# GREEN CITY

## Explorations and Visions of Urban Sustainability

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Transformations in Environment and Society

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Edited by

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# Contents

Simone M. Müller and Annika Mattissek

## Introduction

The majority of the world's population lives in urban areas and this number is only going to increase in the next decades. Cities that already have a total population in excess of 10 million people, such as Tokyo, Delhi, Shanghai, or Sao Paulo, will grow even bigger. Tomorrow's gigacities will soon replace today's megacities (UN 2014). In this context of rapid urban growth, we face a variety of pressing challenges ranging from waste management to housing, mobility, sanitation, and energy—and more generally to the question of sustainability and environmental boundaries (Krueger and Gibbs 2007). Since the United Nations' Rio Earth Summit in 1992, international environmental policy goals for sustainable development and global reduction of carbon dioxide emissions postulate that city dwellers need to reduce their ecological footprint considerably (UN 1992; Schott 2014).

Cities all around the world are already responding to this UN premise. Since the environmental turn in the 1970s (and when we consider the garden cities of the turn of the twentieth century even earlier), both explicit and implicit green city mandates to reduce the environmental impact of urban settings have been part of urban policies around the world (Bauer and Melosi 2012; Bernhardt 2012). In the United States in the 1970s for instance, a group of urban activists rallied around Richard Register in support of planting trees along the main streets, building solar greenhouses, and encouraging public transportation. They argued that you could take the city planning solutions of *Eco-city Berkeley* basically anywhere (Register 1987). In Germany in 1990, a group of dedicated citizens in Munich founded Green City, a citizen-based campaign initiative to make Munich "people-friendly and green."[1] After the Rio Earth Summit in 1992, cities small and large became even more vocal and involved. In 2005, a network of the world's megacities "committed to addressing climate change" formed the group of C40 Cities. This network supports cities "to collaborate effectively, share knowledge and drive meaningful, measurable and sustainable action on climate change."[2] And in 2007, the governments of China and Singapore launched the Tianjin Eco-city project: a "thriving city which is socially harmonious, environmentally-friendly and resource-

1 www.greencity.de (accessed 22 June 2018).
2 http://www.c40.org/about (accessed 9 March 2017).

efficient"[3] and which spearheads China's eco-city movement (for more on this movement, see Shepard 2017).

These are only some of the many examples of a growing number of small- and large-scale cities that are characterizing and promoting themselves as "green," "eco" and/or "smart."[4] The idea behind this kind of labeling is that cities, above all other levels of political governance, have the ability to create environmental awareness among their citizens, to steer processes of conservation, protection, and sustainability, and to champion climate change (Cohen 2011; Kahn 2007). Facing an increasingly immobile international community of nations, the mayors of Paris, Sydney, Tokyo, and Cape Town even boasted in the *Financial Times* in January 2017 that it is now cities "that are delivering the boldest ideas and most ambitious plans for a sustainable low-carbon future" (Hidalgo et al. 2017). Yet, will cities truly lead the way towards a green (urban) and sustainable future for this planet? And if they do, could all cities go green?

Cities are responsible for many of our current global environmental challenges, ranging from air pollution to sanitation issues. The question is, can they also be key sites and actors for global environmental solutions? Taking a closer look at the actual developments, policies, and negotiations taking place in urban spaces, it becomes obvious that labels such as "green city," "eco-city," "sustainable city," or "smart city" are far from clear-cut descriptions of objective qualities of cities. While all concepts broadly characterize a city designed with considerations for social, economic, and environmental impact for existing as well as future generations, these labels point to a wide range of environmental issues, policy solutions, and applied strategies that are often not consensual. They may be the result of intense struggles and political debates in which questions of social and environmental equality and justice play a major role.

At first glance, the justification for making cities greener seems obvious: to decrease the environmental problems associated with urbanization and urban lifestyles. Yet, when it comes to the actual decisions that are made, important questions arise: Which environmental impacts should be reduced? By whom, and for whom? We can make a broad distinction between green city policies that specifically target the city's population and

3 https://www.tianjinecocity.gov.sg/bg_intro.htm (accessed 22 June 2018).
4 While the terms "green city" and "sustainable city" are used mostly interchangeably, "smart city" implies a digital, technology-driven approach to urban development. Still, the development of "smart" concepts can also be traced back to debates on environmental problems and solutions, see Cocchia (2014).

those that attempt to decrease the "ecological footprint" of cities in general. In many practical decisions, these objectives show obvious overlaps. For instance, promoting cycling holds the potential to increase mobility choices of economically disadvantaged groups, while at the same time reducing greenhouse gas emissions and improving air quality; façade greening helps to reduce heat stress for buildings' inhabitants, while storing carbon dioxide and mitigating global warming. Yet because of these overlaps, when we try to assess the success or failure of green cities, the picture becomes increasingly blurred and complicated. Does it count as a success when the production of greenhouse gases within a city is significantly reduced, but inhabitants consume large quantities of products whose fabrication has caused emissions elsewhere (externalization)? Where does a green city start and end? Does it include mobility regimes within a broader region, and what role do integrated policy strategies with its hinterland play? These questions reveal that in terms of actual material flows, lifestyles, and political decisions, cities are not closed entities—rather, they are nodes in networks of exchanges that are characterized by power relations and, in many instances, social inequalities.

With this special issue of *Perspectives*, we wish to explore the many conceptions of green cities and the problems they entail. More importantly, we hope to provide a space to consider new ways of thinking about and achieving green cities in the future. While scholars' contributions assess the value and promise of green cities, they also acknowledge that there is still a long way to go. Cities not only need to address managerial or technical aspects of urban development; they should create green city identities.

We begin with a conversation between Dorothee Brantz and Avi Sharma, who engage readers through a dialogue about the green city concept and its history, tracing how it has evolved. Brantz and Sharma caution readers about the hidden power differentials, inequalities, and hegemonic agendas that the term "green" obscures, highlighting many of the aspects and the perspectives on green cities that other contributions in this issue address. The authors instead propose thinking about the "colorfully urban," a concept that may be less marketable, but which could lead to a more complex understanding of and a more inclusive approach towards a sustainable future.

This volume then goes on to address two overarching themes, the first of which tackles the notion of **Eco-modernization and Its Discontents**. Eco-modernization builds on the assumption that economic and ecological interests can be productively combined,

implying that what we need is not general systemic change (i.e., a move away from capitalist societies) but rather adaptations within the existing system. Debates on the potentials and limitations of eco-modernization are thus also related to fundamental struggles over how societies should be organized and which ideologies they should be built on. The papers in this section evolve around critiques of a range of central themes of eco-modernization, such as market-driven and techno-managerial strategies to make cities green. In carving out the political issues surrounding these approaches and the relationships between various stakeholders that such issues entail, the contributions also address cultural issues, such as value orientations, modes of thinking, attitudes, and our behavior and lifestyles.

One reason cities seem so well suited to initiate social change is that, contrary to nation states and transnational organizations, decision making at the city level seems to be far more pragmatic and result oriented, and less driven by things like party politics or geopolitics (Barber 2013). Yet, when put into action, these issues are far more complicated. Despite advances in individual policy sectors, green city policies have been criticized for functioning primarily as a marketing label to promote cities and increase their attractiveness for inhabitants and investors, while failing to address the real problems associated with unsustainable practices (greenwashing). In addition, and more fundamentally, it is precisely the pragmatism associated with the idea of getting things done that many scholars have criticized. They argue that seemingly unproblematic decisions, which often promote best-practice solutions and/or technical answers to environmental problems, obscure the fact that such managerial approaches fail to address the structural problems underlying environmental damage and social inequalities alike. From this perspective, a transition toward more just and sustainable societies cannot be achieved within the capitalist system and through supposedly "win-win" solutions.

This section also raises questions of how knowledge is produced and circulated in and about green (and other) cities, and how this knowledge is transformed into practices and political decisions. Often, the problematization of certain aspects of urban development, and the solutions regarded as appropriate, are culturally embedded. Such rootedness becomes even more important when analyzing differences between approaches to green city development in more diverse cultural contexts. The norms and values inscribed in green urban strategies constitute specific possibilities and limits for the implementation of policies.

Whether we call these sustainability efforts market-based strategies, techno-managerial solutions, or simply environmental policy, viewing green city initiatives through the narrow lens of eco-modernization limits our awareness of and engagement with issues of social justice, the politics of urban sustainability, and the multiple, fragile relationships between stakeholders when it comes to making decisions and models a reality.

Sabine Barthold's paper addresses the powerful role that city networks exercise in driving the sustainability discourse by presenting green urbanism as a branding strategy. C40 Cities' extensive network of powerful political, economic, and cultural elites has mobilized around a globally circulating concept of sustainability that idealizes technological innovation, economic growth, and modernity, often at the expense of political deliberation and social empowerment.

May Tan-Mullins's case study of the Sino-Singapore Tianjin Eco-city reveals the multilayered challenges and tensions involved in building a green city. She shows how implementing green infrastructures to fulfil sustainability goals often obscures the simmering tensions between the many stakeholders involved, all of whom have different, often conflicting, mandates and interests. She poses the question, "Who are green cities actually for?," showing that green city projects often exclude those who need them most.

Cindy Sturm's case study of how climate politics plays out in Münster and Dresden sheds light on the difficulty of enforcing climate objectives uniformly. She shows us that climate policy discourses cannot be divorced from their contexts, and that local and historical forces shape how actors in cities perceive and take action against climate change.

Finally, Nir Barak explores the limits of techno-management in the transition to green cities. He shows that the city is not simply a physical container, but a political entity—one whose transitions to sustainable patterns should focus on the way that environmental issues are socially and politically framed, and on the values that drive the city's policies.

The second section in this volume addresses the need for **New Green Visions**. This section aims to widen the scope of our thinking and invites us to revisit how we engage with green cities in order to respond successfully to the range of urban environmental challenges in the twenty-first century. The papers in this section can, in many instances,

be understood as attempts to develop ideas for the sociopolitical organization of societies—ideas that move beyond the economic logics of eco-modernization. In particular, these pieces highlight what is overlooked in the current dominant paradigm, revealing the tension between the unrealized potential of green cities and how we might make these visions a reality.

Proponents of green cities in their myriad colors—be they "green," "eco," "smart," or "colorfully urban"—have always been visionaries of a different future urban life. Yet, vision and reality have often clashed. After more than one hundred years of thinking about green cities, we have a greater number of concepts of green urbanism than ever before, not fewer. These manifold conceptions not only illustrate the many different paths that can be imagined and followed in the pursuit of environmentally friendly cities, but they also suggest that such paths are worth exploring.

We need to create visions and utopias that inspire not only policy makers and planners, but also the wider public, with ideas of how a more sustainable and greener form of the city could look and how such a transition can be achieved. These utopias need to address the question of who and what should be included or excluded in this transformation. This becomes relevant to debates not only on social inequalities and power relations, but also on whether humans are the only ones that urban policies should be targeting.

Historically, cities have been conceptualized as places set apart from rural and wild spaces, separated by defensive walls. Yet, despite these demarcation lines, cities have always been multispecies locales, embedded in an intricate connection between cities and "all-encompassing nature." Ecological policies show how blurred the relationships between "the human world" and "the natural world" become in everyday encounters and materialities and point to the importance of coevolving human-nature systems.

In the past, green city concepts have often been criticized for addressing specific (elite) target groups of "city-zens" only, tailoring themselves to neoliberal regimes of capitalist growth and the idea of creating win-win situations of environmentalism wedded to economic growth. Scholars in this section remind us that in order to really achieve fundamental change, cities need a radical rethinking of their modes and limits

of organization. We need to integrate marginalized voices into green city practices. Moreover, we need to "see" what "isn't there" in order to change cultural understandings and modes of critique to achieve a new conception of greenness in cities.

Vanesa Castan-Broto argues that to realize the potential of green cities, we need to advance urban futures that engage with the needs of citizens, address questions of social and environmental justice, and work with existing urban natures. She suggests that the notion of "just sustainability"—implementing green city policies that respond to existing (informal) economies and build on existing urban structures—could help deliver mutual benefits to both the environment and citizens.

Martin V. Melosi offers readers a historical juxtaposition to the modern concept of a green city (or green urbanism). His analysis of the the Emerald City in L. Frank Baum's novel *The Wonderful Wizard of Oz* reminds us how limited perspectives on urban greenness used to be. While Baum's novel does not convey an environmental ethic, it does illustrate a wide gap between thinking about the city and its possibilities for achievable greenness in the past, and the changing framework of recent years.

Kate Rigby challenges the anthropocentric perspective of many modern green city development schemes, inviting us to see cities for the multispecies locales they truly are. Exhibiting a set of different practices of "deep sustainability," one that integrates human and more-than-human perspectives, Rigby challenges us to reimagine green cities from an interdisciplinary environmental humanities perspective to see how they can also be sites of more-than-human prosperity with bio-inclusive forms of ecological citizenship.

Rob Krueger offers a rebuke of the green city movement, suggesting that the green city vision no longer functions as an alternative, transformative development project. Art, Krueger tells us, provides a way of framing the disconnect between green metropolitanization and its emancipatory potential. His analysis of the works of Banksy, Marina Abramovíc, and JR provides insight into the green city failure, and illustrates how art can bring us new imaginaries.

The pieces in this volume grew out of a summer school and workshop on green cities that took place at the Freiburg Institute for Advanced Studies (FRIAS) at the University

of Freiburg in July 2016. The main goal of these events was to bring together junior and senior scholars from the social sciences and humanities to discuss differences and commonalities between perspectives, and to enhance dialogue between different approaches.

We would like to extend special thanks to our co-organizers, Professors Sabine Dabringhaus, Tim Freytag, Christof Mauch, Kate Rigby, and Dr. Philipp Späth for their cooperation throughout the entire project, their willingness to work across disciplinary boundaries, and the effort and time they put into making both the workshop and graduate summer school such a success. Financial support came from the Rachel Carson Center for Environment and Society in Munich and from the Freiburg Institute for Advanced Studies. The FRIAS gave us space for discussion, lent us their administrative infrastructure, and provided us with a venue to carry out our green city events. Last, but not least, our most heartfelt thanks go to all participants in both events, the teaching staff, and participating graduate students. The coming together of their ideas enriched and shaped this special issue, which would not have materialized without the unfailing aid and support of the editorial staff of *RCC Perspectives*.

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Dorothee Brantz and Avi Sharma

## Green Visions: A Dialogue

**Brantz:** One place to start thinking about visions of the green city might be *Metropolis*, Fritz Lang's 1927 expressionist film about love and labor staged in a grossly segregated world. While poor workers toil in the artificial environment of industrial machine rooms below, the wealthy owners frolic in the bucolic eternal gardens above. Led by Maria, the workers struggle for their liberation as the air is literally taken away from them. *Metropolis* depicts the workers' fight for liberation as the struggle for access to the green spaces above ground, because these spaces offer fresh air and the delights of leisure in an open garden. Lang's airy garden on top of the metropolis serves as the ultimate promise for liberation and equality, which he ties to the idea of a "green" (more naturalized) city.

**Sharma:** I think Lang's film is a fantastic place to start the discussion, because it uses spatial metaphors to dramatize the underlying political economy of the green city. One could call Lang's vision a "vertical" axis, where privilege is a product of exploitation; where the pleasure garden is built literally on top of factories entombed in underground caverns. This is very powerful visual rhetoric because it reminds us that leisure and luxury are often produced by the work of others. But it isn't just class exploitation that makes Lang's metaphorical garden possible. The historical and spatial practices analyzed by, for example, David Harvey are also central to understanding why some people live in gardens while others live in caves.

Roughly half a century prior to *Metropolis*, for example, politicians and planners fundamentally transformed cities like London, Paris, Brussels, and even Berlin. Boulevards were widened, parks and public spaces were extravagantly funded, and monumental architecture celebrated the transformational capacity of Western powers. These metropolitan centers were making claims to global status, and they did so in part by rationalizing, beautifying, and pacifying the urban core. And how was this transformation of urban environments achieved? By pushing dirty manufactories like chemical plants, metal works, and slaughterhouses outside the city. Here we have a "horizontal" axis, where the beautiful urban core depends on the dirty and disordered periphery. And it is important to recognize that this horizontal axis spans

US Steel Works. Photo by Paul Sequeira for the Environmental Protection Agency; currently located in the National Archives, Maryland, [public domain], via Wikimedia Commons.

the globe. After all, the vast wealth of Euro-American metropoles—the wealth that financed public works, parks, and other public spaces—was substantially based on the reliable flow of goods and resources from colonial worlds. I would go so far as to suggest that metropolitan gardens (to lean once more upon Lang) have always depended on displacing pollution, poverty, and disorder to the peripheries.

**Brantz:** Your notion of a horizontal axis also raises another perspective on the urban periphery, namely the foundation of new types of cities proposed in contrast to existing metropoles. In Great Britain at the turn of the twentieth century, for instance, Ebenezer Howard initiated the garden city model that today is perhaps the best-known example of these types of cities. On the other side of the Atlantic, Frank Lloyd Wright's hypothetical Broadacre City, or Greenbelt near Washington, DC—which actually was built—represent other concepts developed during the New Deal in the 1930s. What all of these new models of "green cities" had in common is a critique of existing metropoles as overcrowded, inhumane living environments. In their stead, urban reformers planned for much smaller, more egalitarian, and more cooperative living arrangements embedded

in extensive green spaces in peripheral locations. By replacing capitalist ownership with a cooperative model, Howard's garden cities presented another version of the horizontal reframing of the political economy of green cities you mentioned above. Howard also raised the very important notion of scale when he suggested that an individual garden city should be limited to about 32,000 inhabitants in order to remain, what we might now call, sustainable. Of course, his notion of "sustainable" was more aligned with the hygiene movement, thus identifying a good living environment with health, cleanliness, and the prevention of overcrowding. At the same time, these green city ideas were rather self-referential. While they were usually envisioned in reference to existing metropolitan centers like London, Berlin, Paris, or New York, their creators tended to ignore these cities' dependence on larger global, imperial, or colonial networks. In that sense, they replicated Lang's vertical axis of exploitation on a horizontal plane as they were narrowing the scale of their utopian green visions.

**Sharma:** Garden cities are so interesting because, as you say, they illustrate the tension between discourses *about* cities, and cities as phenomena that exist in place and time. As you point out, scale is central to the way that Howard imagines the garden city, which was supposed to be small enough to foster social bonds between residents—to make them "stakeholders" in their own health and well-being. Garden cities were implicitly about creating quasi-autonomous enclaves. But of course, they were always dependent on larger, even global, networks, whether for provisioning, work, or trade, among others. I also think that garden cities and green cities share some important characteristics: in particular, the linkages they draw between green spaces, quality of life issues, and healthfulness. At least for me, green cities raise some of the same fundamental questions as garden cities do: Is it possible for everyone to live in a garden city? Can all cities be green? I think the answer is probably no.

It makes me wonder whether and to what extent the green city depends on the same exploitative logics as the colonial metropole did one hundred years ago. When thinking about green cities, we need to compare discourses about green space, sustainability, inclusivity, etc. against the actual outcomes. In this way, it's possible to see whether green cities are (intentionally or unintentionally) displacing undesirable outcomes like poverty, pollution, and inequality to the peripheries. Colonial metropoles and garden cities both offer useful historical precedents for analyzing this tension between discourse and practice.

Swimming beach in proximity to industry, Calumet Park, Illinois. Illinois-Indiana Sea Grant, photo by David Riecks [public domain], via the Environmental Protection Agency.

**Brantz:** Yes, we certainly need to think about the concept of green cities from a global perspective, and this points us to one of the problems that persists in many green city discourses today: many current ideas of green cities are still premised on notions of inequality and exploitation. The betterment of living conditions in one place is often built upon the worsening of (environmental, working, living) conditions elsewhere in the world. We need to critically evaluate to what extent, for instance, the establishment of green spaces in (Western) postindustrial landscapes is dependent on the fact that much industrial production has moved to other parts of the world. Western exports of trash to less developed regions of the world are another drastic example. I think that in order to grapple with these problems, we ought to shift the conceptual foundations of "green cities." For one, we should move away from the notion of "green" because it tends to privilege green spaces, i.e., parks, which only make up a fraction of urban environmental concerns. Now, one might argue that "green" is supposed to stand for all kinds of environmental features including water, the air, and whatever goes on below ground. However, as we have learned about human society, it is paramount for every politically conscious intellectual enterprise to openly acknowledge diversity in order to unmask power differentials, hidden inequalities, and hegemonic agendas. Thus, rather than using the term "green," we might want

to think of the "colorful city." That would broaden our horizon to the "blue" and "brown" environments, and to the wide varieties of animals that populate the urban realm. Even more importantly, it would also incorporate the built environment and the multi-ethnicity of people who act upon these environments. In addition to explicitly broadening our notion of "green," we also need to reconsider the term "city." I would argue that as long as we think about "green cities," we tend to think in terms of localized and geographically and politically bounded entities or "containers."

**Sharma:** I think that's exactly right and, unfortunately, this is not just a theoretical challenge but an administrative one. Green city initiatives, regardless of who proposes them, only move forward when municipal authorities sanction plans and allocate personnel, resources, etc. It makes sense, then, that these initiatives focus on "the city" as a territorially bounded entity; after all, municipal authorities are paid to think about the people who live within the city limits.

But if sustainability and equal access constitute the core of a genuinely "green" city, as I think they do, then the city as a *territorially bounded* entity is actually part of the problem. Let me offer just one example here. Beginning in the late 1990s, Chicago began to invest substantially in transportation infrastructure, cleaning up brownfield sites and moving dirty manufacturing out of the city. This has been great for many of the city's residents: better air quality, new green and public spaces. At the same time, Chicago's authorities have extremely limited legal, administrative, and financial capacity to shape industrial or environmental practices just outside the city limits—for example, in Gary, Indiana. Highly polluting industries move across the state border; city residents buy cheap gas across the state border; and those living across the border—literally steps away from the Chicago city limits—experience the impacts of those displacements. Chicago residents, though, are also negatively affected. Industrial and human waste from outside city limits regularly flows back into the city through Lake Michigan; noxious fumes from refineries and coal plants in Gary affect air quality in Chicago. It is also worth noting that the Chicago residents who are most exposed to these cross-border effects are the poor black and Latino communities who live in Chicago's far south and southwest neighborhoods. All of this is to say that, in situations where the territorial city is the key metric, the net impacts of green city initiatives are questionable. If the green city idea is to realize its potential, then transborder strategies need to be a starting point, and not an afterthought.

**Brantz:** In his book *La révolution urbaine* (*The Urban Revolution*), Henri Lefebvre argued that urbanization had reached a point where it no longer made sense to think about individual cities but rather about the urban as an overarching phenomenon. That was in 1970. Today half of the human population lives in cities, and the environmental consequences of urban living are felt across the globe. To grasp these consequences, we need to think beyond the boundaries of individual cities. Cities have far-reaching ecological footprints and a tremendous impact on global water and air pollution, as well as on climate change. To address the interactive effects of ecological processes and urban living, we must investigate both the large-scale effects of the urban, and the specific actions that cities take. Looking at both in conjunction, we might be able to articulate the concrete steps necessary to bring about more sustainable living environments for all.

**Sharma:** These efforts to create city-actor networks are quite exciting, and it will be interesting to see how they develop in the near future. And I absolutely agree that a more interactive approach is important if green city discourse is to realize its potential—not just to build more livable, inclusive, and sustainable cities, but also to create positive impacts that extend *beyond* the city limits. But in trying to create a more interactive framework, I would start with a very basic observation about governance: local governments are deliberative and contested bodies, which means that the green city idea is always being "sold" to political opponents, funding agencies, corporate sponsors, and others. The good news is that the idea is pretty easy to sell, because city managers want the things that come with being recognized as a green city: federal and foundation money, and good publicity that can be used to appeal to the young, educated, prosperous, and progressive demographic that every city wants to attract.

The bad news is that selling the green city idea to public and private partners also transforms the idea itself. The hard work of making cities more sustainable tends to become subordinated to other goals that have a more visible payoff. Instead of making difficult or politically controversial decisions that limit consumer choice, threaten financial penalties, or levy taxes, municipal leaders talk about bike lanes, open-air events, farm-to-table restaurants, and so on. The problem, of course, is once the green city idea moves into the competitive space where strategic goals are set: that's when money is allocated, interest groups are canvassed, and "sustainability," "inclusiveness," and "equality" tend to lose out. In a contested political process where cities compete for jobs, population, and resources, the green city idea is packaged in

ways that emphasize urban quality of life issues that do not necessarily coincide with global sustainability concerns as, for example, laid out in the Sustainable Development Goals.

I say all of this not to condemn widely celebrated green cities like Copenhagen, Portland, Vancouver, and others, but simply to highlight the fact that all of these cities—and others that aspire to be like them—are at least as focused on prosperity and growth as they are on sustainability and inclusiveness. And this creates a tension between the green city in practice and our shared aspiration towards global sustainability.

**Brantz:** But that is precisely the challenge—in the end, a concept that applies only to the rich will not really help in our collective struggle against climate change. If the green city operates in the same way as the bucolic gardens in Fritz Lang's *Metropolis*, then it only fosters the further exploitation of humans, animals, and the natural world. If we really want to disrupt this vicious circle, we need to unravel the political, economic, and social premises that lead to a simple greenwashing of cities. Thinking of the "colorfully urban" rather than the green city might be less marketable as a promising symbol within a growth economy, but it could lead to a more complex understanding and more inclusive approach towards a sustainable future for the globe.

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# Eco-modernization and Its Discontents

Sabine Barthold

# Branding the Green City

## Introduction

Since the 2000s, powerful political and economic elites have popularized the pursuit of eco-modernization, a market-oriented version of sustainability, to achieve broader goals of urban economic growth. Eco-modernization schemes, with their emphasis on energy and resource efficiency, suggest that environmental degradation can be decoupled from economic growth and resolved through technological innovation and the marketization of green products and technologies. In the last decade, urban sustainability has increasingly been aligned with the "smart" city discourse. This promotes the idea that economic expansion and increasingly dense urbanization—provided they are based on green technologies and sustainable designs—will eventually reduce ecological harm without any sacrifices or significant shifts in contemporary lifestyles or existing sociopolitical structures (Isenhour 2015).

Today, coalitions of local governments, urban planners and architects, entrepreneurs, technocrats, global consultancy firms, and multinationals, as well as "Big Green Groups" (Klein 2013) are promoting "natural capitalism" and largely market-based or techno-managerial strategies for tackling environmental issues in cities. The call for cities and local governments to become "sustainability leaders" or "climate champions" has resonated widely across multiple scales of governance and in both the private and public sectors. Urban governments are developing "innovative" environmental and climate protection programs, and cities often serve in this process as laboratories for "pioneering technologies" and policies (Bulkeley, Castán Broto, and Edwards). Anxious not to fall behind on the latest trends, municipalities are developing new governance structures and urban planners are, as Eugene McCann and Kevin Ward (2011) have shown, "scanning the globe" for increasingly mobile policy strategies that will help them embrace (often competing) economic, social, and ecologic demands.

In this essay, using the example of the C40 Cities Climate Leadership Group, I illustrate how city networks are powerful actors in the global dissemination of eco-modernization. C40 has achieved great success by bringing together a variety of powerful economic, cul-

tural, and political elites around a globally circulating concept of sustainability that idealizes technological innovation, economic growth, and modernity. Its systematic production, transfer, and mobilization of policy models allows the organization to set technical and political norms that push the global environmental discourse in a direction where dissenting voices and differing socioenvironmental imaginaries become systematically excluded.

## C40 Cities: The Rollout of Bright Green Urban Sustainability

Once deemed the epitome of ecological degradation, urbanization is increasingly being framed as a beacon of hope—a viable way out of global ecological crises. City networks like C40 have gained enormous symbolic power in the global discourse on sustainability, which resonates widely with cities worldwide who are anxious to join the global hierarchy of climate leader cities. In joint efforts to brand cities as "green," collaboration between players of the globalized economy and moderate environmental organizations is an increasingly common practice. The C40 network collaborates with global marketing and consulting firms, multinational corporations, media and PR agencies, and environmental "think tanks" to set norms and standards for urban sustainability and green cities. Membership of the network is exclusive, based on invitation by other members, and limited to big cities.[1]

The C40 Cities Climate Leadership Group was initially founded as the "C20" in 2005 on the initiative of London's then mayor Ken Livingstone. Livingstone's initial aim was to bring together the mayors of 20 of the world's largest megacities to address climate change in a parallel event to the G8 summit in Gleneagles. He wanted to form a "buyers' club" of major cities that could collectively negotiate lower prices for the procurement of green technologies from global manufacturers, like LED street lighting or hybrid buses. Under the organization's second chair, former Toronto mayor David Miller, C40 Cities formed a partnership with the Clinton Foundation's Clinton Climate Initiative (CCI). This crucial cooperation not only brought major resources to the network but also provided access to a range of global organizations and institutions like the World Bank and UNDP.

1 Cities must either have a population over 3 million or be one of the top 25 global cities ranked by GDP output to qualify for membership. C40 explicitly networks with global cities at the top of the global urban hierarchy, because "large cities have sizeable economies that are ideal markets to incubate, develop, and commercialize greenhouse gas reducing and adaptation technologies, including those to improve energy efficiency, waste management, water conservation, and renewable energy" (http://www.c40.org/cities). Currently, 86 global cities are members.

C40 provides a number of regional directors and program experts to serve as a link between the network and individual member cities. These experts offer consultation on diverse subjects including waste, transportation, and renewable energies, among others. They are also instrumental in connecting city governments with private sector companies who offer technologies and services in public-private partnerships (PPPs). For example, C40 partners with private corporations like Volvo, and with nonprofit organizations like EMBARQ, to promote the extension of Bus Rapid Transit (BRT) systems in their member cities. Other programs involve PPPs with Philips for LED street lighting, and with Siemens for Smart Urban Grids. C40 experts also support cities in getting access to international sources of funding for local policy programs. The main platforms for city-to-city cooperation include the biennial C40 Mayors Summit, which allows local officials and urban experts to meet for the purposes of policy learning and "best practice" exchange; it further provides important opportunities for corporations and investors to present their "cutting-edge" products and technological innovations to urban decision makers.

Sustainability discourses have, in the process, been cleverly integrated into cities' branding and marketing strategies. When Michael Bloomberg took over as the network chair in 2010, he hired McKinsey to refashion the relatively loose network of cities into a fully functioning organization with full-time staff, an executive team, and a board of investors. He also invested heavily in marketing, creating a PR division to promote the network's activities. In an interview, C40's communications director explained to me that many of the member cities take advantage of the professional marketing opportunities C40 offers to assist them with branding their city as green to both the international media and their own constituents.

In the face of global financial crises and ecological disasters, the promotion of sustainability and of clean, green lifestyles adds symbolic value to places. It helps brand cities as modern, future-oriented, and attractive destinations for flows of capital and people. In the urban context, this "bright green" version of sustainability (Steffen 2004) aligns with preexisting economic and marketing goals. Green or sustainable urbanism here is more than just an environmental program—it is a branding strategy for the "entrepreneurial city" (Harvey 1989), promoting cities with high living standards and good public services as desirable. These "soft" urban qualities—in which cultural and environmental features of urban spaces and lifestyles play a major role—are key if cities wish to become more appealing to global businesses and investors, the high-skilled workforce

that forms the basis of the "new economy," and the tourists who spend large amounts of the surplus value generated elsewhere in the cities they visit (Gibbs and Krueger 2007).

**Setting Global Sustainability Standards**

Intercity cooperation and member support are certainly central to the network's functioning. But, since local environmental and sustainability programs are increasingly perceived as a key factor for global interurban competitiveness (see, for example, Dual Citizen LLC 2014; Siemens /EIU 2012; Kamal-Chaoui and Robert 2009), C40 also creates a competitive space in which cities are ranked and measured according to their performance as climate champions. This "greening by numbers and indicators" (Kaika 2017, 90)—translating social-ecological issues into technical-scientific monitoring and "intelligent" infrastructure technologies—allows the C40 network to direct the conversation on how best to pursue sustainable urban development goals and who is best suited to do so. Before potential C40 members can enjoy the many benefits of belonging to an elite organization, cities first have to be "smart" enough to be able to collect and report data and indicators.

In 2011, the network partnered with Arup, a global architecture and planning consultancy firm, to help collect data on member cities' climate actions and establish a baseline to measure cities' progress in reducing greenhouse gas (GHG) emissions. However, implementing these sustainable "solutions" has in turn created undesirable problems: indicators and "smart" monitoring in green development agendas have been driving new forms of displacement and green gentrification in cities around the world (Checker 2011). Furthermore, the production of the technologies on which smart cities rely is directly dependent upon the destruction of environment and livelihoods in other parts of the world.[2]

C40 is not only setting norms for GHG accounting in member cities—they have globalized their sustainability metrics as the international standard. In 2014, at the COP 20 in Lima, C40, together with the World Resources Institute (WRI) and ICLEI, launched the Global Protocol for Community-Scale Greenhouse Gas Emissions Inventories (GPC) as a common standard for developing GHG inventories in cities around the globe. This establishes

2 Many information and communications technologies rely on minerals like coltan, which is mined in countries like Congo, where it finances war economies that systematically commit human rights violations, exploit workers, and destroy local environments.

guidelines for how cities measure and report their GHG emissions, and how they account for their reductions in carbon emissions to international organizations and governance mechanisms like the UNFCCC (WRI, C40 Cities, and ICLEI 2014). Adopting the GPC standard has even become the requirement for cities to join the *Compact of Mayors*,[3] launched by former UN Secretary General Ban Ki Moon at the UN Climate Change Summit in New York in September 2014. However, the current method of accounting for climate responsibility favors already-developed nations: today, "affluent nations continue to drive significant demand for global production and benefit from imported products that contribute to net global emissions growth, but production-based emissions accounting methods assign responsibility . . . to producer nations" (Isenhour, O'Reilly, and Yocum 2016, 649).

This market-oriented discourse on urban sustainability that C40 and others are (successfully) promoting in cities around the world is based on a number of presumptions that appear beyond dispute: these include unquestioning faith in Western-style institutions, the tacit endorsement of expert knowledge, assumptions about technological feasibility and the manageability of social processes, and the non-thematization of alternative economic and social models (Keil 2007). These "sustainability" standards obfuscate the powerful social interests hiding behind "objective" measurements, benchmarks, and indicators. Therefore, it is important to be aware of the big picture of capitalist urbanization dynamics and to be critical of sustainability standards that—despite using a rhetoric of fundamental change—do not really change anything.

## Conclusion: The Future of Urban Sustainability

Policies promoting energy efficiency and the proliferation of green technologies are not per se a bad thing. However, framing sustainability as the injection of green-economy and "smart" technologies into local economies—as C40 Cities does—is problematic if it prohibits critical engagement with more fundamental problems of unsustainable urban lifestyles. By exclusively focusing on issues that can be improved with a green technol-

3 The *Compact* is a global agreement on measuring, documenting, and reporting standards for urban climate programs between cities, major city networks, and a number of "partners." These include international organizations like UNHabitat and the World Bank Group, standardization organizations like Carbonn and the Carbon Disclosure Project (CDP), environmental think tanks and consultancy firms like The Climate Group° and the WRI, multinationals like Veolia, and global "Big Green" organizations like the World Wide Fund for Nature (WWF).


"Flood Wall Street." The People's Climate March, New York City, 21 September 2014. Photo by Elizabeth Stilwell [CC BY-SA 2.0], via Flickr.

ogy fix, C40 is framing urban sustainability mainly as a technical and marketing matter, rather than as a structural problem with multiple social, economic, ecological, and cultural dimensions.

Portraying sustainability and green urbanism as consensus-based, technocratic, and modern concepts increasingly denies room for political debate and alternative visions. After all, there is no consensus on what, exactly, we are trying to sustain: Is it nature, the human species, our current way of life, or capitalism?

"Challenger environmentalisms" (Keil 2007) call into question the alleged win-win situation of economy and ecology presented in dominant discourses on sustainable development today. Citizens and communities around the world are resisting existing policy frameworks that seek to "include" them into monitoring practices. They resist being "integrated" into pre-arranged sustainability programs that limit stakeholder participation to a menu of equally unacceptable options to choose from. As alternative practices and methods proliferate, this is an "opportune moment to pay attention to socio-environmental innovations and methods forged not out of social consensus, but out of social dissensus" (Kaika 2017, 99). It is not the consensus-building exercises of technocrats, political leaders, and business elites, but rather the disruptions and

practices of dissent by citizens and communities, that can potentially serve as living indicators of what urgently needs to be addressed and where.

Throughout history, cities have been places of fundamental change and social empowerment. By bringing struggles over social and environmental justice back into the urban arena, progressive urban movements can create new spaces where dominant socioenvironmental trajectories are contested and can help create alternative imaginaries for our common future.

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May Tan-Mullins

# Who Are Green Cities Actually For?

## How Many People Does It Take to Build an Eco-city?

In October 2007, as a response to changing environmental needs and acknowledging the need to reduce carbon emissions and mitigate climate change, the Seventeenth Party Congress in China identified "building an ecological civilisation" as a national goal (Oswald 2016). This triggered the intense development of eco-cities (or green cities) in 2008, the main aim of which was to build sustainable cities through technological advances and achieve a "win-win situation, manageable futures and prosperous development with rather than against nature" (Neo and Pow 2015, 405). The move was supported mainly by the Chinese government, and numerous state and non-state actors were involved. In China, eco-cities are built by consortiums that often involve multiple stakeholders from both the public and private sectors. These consortiums may contain local and foreign government partners in addition to numerous others, such as local supporting businesses, local communities, and nongovernmental organizations, all with different social and environmental agendas. Today, the National Development and Reform Council (NDRC) and the Ministry of Housing and Urban-Rural Development (MOHURD) are the main organizations driving the scheme nationally, whereas provincial governments implement the plans locally. Currently, there are more than one hundred eco-cities in China in various stages of construction and completion.

The Sino-Singapore Tianjin Eco-city (SSTEC) is one such example. A brownfield development joint venture by the Chinese and Singaporean governments in 2007, the SSTEC is a sizeable 30 $km^2$ eco-city development located outside of Tianjin. By the time the project is complete, the SSTEC is expected to house up to 350,000 people. To date, the total investment in this project amounts to 280 billion yuan renminbi. The project started with three key visions in mind, all important hallmarks of sustainable development: it was to be socially harmonious, environmentally friendly, and resource efficient. The development aims to achieve 26 eco-city key performance indicators (KPIs), of which 22 are quantitative and four are qualitative. The development of these KPIs is based on both Chinese and Singaporean national standards, as well as international standards—such as using green building materials, utilizing renewable energy, building green and blue

A green building in SSTEC stands empty owing to unaffordable housing prices. Photo by Xie Linjun (used with permission).

spaces, and constructing eco-corridors—that are used in the certification of new developments. In this way, the city ultimately hopes to offer a model for thriving sustainable development. However, the project is also politically loaded: it advocates "harmonious urbanization" and "ecological civilization," two important politically driven slogans that have been widely used since 2007, when the SSTEC was approved for construction (Caprotti, Springer, and Harmer 2015).

When the development was first initiated, there were already 12 different groups of stakeholders engaged in the decision-making process at the Sino-Singaporean governmental level. They ranged from government-associated businesses (Keppel Group Singapore and Qatar Investment Authority) to financiers (China Development Bank and private investors) and government agencies (Vice Premier's Office China, Prime Minister's Office Singapore, and MOHURD China). Other stakeholders involved in the implementation process included Tianjin's provincial and district governments, local communities, and businesses. The decision-making process has been highly complex

and fraught with power struggles, especially given the great number of actors involved. Each of the stakeholders is empowered by different mandates, with various interests to protect, ranging from profit to bilateral relations, economic development, soft power, climate change mitigation, and environmental protection. For example, provincial and municipal interests are empowered by government regulations and legislation to promote eco-cities. While environmental protection and sustainable development are both aims of the project, Singaporean investors and businesses are governed by international investment laws and driven by profit-seeking agendas. Local communities, in contrast, are more concerned with protecting their personal interests, such as land ownership, the quality of their surrounding environment, and livelihood opportunities in the region under development. Interestingly, these communities are only consulted if their land is going to be appropriated. These varied competing interests have inevitably led to conflicts in the implementation of the SSTEC. This became evident in the early stages of the project, when Singaporean and Chinese partners delayed beginning certain phases due to their contrasting definitions of the KPIs, conflicting work priorities, and differences in the quality of work. More importantly, compromising these KPIs, which are fundamental to the concept of eco-cities, has demonstrated conflicting ideas about what an eco-city is, and who or what it should be for.

**Tensions and Fissures in Eco-city Development Projects**

Today, from the local all the way up to the national level, tensions between different stakeholders continue to multiply across hierarchical power divisions, especially between those who would benefit either financially or politically—such as developers, businesses, and government officials—and those who are disadvantaged by this project—such as small-scale landowners or displaced communities, who are usually represented by environmental NGOs. For instance, the media has run headlines on how private enterprises engage in land grabbing from local communities in the name of national development projects. According to a survey by Landesa (2011), almost half of Chinese villagers have lost some or all of their land to such acts since the late 1990s. The survey found that in nearly a quarter of those cases, the villagers were not compensated. Hence, projects like the SSTEC are a manifestation of unequal power relations between classes, income groups, and owners of resources—in other words, the haves and the have-nots. As such, many are beginning to question whether the concept of the

eco-city has changed from building a sustainable city for all to a means of legitimizing technology-based strategies to justify urbanization and economic growth. In China, local governments frequently request funding from the central government to develop profit-seeking estate development initiatives in the guise of environmentally sustainable urbanization projects.

Furthermore, research has found that the cost of most green housing is expensive, targeting middle- to high-income groups. Neo and Pow (2015) find that most potential residents of the SSTEC are concerned about the affordability of their housing and the appreciation of their property's value, rather than the property's eco-friendly features. The same research has also found that some owners have purchased houses in the SSTEC as a second home for investment purposes. This raises the ultimate question: Has eco-city development become an eco-elitism urbanization project that only upper middle- and high-income groups can afford and benefit from? Chien argues that rather than being examples of truly sustainable communities, eco-city projects in China are better understood as entrepreneurial projects carried out according to "flexible local discretion in line with central policies and novel narratives of land commodification under the green economy" (2013, 176). Li  has suggested that Chinese eco-cities have evolved through the use of advanced technologies to achieve economic growth and, as a result, "neglect the fact that eco-cities require the simultaneous and harmonious development of economy, environment and society" (2012, 25).

Despite these findings and the many misgivings surrounding eco-city development, Chinese planners of the SSTEC maintain an optimistic view of the project as a way to mediate social and environmental changes through policy instruments. According to Neo and Pow (2015, 137), one Chinese planner has high hopes for the SSTEC as a solution to the challenges of urbanization and suggests that "we are not just building another ordinary city, the SSTEC is designed to be a totally different way of living that balances the environment and urbanization in China."

The unequal distribution of power between those who have access to resources and those who do not raises bigger and broader questions about how political forces interact, and how they impact society and the environment. More critically, it pushes us to question the broader impacts of such a project for environmental sustainability. Although the SSTEC is designated to be built within certain parameters, its intercon-

nectedness with the environment means that whatever happens within the SSTEC zone will have transboundary impacts on neighboring villages and municipalities—especially if these new urban forms consume materials and resources from the surrounding regions in the form of water, natural resources, and food supplies. For example, to tackle water shortages in Tianjin, where the SSTEC is located, a new water reclamation center was launched that can treat 100,000 $m^3$ of wastewater and produce 21,000 $m^3$ of recycled water every day (Liang 2017). As a result, however, energy consumption and air pollution will increase, the general environment will degrade, and neighboring communities will be negatively impacted in terms of health, as well as the cost and availability of resources.

To conclude, 66 percent of the world's population is projected to be living in urban areas by 2050 (UN 2014) and it seems inevitable that the pace of urbanization will only speed up. In response, the eco-city concept has been embraced by many countries globally, and particularly in China, as one of the more sustainable forms of urbanization. It also serves the political agenda put forward by Chinese leaders, as it encapsulates the ideals of "harmonious urbanization" and "ecological civilization." However, the case of the SSTEC has prompted scholars to question whether eco-cities are just "another product of global urban entrepreneurialism—a capital-driven growth strategy producing new (non-sustainable and unjust) materialities of urban-nature," or a genuine sustainability fix for today's urbanization trend (Pow and Neo 2015, 411). We need to acknowledge the importance of the equitable distribution of benefits that can derive from an eco-development. The eco-city should not be an enclave for elites, nor should class determine who has access to it or who experiences the benefits and negative impacts it may bring to an area. Rather, an eco-city should be a genuine, socially just good that is available to all.

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Cindy Sturm

# A Tale of Two Cities: Climate Policy in Münster and Dresden

## Introduction

Countries are rallying in the war against global climate change. The time for talk alone has passed, and we all seem to agree (for the most part) that something concrete needs to be done. But what action should be taken, and by whom? Increasingly, cities are becoming "engines of change," as we find ourselves turning for answers to urban actors, such as planning agencies, city councils, and mayors. But what happens when different cities' perceptions of climate issues differ? How do divergent understandings of climate change in different discursive settings affect the implementation of urban development policy?

The growing significance of climate policies for urban development has prompted the German government to set ambitious green city aims, most notably: saving primary energy, increasing the amount of renewable energy, and extending energy efficiency. Germany has established a number of instruments to guide the behavior of urban development decision makers and citizens in accordance with these aims. Laws and regulations (such as the German Renewable Energy Act) provide a framework for defining minimum climate policy standards. Guidelines (such as those for climate-efficient construction), financial incentives, and best-practice guides attempt to standardize the behavior of urban actors by presenting certain perspectives and actions as "right" and "desirable."

Despite this national framework, urban actors across Germany have not taken uniform approaches to making and implementing climate policy. Using the case studies of Münster and Dresden, I show how different local and historical contexts affect the ways in which urban actors assess the relevance and priority of national climate aims when making climate policy. Drawing on Michel Foucault's understanding of discourse, I analyze urban development documents, city council rulings, and interviews with decision makers and city administrators, in order to understand how certain perspectives on climate issues and decisions about the "right" urban development strategy become hegemonic, while others are sidelined.

## Local Discourses, Local Practices

How do rationalities and logics of thinking differ in local contexts? How do actors perceive their scope for action with regard to global climate change? And how do urban decision makers position themselves vis-à-vis different policy instruments in their attempts to meet national climate objectives?

A discourse-theoretical perspective can be extremely useful in addressing these questions, by helping us focus on social negotiation processes around climate change and foregrounding the conflicts and struggles that shape how actors approach this issue. Foucault understands discourses as systems of representations that produce a specific social imaginary and perspective on various issues—in the case looked at here, climate policy. In this sense, discourses are not just linguistic features; rather, they are "tightly intertwined with the notions of knowledge, power and truth" (Foucault 2001; McIlvenny, Zhukova Klausen, and Bang Lindegaard 2016, 10). Foucault goes on to argue that certain meanings become "hegemonic"—that is, they are generally regarded as "truth" and are (re)produced and consolidated at an institutional level—while other perspectives are marginalized. Consequently, particular ways of thinking can enable or hinder specific sets of practices. In Germany, for instance, it is widely acknowledged that human activities have influenced climate change—a perspective that legitimizes actions such as public spending on bicycle lanes or renewable energy plants. At the same time, such a line of thinking discourages other activities, like the building of coal-fired power plants or the development of land that would contribute to urban sprawl.

Importantly, discourses cannot be divorced from their particular contexts. This point is particularly salient when looking at the postwar histories of the two German cities whose climate policy is studied here. Münster's location in North Rhine-Westphalia, which was a state of the Federal Republic of Germany (FRG) before German reunification in 1990, and Dresden's in Saxony, formerly part of the German Democratic Republic (GDR), a Soviet satellite state, point to different historical trajectories. In the West German FRG, an engaged environmental movement began in the 1980s and continues to this day, while in the GDR, environmental politics did not play as large a role. Moreover, policymakers and citizens in Münster have been a part of a democratic system since the end of World War II, whereas—as interviews with politicians revealed—skepticism

towards current political structures can still be seen in large parts of the former GDR[1] (Rehberg, Kunz, and Schlinzig 2016, 32).

**Polarized Attitudes in Münster and Dresden**

Comparing the discursive settings (such as city councils) of Münster and Dresden reveals some interesting observations: first, the number of energy and climate-change policy proposals in Münster is significantly higher than in Dresden; from 2009 to 2013, there were 42 submissions in Münster compared to 25 in Dresden. Second, political actors in Münster are more likely than their Dresden counterparts to approve proposals in accordance with national climate strategies. Several proposals have been approved unanimously in Münster, including requests for an urban nuclear-free energy supply, the construction of wind-energy plants within urban spaces, and participation in the European Energy Award, an international certification process for municipalities engaged in climate politics. In Dresden, however, urban development decision makers rejected these same proposals. As summed up by the head of Dresden's Environmental Agency, "There is no real political force seriously pushing these topics forward."[2]

Climate change mitigation and adaptation may be a part of urban development discourses in both Münster and Dresden, but interviews I conducted revealed that decision makers certainly do not value the relevance of these issues uniformly. In Dresden, although an energy- and climate-protection strategy ("Integriertes Energie- und Klimaschutzkonzept") has been in place since 2013, "the concept of climate protection has not made its way into the realm of urban development and planning."[3] Conversely, councilors across parliamentary groups in Münster emphasize that debates around energy and climate issues "are, of course, very well represented."[4] They assert that "there was not only awareness, but also the will to take initiative right from the outset."[5] In short, although climate issues "also belong to urban politics,"[6] they are not at the forefront in Dresden, while in Münster, addressing these topics is a matter of course.

1 Interview, SPD Dresden, 18 October 2016.
2 Interview, Environmental Center Dresden (Umweltzentrum) 1 December 2016.
3 Interview, Umweltzentrum, 18 October 2016.
4 Interview, FDP Münster (Free Democratic Party), 10 November 2016.
5 Interview, CDU Münster (Christian Democratic Party), 3 November 2016.
6 Interview, Environmental Agency Dresden (Umweltamt), 1 December 2016.

The German federal government has emphasized the importance of establishing municipal organizational structures to advance the implementation of energy and climate policy objectives (BMU 2012, 2; Deutsche Energie-Agentur 2011, 6). In Münster, a Climate and Energy Coordination Office (Klenko) has been in place for several years; it is responsible for planning, coordinating, and initiating energy and climate protection measures for the entire urban area. In Dresden, a Climate Protection Office (Klimaschutzbüro) does exist, but interviews with local decision makers indicate that it yields little influence on decisions related to local urban development policies. In fact, while this office is meant to be in charge of developing climate protection measures, it has thus far failed to implement its ideas within the city administration, or to translate ideas into political practices. The office was renamed "Climate Protection Staff" (Klimaschutzstab) in 2016. The rebranding has not yet resulted in practical changes, but it nonetheless points to ongoing shifts in policy prioritization.

## Discourses and Decision Making

These contrasting contexts and perspectives do not only influence the types of climate policy decisions that are enforced in each city. They also affect people's views on the decision-making process: both the public's perceptions on what the role of decision makers should be, but also the degree to which decision makers consider themselves able to act. In Dresden, perceptions of climate issues are heterogeneous. However, actors who have dominated municipal politics in the last few years seem to be of the opinion that "it is delusional to think that we could have a really significant impact on the climate."[7] As a result, these actors also see themselves as having very little scope for action. In Münster, on the other hand, the image prevails of the "city as an engine" and a driving force that can provide "support and initiative" (Stadt Münster 2009, 9). The interviewees of all parliamentary groups perceive the commitment of a city towards climate policy as very important. Particularly in Münster, actors feel a sense of responsibility in terms of the financial stability of the city: "If we do not step up and say, 'Come on, we can do it,' who else will take the initiative?"[8] Urban documents often highlight the historical continuity of climate policy activities. As far as climate policy has been established as a political agenda since the 1990s, urban actors in Münster

7 Interview, CDU Dresden, 19 October 2016.
8 Interview, CDU Münster, 3 November 2016.

often emphasize the long tradition of political engagement with climate change, which has become part of the the city's identity. This seems to compel continuous action and legitimize further measures (CDU Münster 2014; Stadt Münster 2009).

These divergent perceptions of responsibility and scope for action are also apparent in the ways in which urban actors position themselves with regard to different policy instruments. The German federal government emphasizes that a stronger engagement with climate protection beyond national laws and regulations is important. Although urban development actors in Dresden do adhere to these laws—such as when new houses are built—skeptical and distancing language dominates the discourse. Urban development actors more often highlight potential problems with federal policy than positive aspects. For instance, the CDU and FDP, who were in power at the municipal level until 2016, have called for a restrained and rather moderate implementation of energy and climate programs (CDU Dresden 2014, 6). They warn that the overambitious aims of the federal government "cannot just be forced through at will without running the risk of overstraining the market participants financially and mentally" (Landeshauptstadt Dresden 2013, 19). When urban decision makers discuss the implementation of climate measures in accordance with national strategies, they emphasize potential problems, such as the need for "extensive investments" and "a lot of time and money" (Landeshauptstadt Dresden 2013). The CDU and FDP have been especially vocal in calling for Dresden to follow its own path, which appears to include, for example, demands to stop rather than support the extension of renewable energy. By contrast, in Münster, additional policy instruments have been established at the local level, which actually go beyond national requirements. Decision makers have introduced local heat-insulation standards and a list of ecological construction criteria, which have been enforced by urban development agreements despite going against the interests of investors. They also participate in competitions and certification processes, which has made strong climate policymaking an important part of the city's image.

Additionally, the German federal government requires urban development decision makers to guide and motivate "their" civil society towards the "right" conduct and to strengthen "general acceptance towards the need to adapt to climate change" (BMVBS 2010, 8). People in Dresden perceive such ambitions negatively, however. Here, the extent of urban development actors' attempts to guide their citizens to take up further climate-friendly measures is the distribution of information brochures. Instead, deci-

sion makers in Dresden prioritize protecting citizens' general freedom of choice: "[W]e shouldn't control the citizens so excessively . . . when there is no need for it."[9] In Münster, on the other hand, actors believe that real improvement in terms of climate protection necessitates "action from the whole population of Münster" (see, e.g., Stadt Münster 2009).

## Conclusion

These brief insights into the different discourses and practices related to the implementation of climate policies in Münster and Dresden reveal two important aspects. First, climate policy discourses cannot be divorced from their particular contexts. Although federal laws and guidelines provide a framework for policymaking, local and historical forces shape how actors in different cities perceive and take action against climate change.

Second, perceptions regarding climate policies and the role of urban development actors create a specific scope for action, which influences how ideas and policies are implemented. In other words: "Just as a discourse 'rules in' certain ways of talking about a topic, defining an acceptable and intelligible way to talk, write, or conduct oneself, so also, by definition, it 'rules out,' limits and restricts other ways of talking, of conducting ourselves" (Hall 2006, 72).

Climate policymaking in Dresden and Münster demonstrates the interplay between discourses and practices. Decision makers in Dresden see their scope for action as very limited with regard to global climate protection, and assess national objectives as well as instruments for the implementation of climate policies as "overly ambitious" or "dirigiste." They therefore ascribe neither high significance nor priority to the political realm of "climate" compared to other issues within urban development politics. This is apparent, for example, by the limited institutional basis for climate issues in Dresden. Münster, by contrast, is characterized by long-standing environmental activities and has established a wide spectrum of local instruments to embed climate policies within urban development politics. At the same time, urban development actors in Münster use the successful results of competitions and certification processes to enhance the image of the city.

9 Interview, CDU Dresden, 19 October 2016.

The examples of Dresden and Münster illustrate that climate policies are not just directly transposed into implementation; rather, they are renegotiated, altered, and sometimes even rejected. A discourse-theoretical perspective sheds light on how different notions and perspectives are produced with regard to climate change, the role of urban development actors, and ways of dealing with policy instruments. It thus points to the contested and contradictory nature of climate policy aims.

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Nir Barak

# The Limits of Techno-management in Transitioning to Green Cities

## Introduction

The challenge of creating a green city is enormous. But often, the complex social and political processes that are involved in making a city green are reduced to techno-managerial efforts. These depoliticize a highly political process, often upholding contemporary socio-environmental inequalities that are at the heart of the environmental crisis—and usually an outcome of unsustainable urban patterns. What's more, this depoliticization tends to limit our acknowledgement of urban environmental ethics in the transition to green cities. Technical and managerial solutions are highly significant, yes, but they do not encompass all the political aspects involved in such a transition. Since a city is primarily a political entity, and not solely a "physical container" that needs improved management, how it transitions to sustainable patterns should also focus on the way that environmental issues are socially and politically framed, and on the values that drive the city's policies. In addition, a public-civic discussion should assess the city's contemporary political, social, economic, and cultural practices that may lie behind unsustainable urban patterns or, conversely, be more conducive to environmentally friendly policies.

## Cities and the Limits of Techno-management

Since the late 1980s, international and supranational organizations have identified cities as key actors for sustainable development. Since then, dozens of city-based alliances and organizations have taken the lead[1] based on a shared conviction that cities have the ability to "get things done" (possibly indicating disappointment with previous state-based initiatives). A recent example is the commitment to adopt, honor, and uphold

1 The establishment of ICLEI (International Council for Local Environmental Initiatives) in 1990 marks the initiation of various regional and supranational city-based agreements and networks. For example, the UN Earth Summit (1992) advised that Agenda 21 be implemented by local authorities; this inspired the European-based Aalborg Charter (1994); the United States Conference of Mayors of 2005 initiated the Climate Protection Agreement, which "strives to meet or exceed Kyoto Protocol targets"; C40 (2005) is a network of the world's megacities taking action to reduce Greenhouse Gas (GHG) emissions; The Covenant of Mayors for Climate & Energy (2008), an EU-based initiative, aims to support the EU's objective of 20 percent $CO_2$ reduction by 2020; The Compact of Mayors (2014) is another global coalition of mayors that have pledged to reduce GHG emissions.

Illustration of New York. Image by Sara Cwynar.

the goals of the Paris Climate Accord by more than four hundred American cities, despite the fact that the federal government decided to withdraw from the agreement. In this regard, it is important to assess Barber's argument that in comparison to *dysfunctional* nation states, cities are better suited to tackle global problems ranging from the trafficking of guns and people, to climate change and terrorism. This argument is justified by appealing to the nonideological aspects of city politics and by emphasizing the "preference (of mayors) for pragmatism and problem-solving over ideology and principled grandstanding . . ." (2013, 90). And indeed, many cities throughout the world are making an effort to respond to global environmental issues, striving for greater energy efficiency of buildings and infrastructure; improved water quality and management; more environmentally friendly waste treatment practices; better and "smarter" transportation solutions to clogged and polluted cities; and projects aimed at providing open spaces and parks. All these, and more, are utilized to foster safer, healthier, resilient, sustainable, and more efficient cities.

However, we should be wary of any simplistic notion of "problem solving" since it frames the complex process of transitioning to a "green" city as one comprising mere technical and managerial efforts. While techno-managerial strategies are important, they often rely on the assumption that environmental considerations, such as those mentioned above, are independent of social and political relations. This is highly problematic, given that such a perception may uphold and perpetuate socioenvironmental inequalities and further limit considerations of urban environmental ethics, as I show in my analysis below. In addition, a techno-managerial approach often rests on the misleading assumption that we all understand environmental problems (and their causes) in the same manner, and that we all agree on how to solve them. As this edited volume indicates, however, the range of views, interests, and visions for the sustainable city is multifaceted, varied, and highly contested.

Lastly, a techno-managerial approach reduces cities to "physical containers" or "built environments" that require improved management. Rather, the city is a complex economic, social, cultural, and political system; as such, its most important characteristic is that it embodies a political community. Despite its social diversity, a city is not an aggregation of individuals, but rather a "demos" that shares a particular form of urban pride, identity, and ethos, which differs from place to place (Bell and de Shalit 2011). Cities "behave" differently in the way they interpret social and political matters, and in the policy measures they take to address these issues (Löw 2012). In this way, the city—with its place-based attachments, public spaces, and civic memory—is not simply an administrative sub-unit of the state, or just a "built environment." Rather, it constitutes a thick political community with certain shared values, norms, and forms of conduct, of which sustainable/unsustainable urban patterns are an integral part. In short, there's something about being a Münchner, a Londoner, or a New Yorker that is more than a symbolic identity. Context influences the way in which individuals understand themselves and the way they approach public-political matters including matters of urban sustainability.

**Beyond Techno-management: Social and Political Considerations of Urban Sustainability**

Though techno-managerial approaches and strategies are valuable in the transition to green cities, they lack the scope and ability to address two vital issues: socioenvironmental considerations and environmental ethics, and socioeconomic injustices.

While in previous years creating green cities (or, "green urbanism") was somewhat limited to designated places of "urban nature" (e.g., parks, restoration projects), contemporary technologies today have allowed us to move beyond such confines: for instance, with green roofs and living walls. This gives rise to planning approaches that include ecological restoration, and the replenishment and nurturing of natural processes that are inherent in cities—or rather, processes that have been interrupted by the production of cities, such as flows of rivers, or natural purification of air and waste.

These environmental policies are valuable because they not only instrumentally benefit ecosystem services, but also call into question the city's socioenvironmental norms and values. This form of green urbanism challenges our erroneous intuition that when we

are in the city, we are no longer in nature, heightening our awareness that the built environment is embedded in a natural environment and nature permeates the city. This implies that "respect for nature" and environmental values in general are integral to a city's urban culture and are not just limited to landscapes beyond the city's boundaries. Recognition of these values also places emphasis on and repositions the issue of environmental ethics—championed primarily by Aldo Leopold and Rachel Carson—as an emerging urban concern.

Fostering environmental awareness and literacy is often considered a nonurban practice and when conducted in the city, it often relates to "patches of nature." But such practices should be extended to the "damaged and blemished" urban areas, which are just as much a part of a city's "nature" as parks or gardens are. If, as Leopold (1986, 292) argues, "the weed in a city lot conveys the same lesson as the redwoods," then enhancing city-nature interrelatedness requires learning that "same lesson" as a civic community, and applying this knowledge in our interactions with the city. This type of collective introspection is not limited to greenways, parks, sidewalks, and central plazas, but embraces the city's civic culture and socioenvironmental norms (Barak 2017). Green urbanization, however, is frequently narrowed either to the aesthetic dimension of desirability of an urban greenery or simply short-circuited by applying cost-benefit analyses and by appealing to "best practice" policies learned from other cities. This is at the expense of engaging in a critical public discussion regarding the desired socioenvironmental values and practices within a city's community.

This urban environmental ethics agenda, however, cannot be held independently of the city's socioeconomic and political realities. Impoverished and disadvantaged areas of cities are frequently more susceptible to environmental harms, such as exposure to toxic waste, degraded environmental conditions, and a lack of environmental amenities. In such areas, urban development and greening policies that are implemented can have a twofold consequence: though the environmental harms are alleviated, they are frequently followed by social consequences that may be summarized as a pattern of "green gentrification." For instance, a neighborhood or district that has undergone green retrofits, such as urban parks, bike lanes, and access to public transport—or a city that subscribes to environmental sustainability—may lead to increased demand for property, higher housing and living costs, and eventually to the displacement of disempowered and disadvantaged populations. While public policy can adequately

address this matter by implementing rent control, public housing, and more equitable development policies, these factors are often excluded from the planning process as a result of the uneven political and economic power of private investors, real estate firms, and economic elites in comparison with the local populations (Gould and Lewis 2016). Thus, any apolitical account of urban sustainability founded on supposedly value-neutral techno-management is misleading and may serve to produce and perpetuate existing inequalities.

These problems cannot, and never were intended to, be addressed by techno-management. Acknowledging that environmental considerations are intertwined in the social processes of the city would mean that conflating techno-managerialism with sustainable urbanism is at best insufficient to address the full range of environmental and societal issues facing cities, and at worst intentionally misleading and blinding. More explicitly, trying to disassociate social and political issues from the practice and general orientation of urban sustainability empties environmentalism of its political goals such as equality, democracy, and the protection of human rights. Achieving the sustainable city cannot and ought not be limited to blind faith in "problem solving"; we need to engage the city's community in a public discussion about the city's social equity, and the political values embedded in environmental policies, and then use political action to remedy its undesired consequences.

## Towards a City-Based Green Vision

In summary, the problems outlined above indicate that a city's political, social, and economic institutions and the values guiding them correlate with the degree of sustainability of urban practice. The first issue highlights mostly the city's culture and its socioenvironmental values, while the second highlights socioenvironmental injustices in cities and the political values embedded within. There are no simple answers or objectively "correct" responses to these issues. As indicated above, the city is not simply a physical container but rather has its distinct social, political, and cultural life to which (at least) some sustainable/unsustainable urban practices are integral. Therefore, although there are common challenges and universal concerns, the challenges of urban sustainability can best be addressed by establishing new arenas for city-based deliberation. These deliberations will not yield a unified global vision of the sustainable city, but will enable the

city's community to better address the particular causes behind unsustainable patterns, to shape solutions accordingly, and to foster new patterns of ecological citizenship in cities.

The ability of cities to "get things done" indeed marks them as leaders in the global transition to sustainable patterns. This should not be limited to technical problem solving but should extend to a more profound form of urban politics of sustainability.

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# New Green Visions

Vanesa Castán Broto

# Green City Promises and "Just Sustainabilities"

## Introduction

Visions of green cities as engines of sustainable economic growth are misplaced. Green cities are not just about offering green investment opportunities such as environmentally friendly construction, sustainable transport, and waste management solutions. Rather, they also hold the potential to advance urban futures that engage with the needs of citizens, address questions of social and environmental justice, and work with existing urban natures. Achieving this new green vision means recognizing and building on existing arguments about urban sustainability: First, sustainability is not about incremental progress, but about the radical transformation of current urban development principles. Second, the challenges of environmental sustainability are interlinked with the struggle for social justice, and achieving sustainability often entails high political costs. Third, delivering green cities requires recognizing the specific socioecological context of urbanization, rather than imposing particular development models on cities.

## Green Cities Today: The Need for Radical Transformation

The last three decades of research on sustainable development have shown continued efforts to deliver sustainable agendas at the local level. This body of work highlights the immense effort, political will, and financial investment still required to activate green transformations in any part of the world (Simon 2016), and reveals that a vast range of activities and actors could potentially bring about sustainable transformations.

Yet, there is growing skepticism towards radical agendas of transformation. As other pieces in this volume show, greening the city has become a way to create new economic opportunities. In this discourse, "green" refers both to the interlocking of natural features in cities through urban planning and design, and the possibility of using such green measures as engines of economic growth (Telma 2016). Coupling environmentalism and economic development is, for the most part, a conservative discourse in which green cities emerge as a tool to further the green economy.

Bikers in the metropolitan region in Santiago, Chile, where the rising interest in sustainability initiatives has also been used as a marketing device. Photo by Jose Luis Stephens/Shutterstock.com.

Such a perspective leaves little room for maneuver: in the best of cases, green cities entail little more than the use of sustainable technologies and resource-efficiency measures. In the worst cases, advocates use green labels as a mere marketing and posturing device. For example, scholar Martín Sanzana Calvet has tracked how an array of green-city-inspired phrases and images is used to sell houses in gated compounds in the peri-urban areas of Santiago de Chile. Sellers routinely provide misleading information on the environmental performance of the developments (Sanzana Calvet 2016). Developers adapt to new sustainability discourses without fundamentally shifting construction practices. These forms of green washing do not advance sustainability.

Delivering sustainability requires dealing with wicked problems in which environmental planning objectives become moving targets: before achieving any particular sustainability outcome, new sustainability challenges have already emerged. Simon (2016) and colleagues highlight that cities exist within larger political and administrative regions and that their transformation towards sustainability can only happen as part of broader transitions towards a sustainable society. Achieving a green city is not merely a question of delivering specific sustainability projects in transport, housing, and services; it is also about

catalyzing broader cultural changes and fostering the development of institutions directed towards reimagining society and the economy. Green efforts should look at the city as a site for radical material and cultural changes, where sustainable visions of a green society can be enacted for the benefit of deeper cultural, institutional, and social transformations.

In cities such as Lagos (Nigeria) or Durban (South Africa), we see concrete examples of how changes to society and governance can be harnessed to deliver a green city in a relatively short period (Simon 2016). Durban's efforts to mainstream climate change action, for example, have demonstrated that sustainability action and social development can be advanced in tandem (Roberts 2008).

**Linking Environmental Sustainability and Social Justice**

Embedded in the need for radical transformation is the issue of social justice. In an effort to address the inequality that has emerged with sustainability efforts, geographer Julian Agyeman proposes a radical agenda of change to deliver what he calls "just sustainabilities" in cities. The discourse of just sustainabilities prescribes four policy principles for local sustainability action: addressing well-being and quality of life; meeting the needs of present and future generations; enabling justice and equity in terms of recognition, process, procedure, and outcome; and living within ecosystem limits (Agyeman 2013). An evaluation of the implementation of these four principles in more than two hundred cities around the world showed that local actors—including governments, businesses, and communities—incorporate different principles of just sustainabilities in current practices of environmental planning (Castán Broto and Westman 2017). However, initiatives that incorporate the four simultaneously are extremely rare. The biggest deficits in implementing socially green policies relate to the lack of participation and recognition of marginalized voices, and to real efforts to take into account the limits of ecosystems in public policies and environmental planning.

I would advocate cautious optimism about the possibilities of delivering just sustainabilities in urban areas (Castán Broto and Westman 2017). Empirical studies of climate change governance in different cities suggest that the results of experimentation are ambiguous and depend on how initiatives unfold in context (Bulkeley, Castán Broto, and Edwards 2015). However, there are good examples of initiatives that put participation and recognition at the center of achieving sustainability.

A well-known example is the long-standing Orangi Pilot Project (OPP) in Karachi, Pakistan. Initiated by Dr. Akhter Hameed Khan in the 1980s, the project involved local residents in solving the problems in their neighborhood. Hasan (2006) explains that participatory research led to the identification of four major challenges: sanitation, employment, health, and education. In 1988, four independent programs were developed to address these issues, one of which was the Orangi Pilot Project Research and Training Institute (OPP-RTI). Its most important program is a low-cost sanitation program that builds on the idea of partnerships between people and the government, assuming that "communities can finance, manage and build internal sewerage development provided that they are organized and supported with technical support and managerial guidance" (Hasan 2006, 451). Those "internal" developments (sanitary latrines inside homes, underground sewers in lanes, and neighborhood collector sewers) are then linked to publicly financed external infrastructures such as trunk sewers and treatment plants. More than two million people have benefited from the program, not only in Orangi but also other settlements in Karachi, and cities, towns, and villages across Pakistan (OPP-RTI 2018).

An important feature of the low-cost sanitation program is that the design of the sanitation system followed existing sewerage channels, which have developed more or less informally following natural drainage channels (Hasan 2006). The features of urban nature were able to support sustainable systems that have improved people's well-being, and living conditions in the neighborhood in general.

In the case of OPP-RTI, harnessing local knowledge was key to delivering a successful, large-scale program that put people's basic needs at the center of achieving sustainable development. There is, however, a political cost to socially-engaged sustainable development. When Perween Rahman, long-serving director of the OPP-RTI, was assassinated in 2013, presumably because of her land-rights activism, Professor Diana Mitlin wrote:

> . . . their OPP's vision of the city was one based on justice—in the last few years they had been working with communities to support their mapping of their homes. These were communities whose longstanding residency was under threat. Powerful groups sought to evict them and take over their land for their own gain. OPP both studied the problem and worked with these communities to improve their mapping skills, enabling them to advance their legitimate claims to their homes with the authorities. (2013)

Residential areas near a lake in Bangalore, India. Photo by SNEHIT/Shutterstock.com.

The example shows that delivering urban sustainability requires a strong commitment to community participation and justice, sometimes at great risk to those who promote them. Further, it reveals that we cannot develop green cities by treating the city as a blank canvas. Initiating action first requires a case-by-case assessment of existing structures and institutions within a city, to determine their capacity for realizing transformative, environmentally respectful, and socially progressive visions. Making something "green" is not just about covering unused spaces with vegetation, or even about preserving environmental quality—it is about advancing a political movement for radical change to transform human relationships with the environment and resources as the only means to redress the gross inequalities that threaten humanity's and the Earth's future.

## Understanding Sustainability Action within Socioecological Contexts

Alongside purpose-built green spaces, cities contain an array of ecosystems that may host, with or without planning, different forms of vegetation and wildlife. These may be areas of recreation, social interaction, or innovation. Such urban ecosystems can be valuable, not least because urban populations may be dependent on them. People living in cities may, for example, play key roles in protecting green areas and water resources. In Bengaluru, India, communities have traditionally managed a network of water tanks of immense ecological importance. In the last half century, however, urban development has increasingly threatened this blue network (Unnikrishnan and Nagendra 2018). Ben-

galuru today depends on long-distance water transfers that create political conflict, and on a dense network of private boreholes that are depleting the city's water resources. Local scholars see the restoration of the existing community-managed network of water tanks as a more sustainable and socially just alternative for managing water resources. Citizens have turned towards different forms of activism to ensure the protection of water resources (Nagendra 2016).

Cities are vital in facilitating key processes of resource management that may hold the key to supporting an increasingly urbanized world population. Among urban development planning scholars, green city ideals are promoted hand in hand with people-oriented ideals about cities' futures. Since about one-sixth of the world's population lives in urban areas with limited access to basic services, such scholars suggest that greening activities in cities in less developed regions should provide tangible opportunities for the poorer and more marginalized sectors of the population.

The informal sector—that sector of the economy not monitored or taxed by formal institutions—is integral in managing urban resources (Guibrunet and Castán Broto 2016). Scholars argue that we cannot achieve a green transition without the incorporation of a highly gendered informal economy sector, from street vendors to waste collectors (Brown and McGranahan 2016). In countries as diverse as Brazil or India, there are millions of waste pickers who facilitate the reuse and recycling of approximately 20 percent of cities' waste worldwide (WIEGO 2018). Protecting waste pickers is not only a humanitarian or labor-rights issue; it is also a means to improve the efficiency of urban waste flows. Overall, urban natures are as integral to the city as citizens are to the preservation of such diverse urban natures.

Yet, reports of the green economy rarely recognize the informal sector, and current green city models neither acknowledge the importance of the informal economy, nor support it—even though, ultimately, greening the informal economy would provide an opportunity to incorporate this economic sector into the global economy. The consequences of doing this are uncertain, however, particularly for those who rely on local markets to maintain their businesses. We need research that looks at the operation of local economies. In particular, we need to understand which green development models benefit informal sector workers, and which ones displace them or destroy livelihood opportunities. Green cities that are implemented at the expense of informal economies

miss an opportunity to improve the performance of existing businesses; at the same time, they potentially cause further hardship to citizens already operating in precarious conditions. We should design context-conscious green cities with full recognition of existing economies, formally sanctioned or not. Such a green city would prioritize the concerns of those living in the city and create opportunities to deliver mutual benefits for both the environment and citizens.

## Conclusion

Protecting urban natures requires recognizing that cities coevolve with ecosystems. Making cities green is akin to integrating sustainability into everyday practices, and promotes fairer futures for all. This is not a call to change people's lifestyles. Rather, sustainability pushes us to recognize cities as dynamic arrangements of meanings and things where recognition of the existing landscape and the multiple forms of life it sustains comes before the implementation of rigid management systems that deliver equally rigid visions of the green city. This also constitutes a call for the reversal of familiar, but ineffective, forms of techno-economic planning because they lack engagement with the actual demands of a changing urban society and the ecological systems that sustain it.

Cities have created a global climate of optimism about the prospect of delivering on climate change objectives. This is not because cities hold some kind of silver bullet or a technological solution that can be translated into best practices to be implemented in every corner of the world. Rather, cities hold the key to hope because they offer a world of endless possibilities, and at least some positive outcomes are likely. Cities and broader urban agglomerations bring together diverse resources and groups of people that have the capacity to reimagine the urban environment in which they live. Cities are places in which environmental action is realized in concrete projects that can be presented, promoted, and appropriated in different contexts.

However, action in cities does not occur in a vacuum. Instead, it builds on specific urban histories. Thus, acting in any one city requires recognizing the specific configurations of urban spaces and how they are lived. Action in cities also requires acknowledging the material and symbolic permanence of urban spaces, as much as the ways in which they

change beyond recognition for anyone other than those who live in—and transform—those spaces. Cities enable citizens to interact with their environment and forge urban landscapes. And cities offer the opportunity to establish institutional systems of accountability that allow for visualizing systems of provision and how they are managed. Green cities can only emerge with reference to the landscapes of urban life, and their entanglement with history and cultural practices. Sustainable transformations thus depend on deeply rooted questions of justice, and how they unfold in specific contexts of action.

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Martin V. Melosi

## The Emerald City Was Not a Green City

Sustainable city researcher Timothy Beatley wrote:

> People historically have perceived cities as destructive of nature, gray and natureless, and separate from natural systems. Green urbanism is a movement that rejects that perception and argues that cities can be environmentally beneficial and restorative, can be full of nature, and are inherently embedded in complex natural systems. (2004, 619)

The concept of a green city—or green urbanism—is quite modern. Concepts like sustainability, or resilience, are often used in a definition of greenness, although there is substantial contention over the idea of what "the green city" actually might represent. Beatley went on to ask, "What, more precisely, does green urbanism do?" It can encourage city building "in harmony with nature," and it can minimize the ecological footprint (619–620).

Historically, certain cities or urban places have exhibited some of those elements ascribed to "greenness." Native American communities, while not cities in a conventional sense, often stressed compatibility between nature and human activity. But modern understandings of ecology, ecological science, and the global impacts of environmental change are necessary to design cities that are compatible with the natural world. Such types of knowledge only began to emerge in the West around the mid-twentieth century. Different times also call for different degrees of urgency.

An interesting example of the limited perspective on urban greenness in earlier eras is the portrayal of the Emerald City in L. Frank Baum's children's novel, *The Wonderful Wizard of Oz*, first published in 1900. In this case, a literary work can help demonstrate how perceptions of cities and "greenness" at the turn of the twentieth century contrast with more modern environmental views.

Born in Chittenango, New York, in 1856, Baum was the son of a barrel-factory owner. He began his education at home, then attended Peekskill Military Academy, but dropped

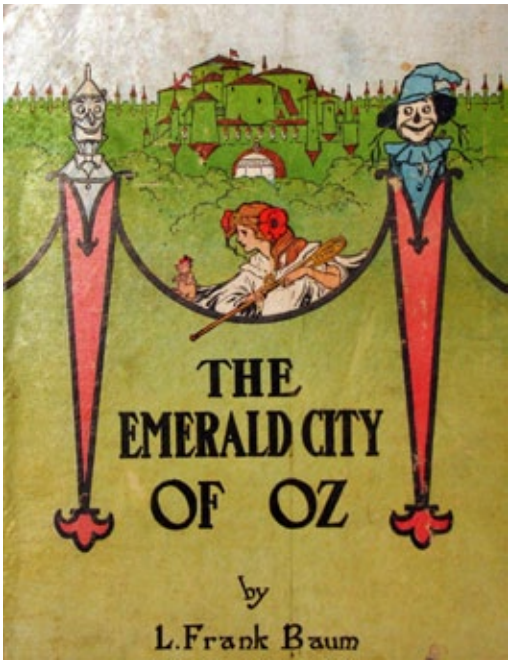
out because of a health condition and never completed his schooling. He tried acting and writing for the stage, newspaper journalism, and business; however, he turned to writing for children in his forties. Baum published his first collection for young readers, *Mother Goose in Prose*, in 1897, followed by the top-selling *Father Goose, His Book,* in 1899. *The Wonderful Wizard of Oz* came out the next year, recounting the story of Dorothy Gale from Kansas, whose house is carried into the land of Oz by a tornado. In attempting to find her way back home, she joins forces with a scarecrow, a tin woodman, and a cowardly lion. Together, they journey to the Emerald City, the home of a great wizard whom they believe can fulfill their wishes. The journey is treacherous, especially because a wicked witch wants revenge on Dorothy, whose house fell on and killed the wicked witch's sister. According to one biography on Baum (A&E 2016), the book so captured children's imaginations that Baum went on to write several sequels and transformed the first book into a play for Broadway in 1902.

In the introduction to *The Wonderful Wizard of Oz*, Baum explained why it was important to make children's stories more relevant to the times in which they were written, giving us a glimpse into his approach to writing the book. It also sheds light on why he drew upon his own knowledge of cities and "greenness" in his own time in placing the Emerald City at the center of his story. As he stated:

> Folklore, legends, myths and fairy tales have followed children through the ages, for every healthy youngster has a wholesome and instinctive love for stories, fantastic, marvelous and manifestly unreal . . . Yet the old-time fairy tale, having served for generations, may now be classed as "historical" in the children's library; for the time has come for a series of new "wonder tales" in which the stereotyped genie, dwarf and fairy are eliminated, together with all the horrible and blood-curdling incidents devised by their authors to point a fearsome moral to each tale. Modern education includes morality; therefore the modern child seeks only entertainment in its wonder-tales and gladly dispenses with all disagreeable incidents. (1956, ix)

Though Baum added that his story was written "solely to please children of today," some adult readers many years later saw allegory behind the fairy tale. The best-known observation, "The Wizard of Oz: Parable on Populism," was written by New York high-school teacher Henry M. Littlefield for *American Quarterly* in 1964. Although Baum never lived in Kansas, his roots in the American Midwest were strong. His political support for pop-

ulist (and democratic) presidential candidate William Jennings Bryan, who supported farmers' rights and favored adding silver to the gold standard, ran deep.




Cover of L. Frank Baum's *The Emerald City of Oz* (Chicago,IL: Reilly & Lee Co., 1910). Illustrated by John R. Neill [public domain], via Wikimedia Commons.

Littlefield saw in Baum's work not just a fanciful fairy tale, but one that suggested an allegory of late nineteenth-century America driven by the populist cause of Midwestern farmers and their supporters. As a reform movement meant to improve the lot of farmers and their lifestyle, populism tended to criticize city life as anti-agrarian and antagonistic to the countryside. The rural-urban tensions of the late nineteenth and early twentieth century are at the heart of the book, its characters, and the various settings he describes—including the Emerald City. The power of the Emerald City was built on the fundamental hypocrisy of a place that only looked sparkling green because of the spectacles you wore. (This is reminiscent of "greenwashing" today; that is, marketing a product as environmentally friendly when it is not.) Baum on several occasions contrasted the city—with its power and wealth (and in some cases, its protection from the outside world)—with the hostile lands of the Wicked Witch of the West, the forest full of wild animals, and even dry and desolate Kansas itself. He portrayed the Emerald City as a safe haven (carefully planned) from a variety of external threats, suggested as uncontrollable Nature. This image does not explicitly parallel specific concepts of green urbanism, such as renewable energy, zero waste, water catchments, biodiversity, sustainable transport, good public spaces, and so forth, but it does suggest a parallel with a modern sustainable city as a community that is beneficial to humans, if not the environment per se.

Littlefield could not prove that Baum intentionally built this allegory behind the veil of the children's story, but his observations influenced numerous scholars, who found

the Littlefield assessment a very useful way to teach populism and nineteenth-century America in their classes. Historian Richard White (2016) has suggested a slightly different pathway for evaluating the book. In his view, Baum may have been more interested "in proposing an alternative to Populism," with the Emerald City taking inspiration from Chicago's White City, which Baum visited frequently. The White City of the 1893 World's Columbian Exposition was composed of neoclassical buildings, illuminated by electricity, and filled with exhibits. Outside the gates, there was a midway where visitors could ride the world's first Ferris wheel. The White City was a technical wonder and a consumer paradise, but not really a stand-in for what Baum described as a place that served as protection from the outside world. The glitz and glamour of the White City, however, was not unlike the Emerald City's charms (White 2016, 868–71).

Dorothy was the everywoman from Kansas. The scarecrow, who sought a brain from the wizard because he felt inferior to others, represented the farmer. Baum portrayed the scarecrow as a bright, wily thinker with an inferiority complex. Carrying the allegory further concerning late nineteenth-century archetypes, the tin woodman was once human, but was bewitched and became an apparent hollow metal shell without a heart. The narrative shows time and again the compassion of the tin woodman—a product of industrial dehumanization. Littlefield viewed the cowardly lion as a frightened figure in the political jungle (in White's view, perhaps populist William Jennings Bryan)—one who needed simply to regain the courage that had always been there in order to attain great leadership skills. This group represented a broad cross section of Americans beset by the oppressive economic and political powers of the industrial age. Littlefield found allegory in almost every aspect of the story, from the yellow brick road (the gold standard) that takes Dorothy and her friends to Oz, to the wicked witches (natural and governmental forces that threatened workers, farmers, and everyone else). The wizard himself—a former circus balloonist from Nebraska who also landed in Oz—is not "all-powerful," but a charlatan with the skills of a Gilded Age politician (Littlefield 1964, 51; see also White 2016, 869–70, and Parker 1994).

When Dorothy and her friends arrive at the Emerald City, the Guardian of the Gates insists that they all put on green spectacles before he can take them to the wizard. "Why?" asked Dorothy. "Because if you did not wear spectacles the brightness and glory of the Emerald City would blind you . . ." the Guardian asserts (Baum 1956, 97). After putting on the glasses, they view streets lined with beautiful houses "all built of green marble

and studded everywhere with sparkling emeralds" (100). They see windows with green glass, a green-tinted sky, people dressed in green clothes—all having greenish skin. Oz later tells the group: "Just to amuse myself, and keep the good people busy, I ordered them to build this City, and my palace and they did it all willingly and well. Then I thought, as the country was so green and beautiful, I would call it the Emerald City, and to make the name fit better I put green spectacles on all the people, so that everything they saw was green" (161). The wizard's equation of his city with the beauty of the green countryside is ostentatious and manipulative on his part. But that he makes the connection between city and country in terms of greenness is at least a faint reminder of modern green cities and their connection to all-encompassing Nature.

In his book *Emerald City: An Environmental History of Seattle* (2007), historian Matthew Klingle picks up on this theme of pretext and duplicity. One source for the title of his book, Klingle states, "is the imaginary metropolis of . . . *The Wizard of Oz*, and like the fictional city, Seattle's allure has been its natural splendor . . . But the history of Seattle, like the history of the West, is not an enchanted romance . . . " (2007, 7). To Littlefield, the deception is wrapped up in the idea that the Emerald City is a substitute for the American nation's capital—a distant government with no time for the problems of the little people (Littlefield 1964, 54). Some would say that the capital was awash in the pursuit of money—greenbacks if you will—as opposed to effective leadership. In a most cynical sense, some people today have touted the value of environmental sustainability as primarily having an economic value or intent. Unfortunately, sustainability as a concept has often been kidnapped by those with only a modest commitment to preserving the environment.

While presenting an image of brightness and greenness, but also linking the Emerald City to deception and greed, *The Wonderful Wizard of Oz* suggests how distant Baum's representation of urban life was from the aspiration of green-city advocates today. There was little interest in substantive change and improvement, sustainable good practices, or attention to nonhuman preservation. The wizard's own admission of trickery does contain an appreciation for "the green and beautiful" countryside, but transferred to the city as an illusion to pacify and impress his people. It is, at best, only concerned with the veneer of life, the surface beauty of the city.

There is no hint of an environmental ethic in Baum's book, nor should we expect one. *The Wonderful Wizard of Oz*, obviously, is not necessarily representative of nineteenth-

century thinking on greenness and cities; however, at the same time, it is more consistent with Beatley's observation that "[p]eople historically have perceived cities as destructive of nature, gray and natureless, and separate from natural systems" (2004, 619). Yet even Beatley's argument overstates the historical case about pre-World War II cities, where anti-smoke ordinances, sanitary reform, and park development were at the very least precursors to green city advocacy. The stark case of *The Wonderful Wizard of Oz* is to illustrate a rather wide gap between thinking about the city and its possibilities to achieve greenness in the past, and the changing framework of recent years. The context and setting at the turn of the twentieth century were very different than today. Environmentalism was linked to resource conservation, or the wise use of resources for the benefit of humans. The modern environmental movement's focus on the intrinsic value of the natural world was a foreign idea then, save possibly John Muir's advocacy of preservation. The park movement in the cities, for example, was an attempt to bring Nature into the urban setting, not to transform the cities themselves to be more in line with natural rhythms. It is the contrast between Baum's view of the Emerald City and modern concepts of greenness that sheds light on both.

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Kate Rigby

## Feathering the Multispecies Nest: Green Cities, Convivial Spaces

How might we reimagine the green city from an interdisciplinary environmental humanities perspective? As a site of more-than-human flourishing and a context for the enactment of bio-inclusive forms of ecological citizenship? With ever more species becoming displaced by the calamitous impacts of anthropogenic global warming, along with other drivers of habitat destruction, do our green cities not also need to become places of welcome to other-than-human, as well as human, refugees? To reconceive the green city as a site of more-than-human conviviality and hospitality, we would need to effect a cultural shift to resituate humankind ecologically, while resituating otherkind (plants, animals, and fungi, but potentially also rivers, wetlands, and woods, for example) ethically. To do this would be to break through the walls of human self-enclosure by enacting what Australian ecophilosopher Val Plumwood has termed cultural practices of "deep sustainability" (2006, 2009).

Cities have historically been conceptualized as places set apart from rural and wild spaces, often demarcated by defensive walls: these were human-constructed sites for the enactment of exclusively human dramas; or at least, dramas in which humans claim all the lead roles (Williams 1985). "O Ur-shanabi," exclaims the Sumerian King Gilgamesh to his boatman in one of the world's oldest surviving documents of urban civilization, "climb Uruk's wall and walk back and forth!/ Survey its foundations, examine the brickwork!/ Were its bricks not fired in an oven?/ Did the Seven Sages not lay its foundations?" (George 2003, 99).

Despite such lines of demarcation, both conceptual and physical, cities have always been, to a greater or lesser extent, multispecies locales. The legendary Sumerian city of Uruk, which was at its peak around 2,900 BCE, is also hailed in *Gilgamesh* as "Uruk-the-Sheepfold," presumably alluding to the presence of livestock within the city walls. Gilgamesh also boasts that these walls enclosed not only the city proper and the temple of Ishtar, but also a clay pit and a date grove, the latter doubtless home to a seasonally shifting collective of birds and insects.

An ecotopian village illustration from a calendar produced by the Save the Ridge group, protesting the destruction of bushland in Canberra, Australia, to create a new highway around 2005. Contributions by Hunderwasser, Tarquin & Graham King. Image courtesy of the Save the Ridge Committee.

Gilgamesh, who had made his fame and fortune by clear felling a far-flung forested mountain and defeating its guardian deity, Humbaba, wastes no words on urban wildlife, however. Nor does he mention the rodents that, in the historical world beyond the text, had come with the storage of grain in agrarian settlements; the cats that followed, eventually making themselves our familiars; nor the dogs that some city dwellers have also kept as coworkers and/or companions since ancient times. This silence is instructive: cities might team with more-than-human biota, including, of course, bacteria, protists, fungi and such, the genomes of which constitute some 90 percent of the DNA that humans carry about on and in their bodies, as Donna Haraway (2007, 3) reminds us. But nonhumans are generally relegated to the background, tolerated only on human terms and in their proper places (Rose and Van Dooren 2012, 16).

The separation of the *polis*—constituted by humans *qua* citizens—from the *bios*—the diverse collectivity of living beings—was arguably exacerbated with the rise of industrial modernity. This separation occurred most tangibly through the exclusion of livestock, the increasing density of the human population, and their growing physical distance from the countryside. But it also happened more subtly through the deepen-

ing of nature-culture dualism, as evidenced in the separation of the "natural" from the "human" sciences in the institutionalization of the modern disciplines of knowledge during the nineteenth century (Serres 1995, 31–32). It was nonetheless precisely during the early period of fossil-fueled industrialization, beginning in Britain in the late eighteenth century, that modern animal welfare and animal rights theories, policies, and practices began to gain ground (Thomas 1983). Many modern cities certainly made provision for those nonhumans that its human denizens have deemed desirable, notably in zoos, parks, gardens, and in the case of particularly pampered pets, in living rooms, and even human beds.

Yet the prevailing anthropocentrism of modern urban society—which engenders a perilous disregard for our biospheric dependencies, entanglements, and responsibilities—in conjunction with unecological technologies and exploitative political economies, has contributed to forms of urban (mal)development that are damaging to many aspects of the *bios*, including vulnerable human bodies. The persistence of this anthropocentric social imaginary of the city can be seen in the eleventh of the UN's Sustainable Development Goals (adopted 2015). This goal envisages a future that "includes cities of opportunities *for all*, with access to basic services, energy, housing, transportation and more" (UN, n.d.), whereby "all" evidently excludes all nonhumans (albeit with the tacit exception of those plants and animals that might be seen to contribute to human well-being).

In her paper on the "sustainability gap" (see Fischer et al. 2007), Plumwood differentiated her depth model of sustainability from conventional constructions of both "deep ecology," with its prioritization of "wilderness" preservation on the one hand, and "shallow ecology," with its privileging of exclusively human interests on the other. Instead, she proposes a mixed framework that reveals how "human-centredness can have severe costs for humans as well as non-humans" (2009, 116). By "human-centredness" or "anthropocentrism," Plumwood is referring to "a complex syndrome which includes the hyperseparation of humans as a special species and the reduction of non-humans to their usefulness to humans, or instrumentalism" (116). It is a syndrome, moreover, in which—as she demonstrated previously in her landmark book *Feminism and the Mastery of Nature* (1993)—human domination of nature has historically been entangled with various forms of social inequity (notably along lines of gender, race, and class). Rejecting what she calls the "pernicious false choice" of the deep/shallow divide,which was first theorized by Arne

Naess (1973), Plumwood argues that human-centeredness also engenders a hazardous "failure to understand our embeddedness in and dependency on nature [and] distorts our perceptions and enframings in ways that make us insensitive to limits, dependencies and interconnections of a non-human kind" (2009, 116).

Insect hotel in the Parc de la Tête d'Or, Lyon, France. Photo by Daderot [public domain], from Wikimedia Commons.

Accordingly, the "cultural work of deep sustainability" proceeds from the critique of conceptual frameworks and social systems that occlude both the agency and interests of nonhuman others, and the ecological services upon which human social and economic sustainability remain dependent. In "Nature in the Active Voice," Plumwood goes on to identify certain forms of writing that might advance this work by providing a space for what she calls an "animating sensibility and vocabulary" (2009, 126), engaging readers imaginatively with other-than-human creative agencies, communicative capacities, and ethical considerability. Here, though, I want to consider how such work might be undertaken beyond the page, so to speak, on the ground, in urban spaces, in the creation of what environmental geographer Steve Hinchliffe (2007, 124–49) has termed "living cities," open to multiple more-than-human presences, as distinct from human-dominated models of urban sustainability.

This line of inquiry leads onto the fertile terrain of a new field of investigation called multispecies ethnography. As Kirksey and Helmreich explain, "[M]ultispecies ethnography

centers on how a multitude of organisms' livelihoods shape and are shaped by political, economic, and cultural forces . . . multispecies ethnographers are studying contact zones where lines separating nature from culture have broken down, where encounters between *Homo sapiens* and other beings generate mutual ecologies and coproduced niches" (2010, 545–6). In their wonderful exploration of the entangled life stories of humans, flying foxes, and penguins in Sydney, Deborah Bird Rose and Thom Van Dooren reimagine the city as a locus of multispecies conviviality, understood as a "kind of being together that is not reducible to shared identities," but rather "a practice of temporary identification with others in a shared place" (Fincher and Iveson 2015, quoted in Rose and Van Dooren 2012, 17). Mindful of the distinct semiospheres—or *Umwelten*, as Jakob von Uexküll (2010) termed them—inhabited by different species, Rose and Van Dooren stress that "'Identification,' in contrast to 'identity,' does not require that we share an essence or even a project, but simply that we are attentive to another's presence, to their way of being in a place." They go on to argue that "[i]n the context of urban planning, conviviality cannot be engineered but it can be both accommodated and planned for. Conviviality thus requires that we make an effort toward inclusiveness, that we endeavor wherever possible to make room for that other in our activities in shared places" (2012, 17).

In their article, Rose and Van Dooren explore what this might mean in the case of the penguins and flying foxes who have determined to nest and roost (respectively) in Sydney's seaside suburb of Manly and in the city's central Botanical Gardens. While they do not offer any specific policy advice here, the multispecies stories they tell both invite and enable more bio-inclusive practices of urban sustainability that respect the interests and agency of nonhuman, as well as human, residents: in this case, a small colony of little penguins (*Eudyptula minor*), who have continued to return to their ancestral breeding site in Sydney's increasingly suburban Manly Cove; and a very large colony of endangered grey-headed flying foxes (*Pteropus poliocephalus*), seeking to make a new home for themselves in the city's parks and gardens, as their bushland habitat has been progressively diminished.

Such ethically, ethologically, ecologically, and anthropologically informed explorations of the particular ways in which humans are, and have always been, becoming-with other species arises in the shadow of mass extinction on an increasingly anthropogenic planet (Rose and Van Dooren 2011): one in which biodiversity conservation cannot be left to so-called "nature reserves" or designated "wilderness areas," but

needs to be undertaken not only on farmland, but also in cities—wherever human lives and livelihoods are entangled with, and especially where they threaten, the lives and livelihoods of otherkind. In this context, the cultural work of deep sustainability in the creation of the green cities of the future needs to extend beyond conviviality to encompass concerted practices of bio-inclusive hospitality.

One example of this is the Chicago-based "Migration and Me" program. An initiative of the "Faith in Place" organization,[1] which seeks to inspire "religious people of diverse faiths to care for the Earth through education, connection, and advocacy," this project is designed to link socioeconomically disadvantaged African-American and Latino faith communities with local conservation initiatives. Veronica Kyle, Chicago Congregational Outreach Director for Faith in Place, realized that shared experiences of dislocation and migration could provide the key to engaging these communities with the predicament of other creatures on the move, since "human beings, monarch butterflies, migratory birds, and other migrating species all seek welcoming places to eat, rest, and live along the migration journey and at the destination."[2] She therefore created a space for sharing stories of migration in conjunction with learning about the struggles of other species, inspiring the participation of hundreds of city dwellers, most of whom carried their own histories of dislocation and marginalization, in the creation and restoration of habitat for butterflies and other insects. Participating in this program has also fostered new forms of community across ethnic and religious divides, and brought physical benefits and spiritual nourishment to many of those involved, as well as providing an urban refuge for nonhuman residents or visitors hard pressed by adverse environmental changes arising from industrial farming, land clearing, and climate change. Thus far, Faith in Place has focused on providing assistance in the sourcing and installation of regionally native plants to create butterfly gardens on the premises of numerous houses of worship in the Chicago area, including Lutheran, Episcopal, Mennonite, Quaker, and Unitarian communities. Growing out of this, however, several churches have also chosen to participate in habitat-restoration projects in local natural areas and forest preserves, providing opportunities and incentives for urban residents who had not previously done so to engage in conservation activities beyond the city bounds.

1 See particularly the "About Us" and "Our Programs" pages.
2 *Faith in Place*, "Migration and Me," http://www.faithinplace.org/our-programs/migration-me.

As I have argued elsewhere (Rigby 2016), such acts of anticipatory hospitality towards more-than-human others—preparing for them a place of rest and sustenance along their journey, or a new home in which to abide—will be increasingly called for as ever more communities and species are displaced and disoriented by the calamitous impacts of anthropogenic global warming, along with other drivers of habitat destruction. In performing the work of deep sustainability, such acts are also sowing the seeds of a new kind of green urban culture, characterized by the cultivation of multispecies practices of care and conviviality among diverse communities of engaged eco-citizens.

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Rob Krueger

# Art, Social Change, and the Green City: A Rebuke of Green Metropolitanization[1]

## Introduction: The Green City and the Lost Mandate for Change

In his wonderful essay, *My Lost City* (2005), F. Scott Fitzgerald uses the character Bunny, an old schoolmate of the narrator, to lament the process of metropolitanization. In the story's opening sequence, Fitzgerald reflects on Bunny's transition as his narrator observes the protagonist from his taxi:

> He was no longer the shy little scholar of Holder Court—he walked with confidence, wrapped in his thoughts and looking straight ahead, and it was obvious that his new background was entirely sufficient to him. (106)

For Fitzgerald, Bunny's disposition exemplifies the process of metropolitanization, whereby our perceptions of the city are desensitized and become regularized, naturalized, and even hyper rationalized, so that our bandwidth of observation is narrowed to perceive and respond only to those stimuli that are out of the realm of the new ordinary. We become accustomed to the smells, sounds, and goings-on around us, nefarious or otherwise. Like Bunny's experience, the rise and fall of the green city vision resulted from a naturalization of a certain concept of greenness, one that can now be indicated by technology, measured quantitatively, and promoted by the private sector.

With its conceptual roots in sustainable development, the green city once posed an alternative vision for society that required human-environment interactions to consider concerns of ecological integrity, social equity, *and* economic prosperity. In the late 1990s, however, the green city movement emerged from a fringe imaginary and entered popular and policy lexicons. Compact urban development, smart growth, and transit-oriented development are all monikers of this new regime. Cities were now able to become "eco-friendly," "human-scaled," and host green buildings and other new infrastructures. The "city" was also discursively transformed into a bourgeois utopia. It is precisely this

1 The author would like to thank Simone Müller, Sabine Dörry, and Tim Freytag for their editorial comments. All remaining mistakes are owned by me.

marriage of the green city to the bourgeois imagination that has stripped it of its emancipatory potential; metropolitanization has been draped over the green city and softened the edginess that established it as an alternative, transformative development project. Indeed, the green city is so enmeshed with neoliberal capitalism it has become its own regime of capitalist growth.

This essay seeks an antidote for metropolitanization in the context of the green city—green metropolitanization, if you will. In an attempt to drive a wedge into this condition, I bring in art, or, more precisely, the process of creating art, as a way to recapture the emancipatory potential of green cities. I first examine the role that art can play in green metropolitanization. Here, I examine how the process of creating art provides a lens into seeing those invisible aspects of life, in this case, green city life. I then offer a very brief look at an unlikely artist, Adam Smith, extending the argument from the previous section to show how the process works in the context of social theory. In the penultimate section, I quickly explore the work of three artists, Banksy, Marina Abramovích, and JR, as exemplars of the type of thinking we need if we are to see past the bourgeois green city. Finally, I bring the discussion back to green metropolitanization.

## Leveraging Art for Social Change

In contrast to metropolitanization, the role of art, any medium of art—and by "art" I particularly mean the process of imagining and creating art—in social change has been vanquished to the realm of the dreamer who, in business terms, doesn't understand how to "efficiently" "incent" the "value proposition" to the "customer." Perhaps, we have been able to overlook art as a possible entry point to social change because of the organizing successes of various radical discourses to reveal—and many have with microscopic clarity— the injustices that presently endanger our planet and the people who live on it. I think particularly of the Occupy movement, the anti-austerity demonstrations in the UK and Europe, the Climate March, and the Arab Spring. These discourses and the movements that emerged from them attracted followers because they offered an alternative to those who suffered under the status quo. Despite their popularity, where did many of these movements go? Who remembers Syria's ongoing revolution as something other than a war against ISIL or a side war between Russia and the US, for example?

I want to bring attention to how art, in its various forms, can be brought to bear on social change; the kind of social change that we need to discharge "the green city" in favor of something more progressive. Art has long been a power in social life, having been used as a tool of discipline for the church (e.g., medieval arts) and to reify the "power" of empires (e.g., the cathedral in Cologne, Germany). Art has also captured the beauty of human labor (e.g., in *The Reaper* by Van Gogh). And, art has captured nature as sublime (e.g., Albert Bierstadt) and transcendent (e.g., Ansel Adams). Art has been used to amplify tensions between Western and non-Western ideologies (e.g., Shostakovich and Stravinsky). Artists have also sought to make pointed political statements, such as Picasso's *Guernica*. Finally, art has captured what slain environmental activist Ken Saro-Wiwa called the "omnicide." Omnicide is something we carry out daily on people and the planet in the name of "progress" and our "quality of life." Canadian photographer Edward Burtynsky, in his current project on the Anthropocene, suggests that his photographs and films must capture phenomena that are "either invisible or marked by an absence" (Khatchadourian 2016). Art and the artists who create it, then, present to us, if we choose to take it, the opportunity to "see" what has not been seen before and to reimagine what we have seen. Certainly, art can reify power, and while it does not constitute social movements, it can inspire them.

**Adam Smith: An Unlikely "Artist"?**

To examine more closely the process of art and social change I will now turn to an unlikely artist, Adam Smith (1723–1790). In this brief discussion I want to highlight the process he went through to create his ideas about economy and society. Smith's process is important here because he wrests from economic chaos a way forward that, he felt, would provide a better quality of life for everyone.

Many historians of economics and biographers of Adam Smith have commented that the prodigious moral philosopher reconciled his views on a moral economy by observing the detritus of human exploitation, ecological degradation, and willy-nilly systems of exchange that blanketed the urban and rural landscapes of the United Kingdom in the eighteenth century. Against all odds, Smith deduced from his observations that an individual, acting in self-interest, can provide a broad social benefit.

My point here is to draw attention to Smith's method of building a beautiful theory: through the observation of the mundane, tired, daily activities of being human. For Smith, society cannot be conceived of as a static achievement—unchanged, unchanging, from one generation to the next. Rather, it is an organism with its own life history. Like a painter with a canvas, a photographer with a Kodak Brownie, or a sculptor with stone or casting metal, Smith imagined and used his words to sketch out a social system vastly different from the one he observed. Smith took his own artistic license to the conditions of his time to create what he thought would be a utopia for all human beings.

For Smith, the subject of his art was visible and in front of him, yet no one could "see" it until he wrote about it. Like Burtynsky's effort to capture images of the Anthropocene, Smith sought to capture organization where it wasn't perceived to exist. The opportunity to produce art is everywhere: some people synthesize disparate elements of life to reveal new insights, give voice to those who have been silenced, and make us bear witness to what we cannot see or choose to ignore. Artistic vision, as in the case of Smith, can be brought to new social imaginaries that provide a basis for social change.

**Art and the Search for Big Ideas Today**

Art, whether it be sculpture, avant-garde building design, or even the written word, embodies a method for how we see or perceive; this brings new imaginaries and radical approaches for creating a more dignified human-environment relationship with people and the ecosystems that we inhabit. We could explore the work of many different artists—important social commentators who have gained notoriety because they were at the fringe of their disciplines and beyond some people's imagination.

In this section, I reflect on the work of three artists: Banksy, Marina Abramovíc, and JR. Each artist's method of seeing provides an argument for my critique of the green city.

Consider the first form of open-source "code": graffiti. Graffiti has been behind a number of social imaginaries. The London street artist Bansky has moved people with his stencils of cops kissing, rats impersonating politicians, and panhandlers rejecting coins and asking for "change," jarring amalgamations of societal modes of discipline and explicit calls for change. Banksy forces us to process, through visualization, what many

people merely utter in daily political discourse. Further, Banksy's project is grounded in anarchism. For him, art should be free and readily available to the public, not stored in the staid institution of the museum or bourgeois gallery in SoHo.

While Banksy plies his trade in the dead of night out of the sight of onlookers, he understands the importance of people in his art. As I mentioned above, this is open-source communication 2.0. Consider the Code of Hammurabi depicted on the basalt obelisk, Mayan temples, or the Ville Nouvelle in Casablanca, Morocco, all of which reify normal behavior and power. Banksy, too, uses objects and architecture to deploy his own code: walls, the sides of buildings, billboards, anywhere he finds an open canvas. In contrast to open-source 1.0, Banksy seeks to disrupt our impression of the normal and the natural(ized). Having people see his images is therefore important to his art. It's open source because in contrast to Italian Renaissance painters whose canvases were only on view in churches and the stately homes of merchants and friends of the church, he puts his out there for everyone. His provocative images demand we pay attention and consider the messages they portend. Art should be free. Art is democratic.

Marina Abramovíc is a performance artist who often self-mutilates, and her work tests the limits and blurs the boundaries between the artist and audience. She reveals the agency of the ordinary by having her audience bear witness to how the ordinary can be transformed to the extraordinary. In 2014, at the Serpentine Gallery in London's Hyde Park, I participated in the creation of a Marina Abramovíc "512 hours" installation just by showing up and following instructions from strangers. Art has the power to catalyze transformation.

For Abramovíc, the message is that the *barrier* between performer and observer is a false dichotomy. There is a tension there, for sure. Where the layperson takes the perceived message is open ended, overdetermined, and colored by ideology. By explicitly turning over control of her message, Abramovíc accepts the contingency of the outcome and rather views the process of engagement and creation as the beauty of her contribution. Abramovíc thus reminds us that no matter how elegant our design, how pure our assumptions about people and/or nature, change occurs within change and it's the process of the evolving idea that is of critical importance.

Another example is JR, the French photographer who captured the imagination of people in 127 countries with his massive collages of photographs pasted in the slums of

"Time is Now, Yalla!" A photobooth set up by JR in Israel/Palestine. Photo by Camlacaze [CC BY-SA 4.0], from Wikimedia Commons.

Nairobi, a favela in Rio, and in Tunisia around the time of the Arab Spring. JR received a large grant that enabled him to invite people from around the world to send him photos that he would print and send back so they could paste their own images and messages. This project has bridged divides caused by race and religious alienation in the Paris suburbs, fostered public discussions on freedom of speech in Tunisia, and on violence against the youth in Brazil. Following JR, art can emerge out of the lived experiences of the world's invisible people. He exposes the implications for those who are victims, direct and indirect, of chronic violent crime. He captures the concerns and fears of the majority who don't show up to the public demonstration. Finally, he reveals the invisible and inspiring humanity that exists in post-natural disaster communities.

The work of these artists provides a way of framing the disconnect between green metropolitanization and its emancipatory potential. The juxtaposition of Banksy's work, the cringe factor of self-mutilation and the participatory nature of Abramovich's work, and the valorization of the mundane, the hidden, and the lost in JR's work—each of these artists forces us to question our assumptions about social relations, the relationship between subject and object, and the winners and losers. For example,

Banky's juxtapositions can act as a metaphor for who greening the city is actually for. All too often, greening amounts to a set of amenities for those who can afford them, not a democratic distribution of sustainability principles. Abramovich reminds us that the green city does NOT fall under the sole discretion of experts. Everyone has a stake in the green city; there are no professional or lay barriers. Finally, JR reminds us of forgotten urban dwellers, those who remain outside the green city mandate. His images should serve as a reminder that despite often good intentions, there are winners and losers in the sustainable city.

**Art and a Rebuke of the Green City**

> *People think that the most appropriate building is a rectangle, because that's typically the best way of using space. But is that to say that landscape is a waste of space? The world is not a rectangle.* (Hadid 2013)

A generation ago, the green city was somewhat of a science fiction, an urban utopia when cities were derelict and unfashionable. Urban designers, like Zaha Hadid, reimagined places that maintained ecological solvency, were accessible to everyone, and, of course, beautiful. Today, the green city is marred by techno-fixes and self-aggrandizing marketing. The heating, ventilation, and cooling system (HVAC) has become more important than the progressive aesthetic green cities used to stand for. Instead of architects designing buildings, we now have architectural engineers privileging building physics over aesthetics that embody a structure's social purpose. Green buildings, and their composites, green cities, are efficient and rectangular. We accept them because they are green and forget to ask what the larger social purpose was meant to be.

The three examples from above, Banksy, Abramovíc, and JR, both provide reproach and offer insight into the green city failure. Banksy's egalitarian approach. Abramovíc's defiance of the "expert" versus "lay" person. And JR, who visualizes the subaltern and forgotten urban dweller. The green city has increased our confidence in the urban; it has also made us comfortable with what was once derelict, industrial, and dirty. Like Bunny, we are confident in our urban surroundings. Yet, in the process, it has distorted the reality of the city. The artists above remind us that cities are not rectangular mosa-

ics designed by experts. They are communal affairs; they are transformative; they are for everyone. They are not only for those who can afford them. And, change that is not mindful and deliberately progressive only serves to hide or displace suffering.

Taking inspiration from the creative method of artists, it's time to take a walk in the green city and cast our gaze on what isn't there.

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Today, cities around the world are becoming laboratories for a host of experiments in sustainable economic development. But will cities truly lead the way towards a green and sustainable future for this planet? And if they do, could all cities go green? This volume explores the "green city" concept from a global and interdisciplinary perspective. Contributions examine the conflicts inherent in eco-modernization—including issues relating to greenwashing, inequality, and justice—and the underlying power relations that shape twenty-first century ecological urbanism. Importantly, these pieces also investigate opportunities to respond meaningfully to urban environmental challenges. In so doing, they provide a space to consider new ways of thinking about green cities, and how to make them a reality in the future.


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