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Stephanie Pincetl

To cite this article: Stephanie Pincetl (2020): Cities treated as things: imagining post-fossil cities. A friendly rejoinder to Hajer and Versteeg and Wachsmuth, *Territory, Politics, Governance*, DOI: [10.1080/21622671.2019.1708444](https://doi.org/10.1080/21622671.2019.1708444)

To link to this article: <https://doi.org/10.1080/21622671.2019.1708444>



Published online: 19 Feb 2020.



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COMMENTARY



Cities treated as things: imagining post-fossil cities. A friendly rejoinder to Hajer and Versteeg and Wachsmuth

Stephanie Pincetl 

ABSTRACT

Cities have become a central focus for questions of sustainability futures. Most discussion has to do with their activities and how they are governed and the strategies to reduce their environmental impacts while increasing their equity. Yet few ask yet a more fundamental question: what are cities for and how might that affect their futures? This commentary raises questions about the role of cities especially in a potential post carbon age.

HISTORY Received 3 June 2019; in revised form 13 November 2019

Kim Stanley Robinson, a science fiction writer, in his *New York 2140* (2017), sets forth a vision of the future fully impacted by sea level rise and climate change. In his New York, capital has won, fully in control and shaping the city, its winners and losers. Earth systems exploitation continues despite its dire consequences, though all fuelled by renewables. Sea level rise has submerged most of the lower end of Manhattan and squatters live in the upper stories of the increasingly salt water-undermined lower levels and foundations of buildings. Broken windows and poor to non-existent services in these areas contrast with the gleaming towers in upper Manhattan, where the rich live in extraordinary luxury – and they have dry soil. Affordable lodging is crowded, hard to get and expensive. In between upper and lower Manhattan there is a watery middle, linked by vaporetos, barges and other water transportation, congesting the canals between buildings. Surely Robinson's New York is an imaginary of a post-fossil city, but the structure of power and city scale has remained the same until Robinson poses a class revolt of sorts as the book's culmination. Any moral implications to living in such a city remain about class struggle, not so much about why people are living there in the first place. Thus, what is interesting about Robinson's account, as in Hajer and Versteeg, is that the city itself remains unproblematized: it is a thing in which humans conduct their business; a container of economic, social and political phenomena (Hajer & Versteeg, 2018). Imagining the post-fossil city in their account does not entail reimagining what cities *are for*, nor their relationship with their territories or beyond. This is the great virtue of Wachsmuth's contribution and commentary on Hajer and Versteeg (Wachsmuth, 2019).

Wachsmuth suggests that we need a new imaginary of cities that exceeds the city, that resists the universalizing imperialism of the urban age, and that this requires 'imagining a whole bunch of

CONTACT

(Corresponding author)  spincetl@ioes.ucla.edu

Institute of the Environment and Sustainability, UCLA, Los Angeles, CA, USA.

things that do not look much like the city at all' (p. 4). Indeed, Hajer and Versteeg seem to assume that post-fossil fuel energy will enable humans to live in cities largely as business as usual with little change. Though they acknowledge that current patterns of urbanization are evidently unsustainable, they do not go beyond that comment and help us to imagine what some other urban might be due to that situation, and how a shift toward another state might require the need for the development of an ethical framework for doing so.

Current cities' growth and functions rest, as Dipesh Chakrabarty memorably stated, on a sea of oil (Chakrabarty, 2009). This is coupled with cities' unsurmountable reliance on the countryside for resources. Cities are constructed from Earth materials. These are both embedded with energy – the energy needed to extract, process, manufacture and transport the materials – as well as the energy used in the process of construction. And the extraction of materials has significant Earth systems transformational impacts. Thus, not only are current city functions majoritarily reliant on fossil fuels but also the materials needed to repair and to build cities are suffused with fossil energy. None of these processes is 'natural', they are driven by human intentionality to create cities as we know them, though perhaps as enormous distributed emergent systems that come together in ways that create path dependencies resulting in ever more deepening exploitation of the planet and people. Developing a 'woke' view of these processes, questioning the actual drivers and beneficiaries of the development and redevelopment of cities, would open up the possibility of dialogue about how we want to live in cities – or not – and our long-term relationship with the planet and the life forces upon which we depend.

As materials themselves become more scarce, they require more energy to extract and to process as quality declines. Finding increasingly diffuse and scarce resources more and more deeply transform Earth systems. A notable case of this situation is sand (Gavriletea, 2017). Sand is indispensable for many current economic activities, and there appears to be some substitutes, but these too have high embedded carbon and have not entered the market in any significant way. Rather, sand is now the object of a global mafia in places that have exhausted their resources, degraded their sand-bearing regions, and are now importing it from questionable sources (Beiser, 2015). Copper is another resource that is becoming less abundant and less pure. Lester Brown, among others, has suggested that it may become very scarce in the next decades, leading to the concept of peak copper (Brown, 2006). Scarcity is coinciding with accelerating copper use, resulting in greater expenditures fossil energy to excavate, process and/or to recycle. Inevitably, the issue returns to the question of Earth resource limits, including space for renewables, and the needs of rampant urban growth (Smil, 2015). And we need to be able to store energy as well, involving yet more space and resource impacts. Simply covering increasing acres of land with solar panels is not sustainable as there will not enough land also to provide for food and fibre, habitat, infiltration for stormwater and more. Unless, of course, the post-fossil city is a dystopia of many scarcities and profound inequality, one which has captured the imaginary of many science fiction writers. However, these realities do not seem to rise to the level of discourse and as such thwarts the development of alternative pathways.

I would suggest that post-fossil cities will, of necessity, entail asking *what are cities for* going forward. Urban growth has been naturalized in Hajer and Versteeg, with little examination of why cities are growing the way they are, including the continuing enclosure of the countryside that is driving people into cities as that countryside becomes rationalized and ownership/control is consolidated out of the hands of the traditional inhabitants. It is increasingly evident that as traditional people and their practices become extinguished, they are replaced by large-scale (often international) farming enterprises, razing forests such as in the Amazon, in favour of soy bean crops that, in the Amazonian region, will need increasingly large amounts of inputs to compensate for rapid soil depletion. In other places entire forests are being logged for conversion to such crops as palm oil leaving behind detritus, with a concomitant decline in ecosystem biodiversity, soil health and, again, land consolidation into non-local conglomerates, often owned by outside

corporate interests (DeFries, Rudel, Uriarte, & Hansen, 2010). The countryside's enrolment into the urbanization process involves its treatment as an extractive resource using generally high fossil energy applications, including farming with compounds derived from fossil energy. Soil is treated as a mere substrate to be pumped with fertilizers, pesticides and herbicides, and worked with machinery powered by fossil fuels. And rural peoples are displaced into cities.

What is missing in imagining post-fossil cities is not only examining more critically the multiple drivers of urbanization but also problematizing cities themselves: who do they serve, how are they made, by whom, and for whom, and what do we want them to be as human habitations? Is the city's current direction and function – the economic workshops of the world – the only one we can imagine? Such an enquiry is not only made possible by the post-fossil question but also is made necessary. An energy future based on renewables cannot be assumed as merely the continuation of today. The energy densities of renewables do not – currently – lead to cities being sustainable at current levels with renewables (Smil, 2015), and the materials flows necessary to fuel current cities and their growth are having devastating environmental and social effects. They also presuppose a kind of biblical never-ending abundance, which is pure fantasy – and a human illusion. To achieve the energy and materials production levels required to maintain ongoing urbanization patterns would require unacceptable levels of land transformation for solar and wind systems as well as materials flows. How is it that humans have become so distanced from understanding these logics? Is there not the need to reintroduce a kind of both ethical and common sensical understanding of the relationship between the patterns of current urbanization and the decline of environmental quality and resource availability, and how these link to the processes of wealth inequality?

One needs to elaborate a vision of a new possible world that shifts human activity from an extractive path, with no reciprocity of nurturing practices from people to the Earth, to one in which there is an active engagement with Earth systems to build both planetary and human health together. This activity brings together the territory and the politics of the post-fossil city, as Wachsmuth discusses, linking the city's existence to the spaces that make cities possible. To enable any kind of liveable city future will require fostering soil organic matter and health, promoting biodiversity, rediscovering forest practices for long-term sustainable yield and complexity. Planetary health and human well-being are mutually interdependent and co-evolutionary. And thus, continuing to treat cities largely as incubators of economic activity as their prime focus or purpose on the planet and *sui generis* means abstracting them from their materiality and dependence on planetary health and resource limitations. Restoring cities to places of human intentionality is foundational to imagining a post-fossil city. Without this shift, global economic growth as the prevailing economic model of the function of the city, and the city as the locus of control and of production remains unquestioned and cities are hollowed out of any other possible direction. Continued economic growth, as we know, is predicated on the enlistment of 'free nature', and simply leads to more degradation of the environment (Moore, 2015), and exploitation of human labour. Recognizing post-fossil energy constraints and a need to preserve, conserve and nurture Earth systems health of necessity leads to reimagining what cities are for.

As to the industrial revolution, cities have been simultaneously the result of a continuing process of enclosure – expropriating people from places, and crushing the ability to live and construct meaning outside the modernist urban paradigm – and the increasingly hyper-intensive extraction of natural resources. The post-fossil city must, of necessity for climate and the continued viability of Earth systems and human well-being, be a city with a much smaller energy and materials footprint, and in fact, perhaps a city with a much smaller footprint altogether. For post-fossil city futures, we need to imagine shrinking cities and people re-inhabiting countrysides, engaging in intensive practices based on hybrid new forms of agriculture, mining, timbering and more: crafting and using machines that are smaller, more nimble and may involve some human or animal labour, able to be fuelled by renewables. This different

engagement, based on low-intensity energy sources, incorporates scientific, biological and traditional understandings of how natural systems function and thrive, and create new information technology and systems engineering toward an appropriate technology future. Such futures were once discussed but sidelined in a triumphalist techno-optimist neo-capitalist resurgence. The fetishized belief in efficiency and substitutability prevailed over basic laws of thermodynamics and the planet itself.

To imagine post-fossil cities – and reimagine what cities are for – also acknowledges that urban situations today across the world are marked by strong substantive particularity (Wachsmuth, Madden, & Brenner, 2011). Imagining post-fossil cities should not be based on a priori theoretical abstraction. Rather, the ordinary city of individual places recognizes the complexity of causes of urbanization and multifarious nature of the urban itself (Amin & Graham, 1997). Cities may, or could, reflect very different goals, purposes and intentionalities, and do not necessarily need to be agglomerations of people predominantly organized to maximize economic activities (Scott & Storper, 2014). Today's cities are already variegated – entertainment machines, the dual cities, the digital cities, the global cities (Scott & Storper, 2014) – creative cities, intentional slow cities, sustainable cities. Therefore, let us allow ourselves to ask: what could post-fossil cities be like, and be for, relative to humans and their quest for meaning in life, and in terms of human relations to Earth systems?

In the fertile engagement with Hajer and Versteeg, I follow Wachsmuth's suggestion that 'we need to resist the universal imperializing of the "urban age" and agree that "imaging the post-fossil city will actually require imagining a whole bunch of things that do not look much like the city at all' (Wachsmuth, 2019, p. 4). I suggest this requires the reimagination of what cities themselves are for. As an entirely human creation, the city reflects human wishes, wants and desires, our capacity for making and imagining. That is, cities are not things, they are not 'its'. Rather, they are the exemplar par excellence of 'us', of the human. And thus, we need to be able to enquire of ourselves, what we want our cities to be, for us as inhabitants, rather than assume what they are, or hind-cast and naturalize the past, assuming that cities yesterday and today are an enduring form in perpetuity. Perhaps this could lead to creating cities that are generous – creating places that make us feel good, where sociability and sharing are encouraged, where diversity and thought are cultivated. Perhaps we could make cities that foster learning, creativity and invention. And perhaps this could mean cities whose engagement with the territory is that of creative, productive interaction with nature, where human activity supports ecological health and productivity with a mutually beneficial intent. We have the capacity to remake intentionally cities that reflect different visions, and which are powered by low-density renewable energy, smaller, more modest, with much simpler lifestyles and awareness of the dependency on Earth systems. However, to do so, we need imagination, intentionality and the development of a set of ethics about our relationship with the Earth and with one another.

DISCLOSURE STATEMENT

No potential conflict of interest was reported by the author.

ORCID

Stephanie Pincetl  <http://orcid.org/0000-0002-8660-4803>

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