means that rather than setting up technologically focused urban innovation projects which start to define a universal blueprint to resolve urban challenges such as sustainable transport, we should recognise that urban sustainability concerns alter over time and space and that consequently innovation must be recast as a more creative and pragmatic response (Cook, 2014). Seen this way, sustainable transport innovation does not result simply from, for example, optimising technological performance but from distinct perspectives, processes and practices rooted in differing situated accounts of the changing relationship between environments and societies.

Consequently, reviewing competing definitions and interpretations of sustainable transport is unlikely to yield simple solutions to what urban sustainability really means. Instead we need to collectively discover a convincing and workable toolbox of innovations, technological options and creative practices that engage productively with urban sustainability issues. The question is not whether any combination of these might provide a universal blueprint but more how they might contribute to meeting specific environmental challenges, in particular places. Below I begin to sketch out some general principles and priorities that might support 'fluid transitions' and provide a frame to generate diverse pathways to more sustainable transport.

First, we must acknowledge that the analytical and practical lens of sustainable urban innovation needs to broaden, to encompass not only near-at-hand technologies but also other novelties. For example, new e-bike and e-scooter services in cities may usefully focus innovation on a renewed approach to common pool resourcing and shared mobility practices (Sareen, Remme & Haarstad, 2021). And while we cannot go back in time, modes of transport such as walking may need to be reimagined and reinvigorated in cities.

Second, we must recognise that all activity is inevitably situated. Space is not simply a homogeneous container but variegated, with concepts such as sustainability falling unevenly (Castree, 2010). Practically, this means that in one place sustainable concerns may focus on flooding, in another extreme heat and in another emissions of pollutants to air. Here, wise governance practices are needed to identify when specific solutions should be developed to these place-based issues and when technologies and management approaches could be usefully 'imported' from elsewhere.

Third, since urban innovation is inevitably situated (Bouzarovski & Haarstad, 2019), it must respond to the sustainability concerns arising from felt needs of urban populations. Here innovators should not occupy exclusive closed spaces but porous ones which are inclusive and provide opportunities for shared endeavour. Participatory approaches where many voices are heard and make a difference are therefore needed. The exclusive spaces created by elite, technologically focused actor networks may be far from fit for purpose as they are a method of doing things *to* urban populations. Debates about urban innovations and the problems they should resolve need to proceed *with* populations and be accepted and owned by them. Not only will this promote legitimacy of interventions but it will also increase the chances of innovations which respond to climate change actually being used to reduce carbon emissions.

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21
Promises and contradictions of digital sustainability in the post-pandemic city

Chiara Certomà

While the climate crisis was calling for urgent transformative action, the COVID-19 pandemic led to sudden and abrupt social changes in 2020 (Shenker, 2020), most evidently the digitalisation of many activities ordinarily performed in person. Frequent lockdowns required people to perform most of their daily routines online: buying food, working from home, education of children and so on. Within this difficult situation, people nevertheless noted the reappearance of wildlife in the city (Arora et al., 2020; BBC, 2020): migratory birds (Brown, 2021) and small mammals (Lanzoni & Almond, 2020) repopulated riverbanks; birds of prey nested on central squares; animals timidly entered the suburbs looking for food.

Furthermore, researchers reported a drastic and noticeable drop in carbon emission in traditionally polluted areas (Wang & Su, 2020; Baldasano, 2020). This inspired a commitment to designing sustainable smart cities (Zellmer et al., 2020) while reinforcing the narrative that makes sustainability and digitalisation seemingly inextricable. Investing in digitalisation for sustainability goals is now a common strategy, incorporated, among others, in the EU New Green Deal (European Commission, 2019). The deal defines the main stakes of digital sustainability as not simply limiting negative environmental impacts of digitalisation, but rather as the ambitious plan to achieve zero pollution, supporting climate actions and sustainability protection through digital solutions.

In this chapter I focus on the nexus between digitalisation and sustainability, which entails understanding the interplay of overlapping geographies in a globalised world, characterised by multiple temporalities. Environmental and social changes are entangled and complex whereas digital technologies evolve rapidly. For instance, climate change is characterised by the confrontation between distinct temporalities that make it difficult to assess the long-term consequences of human agency, including the effects of technological innovations, and ecosystem reactions. From longer-term perspectives, contradictions, paradoxical effects and practical pitfalls emerge.

By discussing how and why our digitally supported habits are not as environmentally friendly as we might presume (Griffiths, 2020), I describe some of the long-term consequences of digitalisation, and the contradictory and paradoxical effects, socially and ecologically. On this basis, the chapter critiques the idea that the ecological transition towards a more sustainable world can be supported by digitalisation.

The digitalised sustainable city

Digitally reframing urban development plans aims to address both ecological and social aspects of sustainability. Sustainability is in fact a multidimensional goal requiring a balance between environmental protection and social measures supporting democratisation, cohesion and justice. The interplay between the multiple components of sustainability generates significant challenges in densely populated, polluted and mutable urban contexts (Haughton & Hunter, 2003; Pearsall & Pierce, 2010). Policy intervention programmes at different geographical scales assume that an increased digitalisation of social reproductive processes automatically equates to increased sustainability. For instance, at the macro-regional level, the 'Declaration on a Green and Digital Transformation' engages European countries in supporting green digital solutions to decarbonise energy networks, facilitate a circular economy and reduce pollution and environmental degradation (European Commission, 2021a). At the local level, programmes such as the 'Green Neighbourhoods' by the private Bankers Without Boundaries company proposes to establish local design and management entity able to coordinate energy retrofitting initiatives on a street-by-street scale (Bankers Without Boundaries, 2021).

The digitalisation processes also answer the need for participatory decision-making processes and transparent approaches to science and

politics production (Larsen, Gunnarsson-Östling & Westholm, 2011). People's access to shaping the urban fabric as contributors (rather than consumers) through digitalisation is thought to be key in helping democratisation and inclusion.[1] Thus the technological readiness of cities is key in sustainability imaginaries. Companies and financial and international institutions, as well as policymakers, are developing and promoting software innovations expected to find sustainable solutions (for example, optimised parking and travel, implementing smart-grid electricity consumption, avoiding the congestion of transport infrastructure and facilitating the access of citizens to services) (*ECM Technews*, 2017).

Building on the smart city concept, ICT and utilities companies promote a highly marketable vision of the future city, characterised by energy-efficient, socially vibrant and ecologically sustainable features. The vision promoted by the 26 large companies (including Siemens, Microsoft, Vodafone, Nexus Integra, Enel and Deloitte) that signed the 'Declaration on a Green and Digital Transformation' of the European Union clearly exemplify this. Feeding this imaginary further, particular cities are held up as prime examples depending on particular indicators: the Green City Index funded by Siemens identified Copenhagen as the greener city (Economist Intelligence Unit, 2020), while the European Green Capital programme selected Lahti in Finland (European Commission, 2021b).

Although the sustainable city has become synonymous with digital cities, it is questionable whether digitialisation is actually serving the cause of sustainable transition. Academic and journalistic research is now questioning its benefits, exposing the regressive consequences in terms of ecological sustainability or social justice. Having always been the locus of emerging social conflicts in their most apparent form, the city also represents the place in which contradictions of digital sustainability manifest.

Ecological contradictions of digital sustainability

During the COVID-19 lockdowns, many working and social activities were performed online. This trend is enduring well after the end of the most acute phases of the pandemic. Therefore, many scholars wondered what the post-pandemic city will be like in light of the speeding dematerialisation and virtualisation processes affecting goods production, distribution and consumption phases and the disintermediation (the short-cutting of long chains of intermediaries) in service provision. For instance, while

the worldwide increase in online shopping reduced the number of people using cars to visit retailers, delivery companies exponentially multiplied their affairs by generating a proliferation of at home delivery services operated by global logistic companies and 'riders', the new proletariat of the platform economy whose working conditions are often precarious and uncomfortable (Figure 21.1). These new forms of production and consumption merely displace negative environmental impacts from one node of global chains to another (Dryzek, 2012).

The race of cities to become digitally connected has many unseen environmental costs. Nearly 20 years ago, the European Joint Research Center estimated that the digitalisation of social reproduction processes (ICT-based supply chains, e-shopping, telework and smart working, virtual meetings, intelligent transport systems, smart grid, etc.) would have an overall positive impact in terms of greenhouse gas emissions (Casal et al., 2004). Nevertheless, there is an increasing awareness that the ICT industry is one of the most impacting sectors for electrical power consumption, and associated carbon emissions double every four years (McLean, 2019). Despite the difficulties in identifying the environmental impact of digitalisation (due to its reliance on complex, interconnected socio-technological systems engaging energy consumptions and material

Figure 21.1   Pisa in the 2020 lockdown. Riders only populate the streets. Photo: Chiara Certomà.

transformations on multiple geographical scales; Naughton, 2017), we know that data centres for interactive smartphones, allowing us to store, back up and recover our data, 'use more than 2% of the world's electricity and generated the same amount of carbon emissions as the global airline industry (in terms of fuel use)' (McLean, 2019).

To claim green credentials, internet companies reduce energy consumption by using renewable energy or – more questionably – by carbon offsets balancing carbon emissions with unknown effectiveness (Greenpeace International, 2017; Pearce, 2018). As McLean (2019) points out, 'The unaccountable nature of digital corporations hampers our capacity to hold them responsible for how they use energy, or whether they are improving the sustainability of their practices,' for instance by moving away from planned device obsolescence (Gibbs, 2018). Actually, the negative environmental impact of ICT hardware life cycles (from manufacturing to wasting) has been progressively explored. McLean (2019) signals that 'Devices are powered by electricity – often produced in coal-fired plants – and are manufactured from materials such as metals, glass, and plastics. These materials also have to be mined, made or recycled.'

The need for scarce and precious resources, notably rare earth metals, pushes the frontiers of extraction further and generates novel geographies of raw materials appropriation (Massari & Ruberti, 2013). Here, in geographically liminal areas, people work in miserable environmental conditions with limited or no control over safety standards. At the end of life, hardware recycling, disposal in landfills and disassembling areas all impact on the environment with limited acknowledgement of it (Krumay & Brandtweiner, 2016). Awareness of the harmful consequences of high-technology production processes on workers and the environment is still nascent, while digital consumerism adds mountains of toxic electronic junk around the world (Smith, Sonnenfeld & Pellow, 2006; Pickren, 2014; Schmidt, 2010; Kamiya, 2020).

Social contradictions of digital sustainability

The unprecedented availability of information, access opportunities and public engagement channels allowed by digital connectivity has been welcomed as a way of fostering democratic values of participation and justice, inherently connected with sustainability. This potentially advances awareness of climate and socio-environmental problems while offering possibilities to scale up effective solutions, such as car-sharing, proximity recycling networks and food waste prevention.

However, despite digital participation processes' promise to broaden the public space, they have negative effects in terms of the quality of engagement and democratic debate (notably via the promotion of tokenistic forms of participation, as 'clicktivism'; Frost, 2020). Moreover, the digital public sphere is characterised by different levels of participation from diverse social groups whose power asymmetries, along with the notorious technological gap effect (i.e. the new uneven geographies of production and use of high-tech devices; Gabrys, 2013), reverberate in decision-making processes (Mohan, 2001; Platteau, 2008).

The digital revolution, in fact, has arguably restructured power geometries between cities and citizens (de Wall, 2015). It characterises a major fracture between those that are in a position to control and modify the codes that govern our social (and private) life, those who passively use them and those who have no access to digital devices and infrastructure at all. The resulting digital divide (van Dijk & Hacker, 2003) is not limited to access to technological infrastructure and devices but is connected with cultural and social barriers such as digital literacy, education and language issues (Norris, 2003; Selwyn, 2004; Warschauer, 2004). Critical research has already documented power imbalances associated with the monopolistic appropriation of technological solutions and infrastructure control (Caprotti, 2015); with data and opinion manipulation (Nielsen, 2006); and with limitations imposed on the expression of social dissent (Loukis, Charalabidis & Androutsopoulou, 2014; Caulier-Grice et al., 2012). All of these (unintended) consequences of digital participation processes contrast with the design of a shared urban sustainability agenda. For instance, research on 'urban platformisation' documents how digitalisation is widening existing social inequalities and the difficulty of guaranteeing environmental sustainability in the (post-) pandemic city (Richardson, 2020; van Dijck & de Waal, 2018).

These inequalities emerging through digital restructuring of power geometries echo the limited possibilities for local governments facing super-powerful ICT companies. For example, citizens' data is regularly acquired as part of the exchange for providing technical infrastructure, such as smart-grid power installations (see e.g. ENEL X, 2021).

As Steward Brand, one of the gurus of the digital revolution, predicted: 'A society of large tools cannot be democratic, egalitarian, socialistic, humane, and just. It must be hierarchical, exploitative, bureaucratic, and authoritarian. If the day comes when all of humanity's wants can be supplied by a few giant tools, the people who tend them will rule the world' (quoted in Streshinsky, 2018). Predictably, while the digital

revolution was intended to subvert the twentieth century's elites, redistributing access opportunities and voices to the people (Turner, 2006; Cadwalladr, 2013), it ended up generating massive concentrations of economic, financial and political power in the hands of a few private companies. As a consequence, rather than fostering inclusion and collective sustainability-oriented decisions, the digitalisation of the public sphere is creating new enclaves of power (Tomalin & Ullmann, 2019). Power concentration is by default dangerous for sustainability because it undermines transparency, accountability and public control of the operating of internet companies, whose supranational business model makes them able to overcome nation-based rules.

These socially regressive aspects of digitalisation invite us to reconsider sustainability through digitalisation as synonymous with social justice. With the digitalisation, ICT companies exponentially increased their gains, while society got limited economic benefits as most companies pay limited amounts of national taxes and make large use of underpaid and precarious work (Graham, Zook & Boulton, 2013). Not surprisingly, the massive use of web-based services stimulated by COVID-19 lockdowns has been criticised for having disrupted local economies for the sake of big tech companies (Klein, 2020; see Figure 21.2).

Where next?

We cannot accept without question that digitalisation automatically leads to sustainability, however much this idea exists in imaginaries. The most severe phase of the COVID-19 pandemic brought about new hopes for transforming densely populated and polluted cities into hyperconnected hubs with digitally performed operational functions, avoiding harmful impacts in terms of sustainability. Nevertheless, there is nothing inherently sustainable in going digital, despite the fact that we often ignore the ecological costs of digitalisation processes (McLean, 2020). The socio-political consequences of digital capitalism (including the emergence of polarised power geometries, novel social inequities and technology imbalances) reverberate in the city, where issues of ownership, management and use of (hard and soft) digital infrastructures overlap with existing injustices.

Digitalisation is happening in multiple places and at a fast pace, whereas results on the pathway to sustainability are comparatively slower. Facing difficulties achieving progress in reducing carbon emissions, re-naturalising urbanised environments or implementing circular

Figure 21.2   Pisa. A sticker blaming big tech companies (together with international institutions) for their use of the COVID-19 pandemic as a Trojan horse to get more power and increase economic gains. Photo: Chiara Certomà.

economy measures, digitalisation has been seen as a short cut towards lightening the ecological footprint of the city. But like many short cuts, the costs may be obscured, or harder to read over longer periods of time. Are we ready to consider a new awareness (and take action) on the socially and ecologically unsustainable shortcomings of digitalisation?

Note

1. See http://sustainabledigitalcities.net (last accessed 19.08.22).

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22

People's Republic of Energy: rethinking the possible in energy futures

Hannah Knox, Jonathan Atkinson and Britt Jurgensen

Blu-tacked to the large white display wall in the offices of an architectural cooperative there are 10 hand-drawn 'maps'. Each of these maps has been sketched by a 'co-researcher' – a participant in a collaborative action research project that this chapter explores – and placed on the wall for us all to look at. The co-researchers have come together for a workshop looking at possible alternative energy futures for the region of Greater Manchester. They are people from different backgrounds – policymakers, council officers, activists, university researchers and trade union members.

The project that the workshop is part of is a practical thought experiment that seeks to create a political intervention into the politics of climate change. The aim of the project is to try to imagine alternative energy futures by compiling knowledge and constituting relationships that could respond to the new Greater Manchester mayor's commitment to create a new local public energy company. The research project is operating under the title 'People's Republic of Energy'.

This chapter explores the activities of the People's Republic of Energy project in order to understand how people are experimenting with practical action in the face of the climate emergency. As the introduction to the volume makes clear, climate change and the biodiversity crisis are often described as requiring urgent and speedy action to mitigate against a dire future which we are hurtling towards. However, as Knox has written about elsewhere (Knox, 2020), one of the profound challenges that climate change poses is the question of how to justify action in the face of a future emergency.

Here the problem is not so much how to generate a pace of action capable of keeping up with accelerating resource use, carbon emission rises or extraction. Rather it is the problem of how to act at all in a manner that both satisfies the current political status quo, and is proportionate to the threat of the future collapse of climate systems. A common answer is to respond to this tension by calling for more research, analysis, strategy and planning that can inform necessary action, as we see in the multitude of net-zero action plans produced by nations, regions, companies and municipalities. Others respond to the crisis through a call for disruptive direct action which aims to dismantle the status quo through revolutionary politics (Malm, 2021). In this chapter, we suggest that the People's Republic of Energy project offers us a third model of action in the face of climate change. This is one focused on intervention through the collective reimagination of the present, the past and the future (Solnit, 2016; Stengers, 2015).

The People's Republic of Energy project, of which the mapping exercise was a part, was set up as a practical response to climate change. It sought to contribute to climate change mitigation efforts through an attention to the ownership structures of energy production, distribution and supply in the UK (Figure 22.1). Its ultimate aim was to understand how more locally embedded forms of energy infrastructure might offer a possible answer to the challenges of rising carbon emissions. It also

Figure 22.1 Mapping the UK energy system. Source: Hannah Knox.

aimed to consider how to bring about a shift towards municipal or community energy in Greater Manchester.

The project was created, then, as a way of asking different and more open questions about the forms of social and technological organisation that a new local, more democratic organisation of energy infrastructure might take. In doing so it sought to create the grounds for new interventions into the challenge of climate change. Built into the project from the very beginning was the idea that no individual had *the* answer to complex ecological challenges like climate change. The terrain of enquiry was conceived as one where the individuals who were to become co-researchers would be chosen due to their very different experiences of the energy system. They would then be brought into conversation with one another to produce connections, interferences, relationships and provocative questions that might help create new energy imaginaries and produce alternative energy futures.

In this chapter we reflect on this research project in order to show how climate change action might proceed through the *reimagination of the space of the possible* (Appadurai, 2013; Jiménez, 2014; Pandian, 2019). The chapter shows how the practical work of reimagination not only creates new narratives, but equally importantly establishes new relationships whose endurance is key to the creation of alternative energy futures. This project was not intended to actually create a new energy company, so much as to open up the conditions of possibility within which an alternative organisation of energy might be imagined and pursued. It did so by working in three key registers: diagnosis, resituating and comparison. Before we come to these though, some background to the project.

The People's Republic of Energy project

The creation of the People's Republic of Energy research project was an attempt to intervene in a policy debate that had already been framed by at least two existing methods of justification. First there had been a campaign called Energy Democracy Greater Manchester that had been running for the previous year (Figure 22.2). This was led by energy activists, and had attempted to create a vision for what a public energy company for Greater Manchester might look like.

Here the goal was relatively clear: could the campaigners intervene in public conversations about energy so as to bring about the creation of an energy company for the people, enabling a new democratic

Figure 22.2 Energy Democracy Greater Manchester. Source: authors.

organisation to take control over where energy is bought so as to reduce carbon emissions, and reduce the cost of electricity for people who lived in the city? In the UK there had been a move at the time to thinking about energy infrastructure as no longer a national industry but a local or municipal good (Roelich et al., 2018). A number of local authorities were exploring whether they could provide better deals, greener electricity or other energy services to the residents of their cities in place of national private energy companies (Roelich et al., 2018).

In Greater Manchester, key individuals within the local government were supportive of the idea of finding new ways of involving the city authorities in future infrastructures of energy generation, distribution and supply. However, they needed reassurance that this would be a good use of public money. Local government officials commissioned a consultancy firm to produce a report that would use a cost–benefit analysis to determine the viability of a municipal energy company for the area. A perfect example of what Mason (2019) calls 'market shaping phenomena', the report provided an economic assessment of the risks and opportunities of a municipal energy company. The report concluded, however, that it would be too risky for a city-region like Greater Manchester to invest in its own energy company at this time.

Dissatisfied with the findings of the report, and aware of an ongoing political will to explore an alternative form of energy provision in

Figure 22.3   People's Republic of Energy project logo. Source: authors.

the city, the People's Republic of Energy research project, with its group of co-researchers, was convened (Figure 22.3). It was to explore, starting from first principles, broad sociological and technical questions. What is energy in the city? How might it need to change, and why? Who might benefit? An attempt was made to assemble both well-established and latent or unarticulated knowledges in order to outline an alternative to existing energy systems. Here the aim of knowledge production was to create spaces and situations in which co-researchers would be invited to bridge very different cultures of communication and understanding of energy issues, in order to create the seeds of an alternative energy future.[1]

Diagnosis

The first stage of understanding the local problem space of climate and energy was to gather together perspectives from a range of people intimately involved in the challenge of providing energy and reducing carbon emissions in the Greater Manchester area. On this basis we decided that a number of people should be involved in the project as co-researchers. Around 20 people were invited, of whom around 12 signed up and became incorporated as co-investigators. They were chosen on the basis of their understanding of energy and politics, a concern with ensuring

gender balance in the room, and also a sense of what they would bring, socially, to the table. In the end the group included representatives from the local energy grid operator, policymakers from within the city-region authorities, activists, trade union representatives, academics and facilitators. Many participants straddled these different positions, inhabiting different roles in different moments in the project.

The co-investigators were invited to participate in five aspects of the research. The first was the mapping workshop with which this chapter opened. Second was a visit to the local network grid operator, where we were given a presentation of the grid operator's work and a tour of their offices. The third was an energy walk around the city that excavated a palimpsest of energy pasts, presents and futures. The fourth was a website which everyone was asked to contribute to throughout the project. And the fifth was a prospectus for an imaginary energy company of the near future.

The actual sites of research, structure of the meetings, content of the website and focus of discussions were determined in the course of the project. As such, the form of knowledge creation that the project deployed might be described as something akin to what Callon et al. (2011) have termed a 'hybrid forum'. Hybrid forums are described by Callon and colleagues as spheres where scientific and technological controversies are debated. In hybrid forums, what is highlighted is less a position of critique of the status quo than the condition of debating a matter defined by uncertainty and unpredictability, and in our case urgency. In the work on hybrid forums, controversies (e.g. genetically modified crops) are seen to be key sites of political deliberation and social change, involving a range of people with different kinds of knowledge and understanding. Hybrid forums thus become 'powerful apparatuses for exploring and learning about possible worlds' (Callon et al., 2011: 28), with an appeal to settled expertise displaced in favour of an attempt to 'facilitate the discovery of a common world' (Callon et al., 2011: 217). What is important in hybrid forums and was also present in the People's Republic of Energy project is a form of participatory politics where different positions are incorporated not just responses to an already existing problem, but as the means to forging new kinds of 'problem spaces' (Lury, 2021).

In the People's Republic of Energy research project this openness to different understanding manifested in the notion of the co-researcher. The people invited to be part of the project were not a public that would be engaged on a problem already defined by experts, but were rather incorporated as participants who would help describe the shape of the problem to be discussed. The co-researchers were asked to bring to the

table their experience, but also to participate in the production of collective knowledge by taking photographs, taking notes about the meeting, recording interesting or striking verbatim quotations and uploading relevant material to a collective web archive. We might say that they were invited in as 'infrastructural tourists' (Mattern, 2013) of an existing and future energy system, wielding maps, diagrams and stories as tools to uncover the relational structure and social implications of past fossil-fuelled and future low-carbon energy infrastructures.

Resituating

If the diagnostic work of the mapping exercise created a sense of a problem space within which the project was working, the second way that the project sought to intervene in the contemporary energy system was to rethink contemporary infrastructures in relation to energy histories. This work centred around the creation of an immersive energy walk which sought to bring the local history of national electricity to light (Knox, Atkinson, & Jurgensen, 2022). Material for the walk was generated first by creating a research repository in the form of a project website, where information about energy systems could be collectively shared.

In the end the main work of finding information and sources for this historical work fell to Hannah in her role as researcher, and Britt as project facilitator, and became less a crowd-sourced activity than a journey through local library archives, books, online searches and the local electricity film collection of the Museum of Science and Industry. Although only scratching at the surface of the archives available, we uncovered stories of the city's historical relationship with electricity that surprised us all. We learnt about the use of electric cars in the early 1900s, the rise and fall and rise again of electric trams during the twentieth century, the local municipal and private control of electricity generation and distribution that preceded the creation of a national centralised energy system, and the flows of financial capital that characterised the post-privatisation electricity industry. Stories of pioneering engineers, utopian energy planners, unruly weather, the allure of markets and tales of selling off the family silver were threaded together into an immersive energy walk through the city, which we ran six times with a total of around 100 co-researchers and participants.

On the walk, participants were taken on a journey through the city centre to explore the local manifestation of electricity, a story which revealed both to the walk's participants and to those of us doing the

archival work the contingent circumstances which had led to both a fossil-fuelled and centralised electricity grid to power the city. The walk was enacted as a process of relearning and reimagining histories of infrastructure, so as to see futures that might have otherwise seemed impossible. Drawing on the diverse experiences of the participants, the walk ended with an open question about the kinds of energy future that the walk had revealed. Moving from the streets into the back rooms of one of the oldest pubs in the city, the final discussion after each walk ended with us circulating a prospectus that we had created, for an imaginary future energy company. It is to this prospectus that the final section of this chapter turns.

Comparison

If the mapping exercise and co-researcher participation offered a diagnosis of the present, and the walk a rethinking of the present in relation to previously unacknowledged pasts, the final part of the project was oriented to the question of how to build a viable picture of an actionable future. Deviating from economistic methods of market projection, cost–benefit analysis and scenario modelling, the technique deployed in this part of the project was one of comparison and concretisation.

First this took the form of working through existing relationships with individuals and organisations already successfully reorganising energy provision in other parts of the country. Here examples of different kinds of municipal energy provision in Nottingham, Gateshead, Liverpool and Bristol were set alongside examples of community energy projects in Scotland and Wales. Examples from further afield were also gathered through word of mouth, past experience, Zoom calls and internet searches, with the aim of creating a repository of cases of where energy provision was already being done differently: where the future, so to speak, was already existing in the present, and where such evidence could be brought into conversations about local energy futures so as to stimulate a consideration of alternatives to the status quo.

This research was drawn together in a document that took the form of a 'prospectus' for a local energy company of the future. Rather than creating a report with options for possible futures for energy, the co-researchers and facilitators decided that a more effective intervention would be to create a prospectus that would showcase the activities of an imagined energy company of the future. One thing that had become clear through the course of the project was that the idea of a

local supply company in Greater Manchester was not going to be viable, for a range of technical, financial and political reasons. Instead the prospectus prefigured the existence of a hypothetical energy company that would be grounded in cooperative forms of energy generation conceived as an 'energy service' democratically controlled by citizens and local 'stakeholder' members. From this starting point, a series of other services would become possible over time, including housing retrofit, energy monitoring, accessible and clean transportation and community-managed energy grids. As well as outlining these services the prospectus also included a 'road map' explaining how to link existing community energy companies to this imagined model of a new public-civic company.

Designed with a retro aesthetic, the prospectus was intentionally made to look out of place alongside glossy corporate brochures and urban reports which were the usual form for announcing new supply companies or arguing for their relevance (Figure 22.4). Sitting somewhere between an art project and a serious intervention into energy futures, the prospectus laid out three versions of an energy company as it would exist at three points in the future: 2020, 2035 and 2050. On the first page it read, 'Whilst these project ideas are purely speculative, all have a basis in present day technologies and existing or demonstration-stage initiatives running elsewhere today, all can be replicated in greater Manchester in this unique enterprise – see the accompanying notes for details.'
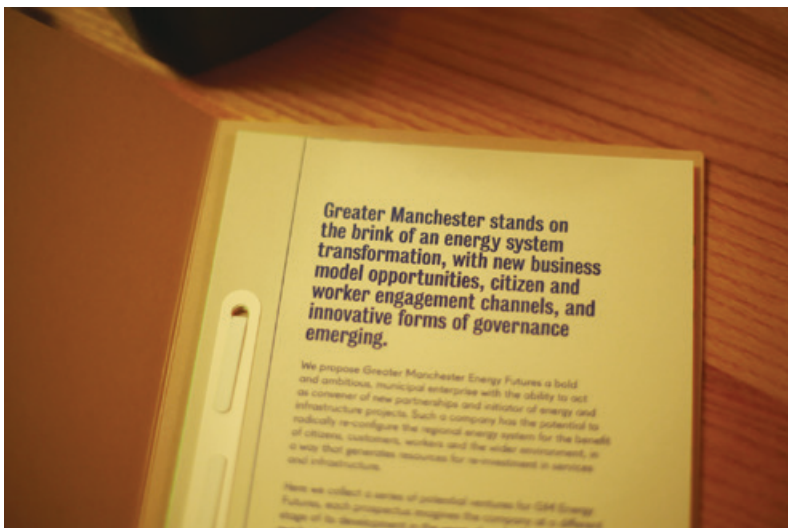
Figure 22.4   The Energy Company Prospectus. Source: CarbonCoop/ Jonathan Atkinson.

Conclusions

One of the challenges that policymakers and activists working on climate change face is the question of how to intervene meaningfully in the status quo (Knox, 2020). Plans, strategies, scenarios and projections build on the present to imagine trajectories into the future, but too often these futures are curtailed by the constraints of an imagination squarely situated in the here and now. Direct action with revolutionary intent offers an alternative to the status quo, by stopping, breaking or disrupting those infrastructures that sustain the acceleration of growth and environmental destruction. The project presented in this chapter offers us a third example of how action manifests in the face of climate change. Focusing on the techniques deployed by the People's Republic of Energy Project, we have outlined how these activities opened up a space of reimagination – different futures, pasts and presents – and the role that this played in the remaking of energy infrastructures that could serve both people and the planet. At the end of a project like this the question then remains: what difference did it make?

When working in the realm of imaginaries it is hard to trace the effects of such interactions and interventions. Immediate feedback from participants on the walk suggested that it opened up a realisation of the contingency of existing infrastructure and the possibility of alternatives, while also exposing the difficulty of intervening in a neoliberal system of contracts and relationships rather than local or even national systems of control.

But it was perhaps less in the realm of imagination than in the realm of pragmatic action that the project made the biggest difference. Through the act of bringing people together to imagine a different future, the project had the effect of building and strengthening networks of relationships between people from different disciplinary backgrounds. The relationships that were built throughout the People's Republic of Energy Project came themselves to have an afterlife in other projects and activities – firstly relationships with other energy cooperatives and organisations in the UK and in Europe that were established during this project were carried forward into a future European project on municipal energy in Europe.

More local relationships with local and regional authorities were also subsequently developed into ongoing funded work within Greater Manchester, which is now exploring concrete options for community energy in a range of different kinds of communities and neighbourhoods.

The project also helped strengthen and establish relations of trust with grid operators and energy specialists, who are now informing the development of community energy activities across the region, by providing funding and expertise. While the project focused substantively on how to reimagine democratic, community-based forms of energy generation, distribution and supply in Greater Manchester, the approach that the project itself took – co-researchers, prefiguration and collaborative, non-hierarchical methods of working – had the effect of turning the project itself into a proto-energy community.

One criticism that may be charged at a project like the People's Republic of Energy is that, in face of the acceleration of capital and climate change, we do not have time to engage in imaginative speculations about possible futures. In contrast we have suggested that imagination work is an important form of action. It does not float above or outside practical action, but offers a key way of building relationships and forging a problem space from which future actions flow. As we have learnt from this project, then, the work of imagination should be understood as a particular way of acting in the face of accelerating threats. It is not a distraction from the real work of addressing sustainability challenges, but rather a crucial technique through which new social collectives capable of bringing about infrastructural change are being forged.

Note

1. The project was funded by an ESRC-funded initiative called Jam and Justice, based at the University of Sheffield, which sought to support 'co-production for local governance' by funding community based projects in Greater Manchester. See https://jamandjustice-rjc.org (last accessed 19.08.22).

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Solar spectacles: why Lisbon's solar projects matter for energy transformation

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In the past few years, Lisbon has become centre-stage in the rapid emergence of a powerful imaginary of solar energy. This has unlocked developments across Portugal and beyond. The capital's visible championing of this technology within its own territory has mattered beyond megawatts. In 2018, the United Nations Development Programme Innovation Facility sponsored 'Solar Cities', an event in Lisbon that established the Solar Mayors' Charter for adoption of solar power in urban environments. The Portuguese capital hosted the *Festival Solar Lisboa*. The municipality launched its 'Solis' platform to track all solar projects within the capital territory. The Lisbon-based Portuguese Renewable Energy Association celebrated *dia do sol* – the day of the sun. All in all, a remarkable turn of events in a country where, just the year before, the secretary of state for energy was forced to defend solar energy growth by clarifying that it would not burden taxpayers, to a population still recovering from the worst excesses of austerity politics after the 2008–15 recession.

This rapid ripening of the solar imaginary continued in the following year. In 2019, the capital hosted Portugal's first *Forum Energia* (energy forum), highlighting the role of solar power in the recently launched National Energy and Climate Plan 2030. This plan envisaged the growth of solar power from below 1 gigawatt (GW) to over 9 GW by 2027 nationwide. It was complemented by Portugal's Carbon Neutrality Roadmap 2050 (Gil & Bernardo, 2020). Both were rolled out with great fanfare by the newly formed Ministry of Environment and Energy Transition in the capital, and taken on a roadshow to Porto, Portugal's other major city

in the north, and to Faro, the capital of the solar-rich southern Algarve region. In the same year, Lisbon hosted Large Scale Solar Power Europe, marking a trend of playing host to major solar events. By 2022, Lisbon had become a popular location for such large solar conferences, including the continent's largest annual solar photovoltaics (PV) industry gathering, the European PV Solar Energy Conference, wrapping solar energy tightly into the identity of the city and making it an attractive foreign investment destination.

While the world record-breaking Portuguese solar auctions of July 2019 and August 2020 have made headlines with large projects in rural areas – with one solar plant even approved to exceed 1 GW – I argue that the smaller solar projects of Lisbon in the tens and hundreds of kilowatts (kW) also merit attention. They range from technical pilots to early adopters of rooftop solar, from European Green Capital 2020 prestige projects to fast-tracked applications during the COVID-19 pandemic.

Drawing on five months' ethnography in Lisbon during 2017–19, I posit that making visible the viability of the technology in proximity to corridors of power was instrumental to securing energy policies that accelerated the solar energy boom. While much of the 9 GW of solar energy that Portugal's National Energy and Climate Plan 2030 targets by 2027 will appear outside the capital's borders, the political conviction of its need and feasibility is inseparable from Lisbon's political geography. It is here in this city of seven hills that regulators, policymakers, incumbents and emerging actors orchestrate national energy futures amid its undulating rooftops, which increasingly feature solar modular arrays.

Prima facie, the 8 MW of solar energy capacity that Lisbon aims to host within its territory is a drop in the ocean, less than a thousandth of the national solar growth target by 2027, and less than a hundredth the size of the biggest solar park in development in Portugal. Yet this 8 MW target and its early manifestations in the form of pilot projects and rooftop installations matter far beyond their contribution to energy generation. Their proximity to Portugal's highest power consumption site in the populous urban agglomeration that is Lisbon, and to the corridors of power where decisions on the country's energy future are shaped, imbues the target and its manifestations with amplified potency.

The chapter captures this transient snippet from the ramping up of Portugal's energy transition, by examining why Lisbon's solar projects matter for energy transformation. It foregrounds multiple sites of urban spectacle – solar festivals, public events, demonstration buildings – within a narrative of the rapid, bold and consequential decisions that

made Lisbon the latest darling of the European solar scene. It thus shows how urban spectacles, here centred on solar projects, can be instrumental to kickstarting energy transformation, nationally and beyond. Lisbon's efforts are of interest as a key urban site of a rapidly ripening socio-technical imaginary, where the latent idea of a low-carbon energy future finally grasped firm hold in the late 2010s.

Lisbon's solar spectacles as performative urban energy futures

When I interviewed senior representatives at Lisbon's municipal headquarters in August 2018 about the city's solar energy plans, I was struck by the political and technical savvy of their vision:

> We are talking with big stakeholders in the city, like the Metro [i.e. the subway system], since its power consumption is DC [direct current] and it has its own grid, which we want to inject 1 MW of solar energy into … This innovation pilot will directly feed mobility, after which we eventually foresee 10–24 MW of solar resource use in this way.

This deployment of decentralised solar power close to a site of energy consumption was possible within the existing self-consumption regime for distributed solar generation. They continued:

> The new electric vehicle regime allows production and consumption at different sites, which took a lot of lobbying efforts with the government. We are also focusing on self-consumption for buildings. Carris [the urban tram operator] also has DC for its tram network, so there is the same option as with the Metro in the future.

Thus, the point of departure for solar uptake in Lisbon was how to layer it in tandem with existing infrastructure and projects. This both ensured demand and made immediate action more likely despite legislative constraints on many other forms of distributed solar generation at the time. Decision-makers saw such measured steps within existing legislation as opening up larger future options. Sure enough, legislative evolution followed suit, as new laws enabled community energy projects from 2020 onwards, making it possible to distribute power from small solar projects to multiple nearby users (Campos & Marín-González, 2020).

But rather than awaiting national policy and legislative changes, the work of urban experimentation for solar rollout was underway in parallel in the late 2010s. Partly due to its ambitious clean energy vision, Lisbon successfully competed to be the European Green Capital 2020. A key player in the initiative explained to me in 2018 that some people in the municipality wanted to enable sustainability initiatives, but that a number of bureaucratic processes linked with people in the lower rungs of the hierarchy usually slowed down progress, due to problems of internal coordination. This actor thought the award would enable experimentation to create regulatory sandboxes and run pilots that materialised possibilities like solar energy buildings. On 4 November 2020, tweets by the European Green Capital 2020 Lisbon highlighted the solar panels on its municipal building, and the implementation of an urban solar plant to charge its growing electric bus fleet (see Figure 23.1). The photos in the tweets underscore that the vision of a solar energy city was performative, intended to ensure that solar rollout as a socio-technical imaginary gained traction through such celebrated models with the capital's city hall leading by example. This solar capital vision has effectively intertwined with Lisbon's urban planning and development, and over time with its very identity.

Figure 23.1   Tweets by European Green Capital 2020 Lisbon, 4 November 2020. Source: https://twitter.com/greenlisboa2020/status/1323937072974041091?s=20 (thread last accessed on 27 January 2022).

Some of this branding took the form of pop-up spectacles like Lisbon's solar festival and energy sector events hosted at prominent venues. The solar festival included Portugal's largest energy company as a sponsor, as well as relevant urban and European entities and initiatives (see Figure 23.2), underscoring the idea that solar rollout was becoming a mainstream idea. Its centrepiece was a 'solar house', which demonstrated a combination of solar PV modules, a solar thermal system for hot water, and energy-efficient technologies such as heat pumps to run a home with low external energy demand. Such events served to popularise the idea of a solar transition through transient interventions in the public imaginary of energy.

Meanwhile, other forms of intervention were explicitly meant to endure, such as rooftop panels and electric charging stations for solar-powered urban mobility; these were baked into urban infrastructure through a range of policy and innovation processes. They gave national decision-makers at the Ministry of Environment and Climate Action and the Directorate General of Energy and Geology examples to point to as concrete proof of what solar futures could look like, by integrating elements that worked into urban development. This multi-temporal (Grandin & Sareen, 2020) and performative (Sareen & Grandin, 2020) nature of local sustainability initiatives was something Lisbon's decision-makers were well aware of and pragmatic about, as evident in their strategic bid for the European Green Capital 2020 and its use to promote local solar initiatives.

Figure 23.2   Event poster from the Solar Festival Lisbon 2018.
Source: Solar Festival Lisbon.

Urban solar energy as a technology of humility

Not only was Lisbon home to proactive municipal actors and a ministry with much to prove upon formation in October 2018 before national elections in October 2019, the city also hosted actors with long-running understandings of solar technologies. At its universities and research institutes, people prolifically produced articles about different options for energy transitions (including a municipal-scale focus: see Poggi, Firmino & Amado, 2020), and advanced European research on solar energy pro-sumers and positive energy buildings (see, e.g., Gouveia et al., 2021; Santos et al., 2014). The National Laboratory of Energy and Geology even built the 'Solar XXI' building on its campus to demonstrate highly energy-efficient construction that included solar PV and thermal solar collectors on facades and rooftops. Lisbon moreover featured a solar energy cooperative, Coopérnico, which raised millions of euros through crowdfunding for small solar PV projects in Portugal, and grew a base of more than a thousand clients who contracted virtual solar electricity supply at competitive tariffs.

This engaged knowledge and praxis base made it apparent that solar energy was increasingly accessible and functional, and by the late 2010s also highly competitive on costs despite constraining policy frameworks. Jasanoff (2007) argues that 'Researchers and policy-makers need ways for accommodating the partiality of scientific knowledge and for acting under the inevitable uncertainty it holds.' She calls upon decision-makers to employ 'technologies of humility', namely 'disciplined methods to accommodate the partiality of scientific knowledge and to act under irredeemable uncertainty' (Jasanoff, 2007). The proliferation of examples of solar energy technologies in Lisbon can be regarded as the relational embodiment of such technologies of humility. Rather than castles in the air, these simple materialisations of energy futures made it possible for engaged actors to channel their conviction to those in power. They provided examples for decision-makers, practitioners and researchers to point to in aid of the legitimation of solar energy futures to wider publics, and grounded visions of clean and affordable energy utopias in familiar cultural referents. Where large solar plants in Portugal's southern regions evoked one sort of socio-technical imaginary, these more human-scale and proximate manifestations of solar energy rendered it relatable and familiar to city-dwellers, and not least to decision-makers themselves.

This is the main power of solar spectacles at the urban scale. When Portugal's solar auctions set new world records, the projects that followed came up primarily in rural hinterland, away from the capital. Legislation to enable community energy projects came into force in January 2020, and provided an improved basis for urban scale solar roll-out. The October 2019 elections kept the main party in the ruling coalition, providing a firmer political mandate for sustained action towards the energy future envisioned in the National Energy and Climate Plan 2030 and Carbon Neutrality Roadmap 2050. These developments were welcomed, rather than resulting in a potential rural backlash, because solar energy was not bound up with a single scale or territory, but seen as pan-Portuguese. It could render rural land productive and remunerative, but also be embraced into the urban landscapes where much of the produced energy is consumed. Thus, the urban embodiment of solar cityscapes both paved the way for its growth and smoothed the public response to initial success. Lisbon's solar spectacles proved instrumental to ensuring a bright Portuguese solar future in a city recently emerging from post-austerity politics.

'Extremely loud and incredibly close' urban solar futures

Jonathan Safran Foer's novel of this title, and the film adaptation, argue Loong and Woon (2017: 1), 'reimagine the post-traumatic city as a place in which embodied encounters … entail the possibility of revealing a shared, generalized condition of precariousness from which non-violent imperatives might arise'. Like protagonist Oskar's perceptions of reality, Lisbon's solar futures are 'extremely loud and incredibly close', an opportunity within grasp if structural challenges can be overcome through the ubiquitous embodiment of solar futures in urban landscapes, to refashion place-making potential in its gritty urbanism. The challenge of realising the promise of urban solar power in post-austerity Lisbon required the demonstration of non-violent imperatives in the form of solar generation that could help move an economically reeling population into a more inclusive energy future to back ambitious energy transition targets. The comparison with post-9/11 New York extends to the recognition and mobilisation of networked and innate agency in the face of adversity.

Think of climate change-exacerbated floods that have become an annual threat in Lisbon, and the poor quality of its building stock in a rapidly inflated real estate market that long-term inhabitants increasingly find themselves priced out of (Verheij & Corrêa Nunes, 2021).

Adding solar panels to Lisbon's changing urban fabric offers possibilities to benefit its inhabitants, move towards greater self-sufficiency and reconstitute a sense of identity as a shining example of a green capital. The materialisation of such futures through solar spectacles in the late 2010s made urban solar futures extremely loud and incredibly close in popular imagination, in a manner whose repercussions extend beyond Portugal. In Lisbon, a set of escalating acts at the urban scale rendered a utopian socio-technical imaginary increasingly plausible. This plausible utopia catalysed a changing political economy to overwhelm resistance, ushering in solar energy futures as an inevitable and empowering reality for Portugal to embrace.

The old adage goes that there is nothing as powerful as an idea whose time has come. Solar spectacles are a futuring technology, but they also rely on the world as it obtains; in order to change things, we must meet them in the present, and in this meeting shape the hopeful futures we envision. Lisbon can be understood as an accelerator of the uptake of a timely idea, activating a solar future through a combination of gutsy policymaking and infectious enthusiasm. Increasingly, ideas such as positive energy districts are taking hold and unleashing powerful imagination and innovation of cities in the twenty-first century. From the rambling streets of Alfama to the towering statue in the square at Praça Marquês de Pombal – dedicated to the one who led Portugal's recovery in the aftermath of the earthquake of 1755 in Lisbon – the city and its sun-baked roofs quietly reflect the potential that lies tantalisingly within our grasp. Like a good idea and warmth, Lisbon's embrace of solar energy has spread beyond its boundaries.

Acknowledgements

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Figures and tables are denoted by the use of *italics*.

What does it mean politically to construct climate change as a matter of urgency? We are certainly running out of time to stop climate change. But perhaps this particular understanding of urgency could be at the heart of the problem. When in haste, we make more mistakes, we overlook things, we get tunnel vision. Here we make the case for a 'slow politics of urgency'. Rather than rushing and speeding up, the sustainable future is arguably better served by us challenging the dominant framings through which we understand time and change in society. Transformation to meet the climate challenge requires multiple temporalities of change, speeding up certain types of change processes but also slowing things down.

While recognizing the need for certain types of urgency in climate politics, *Haste* directs attention to the different and alternative temporalities at play in climate and sustainability politics. It addresses several key issues on climate urgency: How do we accommodate concerns that are undermined by the politics of urgency, such as participation and justice? How do we act upon the urgency of the climate challenge without reproducing the problems that speeding up of social processes has brought? What do the slow politics of urgency look like in practice? Divided into 23 short and accessible chapters, written by both established and emerging scholars from different disciplines, *Haste* tackles a major problem in contemporary climate change research and offers creative perspectives on pathways out of the climate emergency.

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