

# **Visible Cities: Envisioning Social Futures**

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## **Abstract**

Visions for place carry and project the concepts and ideologies behind them and, in doing so, it is evident they are not neutral since what they omit can be as important as what they promote. The many visualisations produced for future cities are especially relevant to this latter point. Typically constructed to depict the apparent virtues of coherence, cleanliness, efficiency and light, visions for futures are often keen to promote technology. Why should this matter? Images such as these are critical in how we construct and share ideas for our collective future, providing portals for how the world might be. In their expression of the not-yet such imagery shapes our ideas of, and intentions toward, futures. Social visions for collective life appear remarkable for their scarcity in contemporary visions. This chapter draws on the use of visual methods to better understand how we can articulate visions which are predicated on social and environmental issues rather than being solely driven by technology. In particular, it seeks to contribute to the propagation of this wider array of futures.

Keywords: methods, social futures, visions, future cities, visualisation

## **The Failure of the Future?**

What do we think of when we think of the future? Many of us might envisage space travel, off-earth communities, sleek architecture, airborne personal transportation, or, perhaps, a

bleaker version involving environmental degradation, inhospitable places, and societal collapse. Critically, when we consider the future it is usually situated i.e. it is a time and place we can imagine, even if that location is very different from our present one. It is through *place* that we are able to assemble different elements to compose an image of our future, not an ambiguous space. Unsurprisingly, when we think about the future we are drawn to visions for them. Indeed, it is precisely through the act of locating oneself in the future that orientation towards it becomes tangible. This is the power of creativity and imagination in supporting the ‘futures literacy’ needed to ‘introduce the non-existent future into the present’ (Miller, 2018, p.15). It is integral to iterative and exploratory methods which form one of the four-stage methodological approach for thinking about the future developed by Richard Slaughter (1997). Iterative and exploratory methods include backcasting, scenarios and visioning. All require activism on behalf of the individual or group of participants involved. Joseph Voros (2003) has described these methods as aligning to prospective methods which seek to produce future images. This is why futurists, including designers, apply visioning as a method not only to forecast but also to stimulate potential futures into being. Through creating multiple futures, visioning presents us with the ability to discover and explore different options and thereby begin to negotiate values and preferences. The primary benefit of iterative and exploratory methods is their capacity to reveal new ideas and challenge existing assumptions about the future. Visualisation can play a critical role within the visioning process enabling those exploring potential futures to capture their ideas and share them. As Kwartler and Longo (2008) have shown, these methods have particular applications and implications in the context of future place-making. So, where does this position us at this moment in time?

In a visualisation for a future city, there is intentionality that the ideas, values and hopes it seeks to depict become visible, though this is not always the case. This leads us to

consider the power and agency of the images themselves which, when coupled with the process of futuring, can be highly effective in promoting or discrediting particular agendas. Visualisations for future cities carry and project the concepts and ideologies behind them. They are clearly not neutral since what they omit can be as important as what they depict. In most cases, visions for alternative ways of living are bound up in ideologies and agendas, especially when they strive to illustrate a radical departure from prevailing conditions. This reminds us of the plurality of futures and the transition from an empiricist approach to *the* future toward a diversity of approaches to multiple futures. Thus, as Law and Urry (2004) observe, there is a plurality of both pasts and futures that are individually constructed to assemble an individual reality. This is especially relevant to future cities where manifold possibilities for how urban life could be have been produced.

Yet, despite this general shift in how we think of futures plus the plethora of tools and techniques available to help us create visions for places, futures remain dominated by technological aspirations and determinism over other possibilities (Urry, 2016; Sand, 2019). Why does this matter? Well, put bluntly it is the world that is at stake. Societies shape themselves partly through the images of the future they construct (Polak, 1973). Different ways of thinking about cities, their futures are vital if we are to avoid path dependency and identify alternatives to business-as-usual scenarios (Albrechts, 2015). This situation is increasingly urgent given our collective responsibility in mitigating planetary consequences and providing a safe, sustainable world for future generations (Swilling, 2020). A lack of imagination hinders our capacity for change as Hajer and Versteeg (2019) emphasise in their discussion of post-fossil futures, since it seriously limits our ability to conceive of coherent visions for alternatives. The next section, therefore, examines the current status of visions for future cities to contextualise the position of this chapter.

## **Utopic Bubbles and Echo Chambers**

In 2014 I was commissioned by the UK Government's Office for Science as part of its wider Foresight Future of Cities project to write a report on the subject of how we have envisioned future cities throughout history (Dunn et al., 2014). In our research we examined nearly one thousand different future cities. These were drawn from a variety of sources including: mainstream visualisations created by architects, town planners, and urban designers; avant-garde works from architects, artists, and designers; and examples from popular culture such as film, graphic novels, and video games. Given the sheer volume and diversity of material available, it soon became evident that we needed to find a method of analysing these visions. This led to a number of attempts to understand how they could be classified and related to one another so that we could make sense of what we were studying and provide insights. The scope of the report meant the period under scrutiny spanned from 1900 to 2014 when it was produced. To best illustrate the various concepts and themes identified across the material we chose ninety-four visions that were prominent types to provide an overview as comprehensive as possible to the reader. We classified the materials to ascertain primary elements within each image and then recorded these. This was a dual process. We organised the visualisations by association to categories and the technique by which they had been produced. Parallel to this, we also analysed the thematic content of these images to identify dominant elements of urban life, or their alternatives, they conveyed. Upon collating this information, we then sought to establish clusters and groupings of visualisations to understand patterns and trends within the visions. Our attempt to visualise the relationships between these examples, what type of media and techniques were used to generate them, and what themes they communicated was complex to say the least [Figure 1].

<insert Figure 1 here>

Figure 1. Taxonomy for visualisation of future cities 2014. Nick Dunn, Paul Cureton and Serena Pollastri.

This process enabled us to draw out overarching narratives and thematic patterns for how future cities have been envisaged. We established a set of twenty-eight categories that fit within six dominant paradigms as follows:

*Regulated Cities* - urban visions that integrate aspects of rural/country/green living.

*Layered Cities* – portrayals that have explicit multiple but fixed levels typically associated with different mobilities.

*Flexible Cities* - urban depictions that allow for plug-in and changes but still fixed in some manner to context.

*Informal Cities* – present visions that suggest much more itinerant and temporary situations and include walking, nomadic, and non-permanent cities.

*Ecological Cities* - illustrations of cities that demonstrate explicit ecological concerns, renewable energies, and low or zero carbon ambitions.

*Hybrid Cities* - urban visions that deliberately explore the blurring between physical place and digital space, including augmented reality and ‘smart’ cities.

When arranged in a timeline these different paradigms can be appreciated from a historical perspective, illustrating connectivity and recurrence over time [Figure 2]. The aim of this work was to provide a useful resource and method for the analysis of visions for future places. It facilitated trends and patterns to become legible, for example the apparent re-emergence of more socially-engaged ideas for collective life. Yet it is important to be cautious when attempting to draw tidy conclusions from this kind of visual survey. For

example, the growth in socially-engaged visions may reflect greater societal and global ambitions for sustainability. However, an alternative reading might indicate a deliberate branding of contemporary visions to align with political agendas. Within this apparent movement of socially-driven visions, therefore, is the full gamut of possibilities from legitimate strategies to deliver low or zero carbon urban development to proposals that have been subject to ‘greenwashing’ to improve their reception. This demonstrates the agency and plasticity of visualisations for prospective futures. It also raises complex issues with regard the communication and interpretation of such images.

This study also illustrates that the more radical alternatives to traditional development principles for cities i.e. Informal Cities and Flexible Cities have to date been ‘utopic bubbles’, bound in time and reflective of short periods where there was considerable optimism for different futures away from business-as-usual pathways. It is interesting to note that Informal Cities which were stimulated by counter-cultural conditions in wider society became conceptually exhausted by the mid-1970s. This is no coincidence given the peak oil crisis and the general rise of conservatism in the latter half of the 1970s onwards. Concomitant with this shift was the upsurge in digital technologies, notably in the growth and widespread use of new forms of representation, to generate images including visualisations, and the production of new environments, within which to explore spatial possibilities that did not have to contend with the limits of reality such as gravity. This retreat into digital space enabled designers to explore the more fantastical side of their ideas, accounting for the re-emergence of Flexible Cities as part of broader anticipation and anxiety at the turn of the new millennium. These latter visions were highly influential within the subfields of digital architecture and computational design, further spurring new ideas, theories and practices. Aside from a few seminal projects, however, they were essentially operating as echo chambers for novel visualisation techniques, emblematic of the increasing delamination of

these forms of architectural and urban design from those that directly impacted upon the physical built environment.

<insert Figure 2 here>

Figure 2. Timeline of the six principal paradigms and twenty-eight future city categories between 1900-2014.

Nick Dunn, Paul Cureton and Serena Pollastri.

Technological potential and environmental concern signify the two most prominent paradigms in the visual materials studied, a situation which, in the intervening years since the report was published, has continued to increase their influence as Ecological Cities and Hybrid Cities. Of relevance to our discussion is how these two types are often coupled together in a compelling vision, the Smart City. As an umbrella term which encompasses a significant variety of different futures for place, the Smart City is a powerful imaginary, flexible and capable of assimilating many other forms of technologically-driven visions for future cities. The ambiguity and intangibility of what a Smart City is has led to it becoming pervasive in the first two decades of the twenty-first century given its predication on technological impulses, which can be seductive in their own right, and its capacity to absorb other possible futures into its rhetoric. This, as I have discussed in greater detail elsewhere (Dunn, 2018), has led to convergence of futures, the consequence of which occludes viable alternatives. How might we counter this confluence of futures and explore different ones? I next examine this phenomenon in greater detail before considering a number of ways that may support the production of alternative visions for collective life.

## **Tensioning Frictionless Futures**

For a long time, visions for future cities have typically been the product of a singular, seemingly heroic designer who has sought to bring order and control to the messiness of urban life. As the complexity of issues in cities has increased, so too has the size of teams needed to design strategies for addressing them. Of particular significance has been the steady rise in major corporations developing visions for future places through the implementation of information and communication technology (ICT) to provide management and operation of cities (Söderström et al., 2014; Rose, 2018). This shift is reflective of a wider development, the ongoing abstraction of place towards space that has resulted in a false yet alluring dematerialisation and deterritorialisation of cities. It is crucial to recognise that this transition has been catastrophic since it has allowed humans to ignore the impacts of climate change, finding ourselves as we do on a specific planet with a specific biosphere where place, not space, has emerged in all its non-human dimension (Morton, 2016).

Through this detachment, Smart Cities are portrayed as complex entities but this refers to the challenges of handling Big Data rather than the enmeshed intricacies of urban life. An important aspect of these futures has been the emphasis on short-term dynamics that, rather than reinforcing time horizons as end-states that are far away, has brought the temporal dimension of cities onto the agenda by focusing on the now and next (Batty, 2018).

Furthermore, with their origins in management software, the premise of a solution-orientated approach and borrowed language of systems, processes, outputs etc. implies that existing places can become more efficient through a flattening of layered realities that can be reproduced elsewhere. Not surprisingly, the visions constructed to convey Smart Cities are characterised by technology that supports apparently frictionless and seamless movement, accompanied by green and blue infrastructures, gleaming and shimmering architecture, all coming together under a bright blue sky where the future city is conspicuously free from debris, dirt and pollution. The significance of these features and colour palette is notable for



the way they support an untainted view of the world, where trees and park spaces are always verdant and canal and rivers are azure. In both these cases, they are unrealistically manicured and shown without debris, seasonal change or inclement weather. Such clean, glitch-free worlds are utopian ‘frictionless futures in which the city is easily disassembled and reassembled into a coherent whole for operational optimization without question’ (Dunn and Cureton, 2019, p.19). In promoting these futures, other possibilities are hidden or even discredited. So how can we explore alternatives to those futures which are principally driven by technology and currently dominant our purview?

This leads us to consider what or who makes cities. Despite the inclination to think we make cities in terms of human attributes such as reason and other ways of acting that give us a sense of control over such matters, the gap between intention and realisation remains (Williams, 2019). It is clear we need a more expansive view of visions for future places that can accommodate a greater degree of plurality and diversity. More recently, my work has sought to redress this balance and demonstrate that alongside Technological Futures there are also visions that embody what might be understood as Social Futures and Global Futures. To aid clarity of these terms within the context of visions for urban futures, they are defined as follows (Dunn and Cureton, 2020):

*Social Futures* investigates the experimental and experiential visions for future cities led by an impulse to provide for a new society or create novel urban situations.

*Global Futures* takes account of those visions produced in response to the significant challenges of climate change and how we might enable collective life to be sustained.

*Technological Futures* examines the optimism of those visions driven by technology and their dialogue with their expressions within science fiction.

In doing so, the aim is to provide new critical lenses through which visions for future places are generated and communicated, which enables us to better understand how such images are interpreted i.e. who is using them to push an agenda, why they are doing so, and when. By explicitly positioning the social and global alongside the technological, our intention is to stimulate new debate about how futures are categorised. The original study was primarily focused on examples based in or relevant to the UK context whereas this second study was deliberately more global in its scope and included a larger number, one hundred sixty-five, of visions for future cities to be accounted for. Again, these examples were drawn from a much larger collection of work, in this case comprising nearly two-thousand images assembled from many archives and other sources. To provide as comprehensive survey as possible, these visions included an array of mainstream visualisations created by architects and city planners, avant-garde works, and examples from popular culture. Revisiting the timeline of principal paradigms six years after the original study four key findings are evident [Figure 3]. First is what seems to be a re-emergence of Hybrid Cities, Ecological Cities and Layered Cities during the last ten to fifteen years. Given the ubiquity of Smart Cities, environmental concerns, and renewed interest in addressing the complexity of soft and hard infrastructures that support urban life, this perhaps is unsurprising. Second is a notable growth in Informal Cities, Flexible Cities and Regulated Cities in the same period. This may be reflective of the considerable uncertainty of the present and our tendency to look to the past for the ideological seeds of our futures. It may also be indicative of the increasingly manifold and rapidly shifting dynamics of contemporary cities. Third, the findings illustrate that when visions are intentionally viewed through different critical lenses the various registers of information, the respective themes and features, within the visualisations come to the fore in different ways. To expand on this point, by actively identifying visions that represent Social Futures and Global Futures parallel to Technological Futures it becomes possible to have a

broader conversation on what is preferable and how this is framed. Fourth, this research found that such classification of visions remains flexible and open to challenge as it did in the original study. Although this suggests this approach is useful as a method of analysis, it reinforces the need for greater inquiry into these categories through further application of them to develop more nuanced definitions and subcategories as appropriate. It is essential to acknowledge the nascent quality of this work and its attempt to offer a foundation from which subsequent research into the diversity and plurality of visions for future cities may evolve.

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Figure 3. Timeline of principal paradigms 2020. Nick Dunn, Paul Cureton and Serena Pollastri.

## **Making Futures Visible**

Returning to the premise of this chapter, it has been shown how the use of visual methods can open up alternative visions for collective life that have their basis in social and environmental issues rather than solely being driven by technological innovation. What has not been determined is how we can leverage these different futures into being. This is no small task. Recent work in speculative non-fiction has been compelling in its warning of the radical changes we need to make to slow down the impacts of climate change, either through articulation of how catastrophic the future could become (Orsekes and Conway, 2014) or potential steps to reduce its worst effects (Porritt, 2013). Visualisation and visioning needs to be taken seriously given its fecund potential for the ‘midwifing of futures’ (Ache, 2017).

It is beyond the scope of this chapter to be able to define such a process in detail yet it is possible to sketch out a framework for envisioning social futures towards which this work constitutes the first stage. By setting out a new agenda within futures studies for how visions for place are analysed, I have aimed to illustrate the role of the novel visual analysis method applied in two studies as a means of propagating alternative futures that lie outside of the dominant technological view. The purpose of this work is to increase the acceptability and adoption of a wider array of ideas, values and hopes that may influence the production of new visions for future places. The second stage will be to develop appropriate methods of involving people in the co-design of these visions (Pollastri et al., 2018) empowered with the knowledge that there are radical alternatives to business-as-usual scenarios for their future. Key here is the ‘who’ in such processes, which is inherently political since it concerns, ‘what is seen and what can be said about it, around who has the ability to see and the talent to speak, around the properties of spaces and the possibilities of time’ (Rancière, 2009 [2000], 13). The third stage will be to formulate potential delivery mechanisms that can connect on the ground (Campbell, 2018; Rogers, 2018) to reduce the gap between intention and realisation. This is essential if we are to find viable ways through the mirage of ‘frictionless futures’ detached from the realities of cities. The latter has been brought into sharp focus following the global outbreak of COVID-19, wherein the specificity of place and its impact upon how we live has been profoundly significant. The fourth stage will be to recognise the amount of time, action and commitment that the prior three stages represent by establishing a multi-disciplinary field of research to scrutinise this framework, to continue to challenge assumptions, and bring in a more diverse assemblage of actors to the ongoing inquiry of such work.

Making futures visible requires us to examine the history of the future, question its dominant voices and better understand those that have been marginalised, underrepresented,

silenced or unable to speak (Sand, 2019). Such processes will need to become further nuanced if we are to take account for the many non-human actors that need representation in visions for future places (Haraway, 2016). Likewise, we will need to be vigilant when technological developments enhance our human capacities within posthuman futures to ensure we are equipped to care for more than human worlds (Puig de la Bellacasa, 2017). The framework set out here proposes tentative steps. Through it, we can form the foundations of valuable counter-positions and identify new connections woven through time and place that suggest new and vital alternatives, rendering cities and the polyphony of voices and narratives that co-constitute them to be visible. By opening up the processes and dialogue of futuring through visions to a wider set of stakeholders we will be better positioned to rethink the global transitions required to safeguard our health, that of other species and the environment we share.

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