

Chapter 28

URBAN IMAGINARIES AND THE PALIMPSEST OF THE FUTURE

Nick Dunn

Abstract

How and why should we imagine new, positive urban futures? As we look forwards, the world seems highly likely to be shaped by its cities. We anticipate that cities will become the ultimate destination of future generations and they will play a crucial role in the lives of everyone around the globe. How these urban futures look, feel and operate has long been, and will continue to be, an important series of issues. Urban imaginaries have been conceived throughout history but their paths are increasingly critical as we seek to develop sustainable practices and environments for our collective tomorrow. The role of imagination is fundamental to processes of conceptualisation, envisioning and performing urban futures. The importance of such creativity extends in other ways to their questioning of reality, reshaping our spatial conceptions or providing expressions of alternatives. This chapter, therefore, examines the power of visions for urban futures across multiple media and how they contribute to our social imaginary. Considering these projections from a historical perspective can provide new insights and greater understanding of the developments and patterns that shape the present and, in turn, their implications for our future. The chapter also aims to provide insights for the way urban imaginaries have evolved and converged different ideas of the city. It thus explores dominant paradigms and how these have emerged, echoed or perished over time enabling certain futures to be visible, even if their trade-offs are less so.

Introduction

Since the publication of the UNFPA's 2007 report, we have been repeatedly informed that our society will be an urban one yet within the complexity of our cities there is a paradox. Cities are championed (Glaeser, 2011; Hollis, 2013) as the places within which dense dynamics of economy and technology will enable us to flourish and where we can transform our lives and be happy (Montgomery, 2013). However, it is also because of the very same forces that many problems are occurring within urban society. Which makes the question of how we form visions for urban futures critical. Imagination is key to processes of creating visions which in turn directly informs those which we support in processes of becoming and the delivery of futures.

Formulating visions for urban development has often been marginalized or dismissed as being inconsequential. However, if as Neuman and Hull (2009) posit, "if we cannot imagine, then we cannot manage," the practices of conceptualisation, envisioning and performing urban futures is vital to our ability to deal with increasing urban complexity. Numerous writers including Hall (2002) and Pinder (2005) have emphasized that imagining cities is a normative practice within the disciplines of urban design and planning, and the value of doing so is fundamental to our ability to understand alternative visions for collective life. Despite this, it is increasingly apparent that such professions seem unable to transfer this skill toward the production of new visionary imaginaries of the urban that illustrate a significant diversity of ideas. This is odd, even contradictory. At a time when discourse concerning the role of cities as *the* object of our times is perhaps at its greatest momentum (Graham, 2010; Robinson, 2006; Sassen, 2001) even to the point of what we might understand as 'planetary urbanism' (Brenner and Schmid, 2015) it is

remarkable that proposals for radical alternatives are few. Why should this be? Two matters present themselves as possible explanations. Firstly, is our inability to define what we are discussing when we explore and examine the 'urban' as critiqued by Gleeson (2012). Secondly, are the concomitant forces that have, particularly over the last fifty years or so, gradually converged our urban imaginaries to its current narrow bandwidth of possibilities, notable for its convergence of future scenarios rather than divergence (Hunt et al., 2012).

This latter point is perhaps best illustrated by the dominance of 'Smart Cities'. This paradigm, itself diverse and with multiple narratives, is often perceived as one of singularity in which technology supports optimal efficiency in many, if not all, aspects of urban life. Though the visions for Smart Cities hint at a brave new world that will eradicate urban ills in the name of progress with futures that are always clean, smooth, green, and vibrant, they also necessarily open up serious questions concerning such apparently frictionless and perfect environments and who operates them (Greenfield, 2013; Hollands, 2008; Thomas et al., 2016). Why would we not want to live in a world as depicted like this? Especially when the antonyms of 'smart' plunge us into an unhelpful dialectic when imagining radical alternatives. We will return to the urban imaginary of Smart Cities later but it is a useful reminder of path dependency when we try to conceive of different futures. Perhaps this is why now it is particularly salient to examine how we may better enable the reworking or vision processes so that rather than closing down futures we find ways of opening them up. Key to such processes is the role of imagination.

The power of imagination

So can imagining the future change it? Do the ideas we have for urban futures build up over time and echo throughout history? In this section, I am going to further explore the idea perhaps that the problem regarding urban imaginaries in the present time is not necessarily that we have unattainable ideas but that we have a lack of them. Many of our imaginative ideas for urban futures are born in the past. More specifically, we can conceive of the history of urban imaginaries as similar to a palimpsest i.e. it contains a layering of ideas, some of which have been reused or significantly altered but still bearing visible traces of its earlier form. Indeed, despite the claims foregrounded by technological innovation, it is also possible to argue that we have not travelled very far at all when it comes radical visions for urban life. One of the explanations for this is what we might term 'imaginative lock-in', i.e. our inability to think beyond relatively normative trajectories when conceiving urban futures and their lifestyles. This may not necessarily be the result of an immediate dearth of extreme or challenging urban imaginaries but might be the consequence of those dominant narratives that, as they make certain futures visible, they occlude or even discredit others. In this regard the history of urban imaginaries is not unlike many other histories. Simultaneous processes of globalization and pervasive digital technologies have enabled the production and dissemination of urban imaginaries through interlinked global ideoscapes and mediascapes (Appadurai, 1990). However, despite both the cultural and geographic diversity of their origin, these interconnected ideo/mediascapes typically congregate into a surprisingly limited number of types. Which stories we tell and how they are shared to form collective visions for urban life therefore seems more pertinent than ever.

The role of imagination is fundamental to processes of conceptualization, envisioning and performing urban futures. The importance of such creativity in forming urban imaginaries extends in other ways to their questioning of reality, reshaping our spatial conceptions or providing expressions of alternatives. In his last book, *What is the Future?* (2016), John Urry explained that the various methods for envisaging futures, visions and the role of imagination can have powerful

consequences and are a major way of bringing the state and civil society back into the collective dialogue about futures, especially if the focus is upon social and not just technological futures. As he concludes (Ibid: 191), "a planned future may not be possible, but a coordinated one may be the best show in town." This is our value as architects, designers, urbanists and other agents for positive change. It is also where imagination comes in, by enabling designers, planners, stakeholders and the public to develop suitable ideas to help guide the forces and complex situations or urban development whilst also keep alternative options as open as possible. Ache (2017: 1) provides further emphasis, "vision-making processes become very important in such a context, in the best case creating open political horizons interested in becoming and the 'midwifing of futures'."

When architects, planners and urban designers design they typically create something that does not exist yet; we tend to lose sight of this most visionary aspect of these professions. It is in moments of great optimism or great crisis that architects and urbanists have returned to the more visionary side of their practices. At its best these practices are willing to look at the potential future as a way to explain and address present dilemmas. In this way they respond to actual needs. The most challenging answers, however, have only one thing in common: the power of imagination to transport us to another reality. Most importantly, they also act as conduits for ideas and are able to share and explore pluralistic possibilities to reconsider the world we live in.

In *Envisioning Real Utopias*, Erik Olin Wright (2010: 21) points toward the role of the social imaginary in constructing possibility, "what is possible pragmatically is not fixed independently of our imaginations, but is itself shaped by our visions." Wright favors real utopias since he considers them more useful for future options than imagined totalities. However, I suggest that this misses an important point with regard the instrumentality of design in future-forming visions. Furthermore, it is also evident we need to better understand the way imaginative ideas travel and influence us from a variety of different sources.

World building and the reflexivity between fact and fiction

Urban imaginaries have been produced and disseminated throughout history, arguably the first holistic vision for collective life being that of Thomas More's *Utopia* of 1516. The last two hundred years, however, have been particularly fruitful for the degree to which imaginaries developed in tandem with the growth of urbanization through the industrialization of processes, especially in the West. Whether Engels in Manchester, Hausmann in Paris, Leonidov in Moscow, Ferris in New York, Sant'Elia in Milan, spectacular visions for urban life were offered and (largely) disappeared. Despite the variances in their stylistic tendencies and features, the morphological similarities are notable and it would be until after the Second World War with the rise of consumer culture - specifically the automobile - that a new form of urbanization would be unleashed. Deeply connected to this was the widespread infiltration of television into people's homes that consequently, as Sanford Kwinter (2000: 509) has observed, "the American city began to explode spatially, but only as a quilted interlock of increasingly confined and abstract synthetic environments." A key component of this transformation was the visual dimension of television in being able to vividly communicate the mid-twentieth century preoccupations with the atomic age, space travel, and various counter cultures, bringing them into the homes of millions. Here, many imagined future worlds involving spectacular technologies, time travel, roads and trains in the sky, robots, off-earth communities, and so on were richly detailed and appeared alongside factual programs and news bulletins seemingly describing wonderful advances in technology and human progress.

This brings us to consider the complex ways that fiction explores plausible near-future urban contexts that, in addition to speculations about the future, can also provide powerful commentaries on, and critiques of, the nature of contemporary social life. Importantly, writers too have begun to argue that epistemological boundaries separating fiction from non-fiction are far more porous than often recognized. This holds relevance for urban imaginaries since they typically work with futurity, projecting ideas about how our urban landscape might be. Numerous authors (Abbott, 2016; Clear, 2009; Hewitt and Graham, 2015) have discussed how these boundaries are crossed especially in the case of urban planning, architectural design and science fiction since the visionary element of the architectural and planning disciplines is a strong, integral part of traditional activity. Bassett et al. (2013) have argued that the relationship between innovation in the real world and science fiction is one of mutual engagement and perhaps even co-constitution. Kitchin and Kneale (2005) have identified this reciprocity as contemporary urbanism shapes science fiction, which then works in complex ways to effect the imagination, experience and construction of contemporary urbanism. They also emphasise the interplay between science fiction writers, its readers and the development of space.

One of the most influential and enduring attempts to imagine how things might be was Futurama, a giant model of an urban future designed by Norman Bel Geddes and exhibited in 1939 as part of the General Motors pavilion and is a significant example of an urban imaginary directly influencing the future. It was also at this international exhibition that designers understood the opportunities to be found in urban, private and public spaces beyond industrial objects. Presenting a preview of what the city would be in 1960, astounded visitors circulated the huge model via a conveyor belt, observing skyscrapers, expressways and automated farms. Importantly an example such as this reminds us that visible futures are branded, shaped as arguments replete with different registers of information, and as specific options are promoted this may mean alternatives are concealed or even discredited. Whilst with the benefit of hindsight it is possible to detect in Futurama some of the subsequent developments in the American urban landscape, it is less evident how these ideas endure, perish or evolve to influence future trajectories.

This enables us to respond to one of the principal criticisms of Joseph Voros' (2003) futures cone, which is often used to illustrate different types of alternative futures, is it is unidirectional. So, although it is able to show all the imaginable futures, i.e. inside the cone, we might be able to conceive, it takes no account of the past starting as it does from 'now'. Coulton and Lindley (2017) remind us that, perhaps counter-intuitively, the past has a significant role in understanding the intentionality of an idea as much, if not considerably more so, than the future. The cone also implies an accepted view of the past and the present. Indeed, as Law and Urry (2004) observed, there is a plurality of pasts and futures that are individually constructed to assemble an individual reality. At this juncture, it is worth us considering what such history may be able to tell us.

A visual history of the future

So let us rewind a little here. Urban imaginaries have long been dreamt up and shared by a wide range of artists, architects, filmmakers, and visual designers amongst others. Images of urban futures are crucial as they enable a future-orientated society to have a conversation across different communities and with the public. More specifically, whilst they all have relevance to the context of urban representation or future scenarios, they are also culturally and socially important as they are reflecting points of time historically, thus reflecting a society's attitudes. Perhaps most

importantly they are a way for the public, communities and experts from various professions and academic disciplines to access the ideas about how our cities and our futures may potentially be. How valuable is this? Why are such visions significant? What do they tell us?

In 2014 I was commissioned by the UK Government's Office for Science to write a report specifically on this subject (Dunn et al., 2014). In our research we examined nearly one thousand different future cities and urban imaginaries. Given the sheer volume of material available, we quickly realized that we would have to try to understand how they could be classified and related to one another in order to make sense of what we were studying and provide insights. In the end, for the purpose of the report we chose ninety-four future cities that were prominent types to give as large an overview as possible to the reader. We classified the materials surveyed to identify primary elements within each image and then recorded these. This was a dual process: on the one hand we organized the visualizations in relation to categories and the way in which they have been produced; whilst on the other hand we analyzed the depictions for their thematic content and which dominant elements of urban or rural life they portrayed. Once we had collated this information, we then examined potential clusters and groupings of visualizations to understand patterns and trends. Our attempt to visualize the connections between these examples, what type of media was used to produce them and what themes they communicated, as can be seen in figure 1, perhaps ended up just as messy and complex as a city itself!

The scope of the report meant that the period under study spanned from the beginning of the twentieth century to the present day (i.e. 2014 when the report was produced). Clearly, this is a huge topic and we had to be discerning in our approach. Our attempt to categorize the different ways in which urban imaginaries have been depicted enabled us to draw out overarching narratives and thematic patterns for how urban life has been envisaged. From this we established a series of future city categories and dominant paradigms drawn from these. Why should this matter? The value of reexamining the histories and visual materials of the past and the manner in which they sought to extrapolate or project urban imaginaries is evident in the increasing body of work related to this endeavour (for example: Brook, 2013; de Wit and Alexander, 2013; Mami et al., 2011). In addition, as Murphy (2016) has argued, the importance of built work that has been subsequently demolished, the apparent failure of technology to deliver upon its promise, or even imagined projects that were never realised upon our reading of the future of the urban should not be underestimated. This is a point worth emphasizing for the evaluation of where we can be, as it gives scope to competing city forms and their respective challenges. In addition, our relationship with, and, understanding of, the built environment has also radically altered during the timeframe under scrutiny. The burgeoning interest in cities in recent years has cast them to the forefront of public consciousness through direct, everyday experience and numerous mainstream and social media platforms. Thus the impact of how urban imaginaries are conceptualized, disseminated and performed across various media, means that we cannot and should not underestimate their power upon our thinking and future strategies.

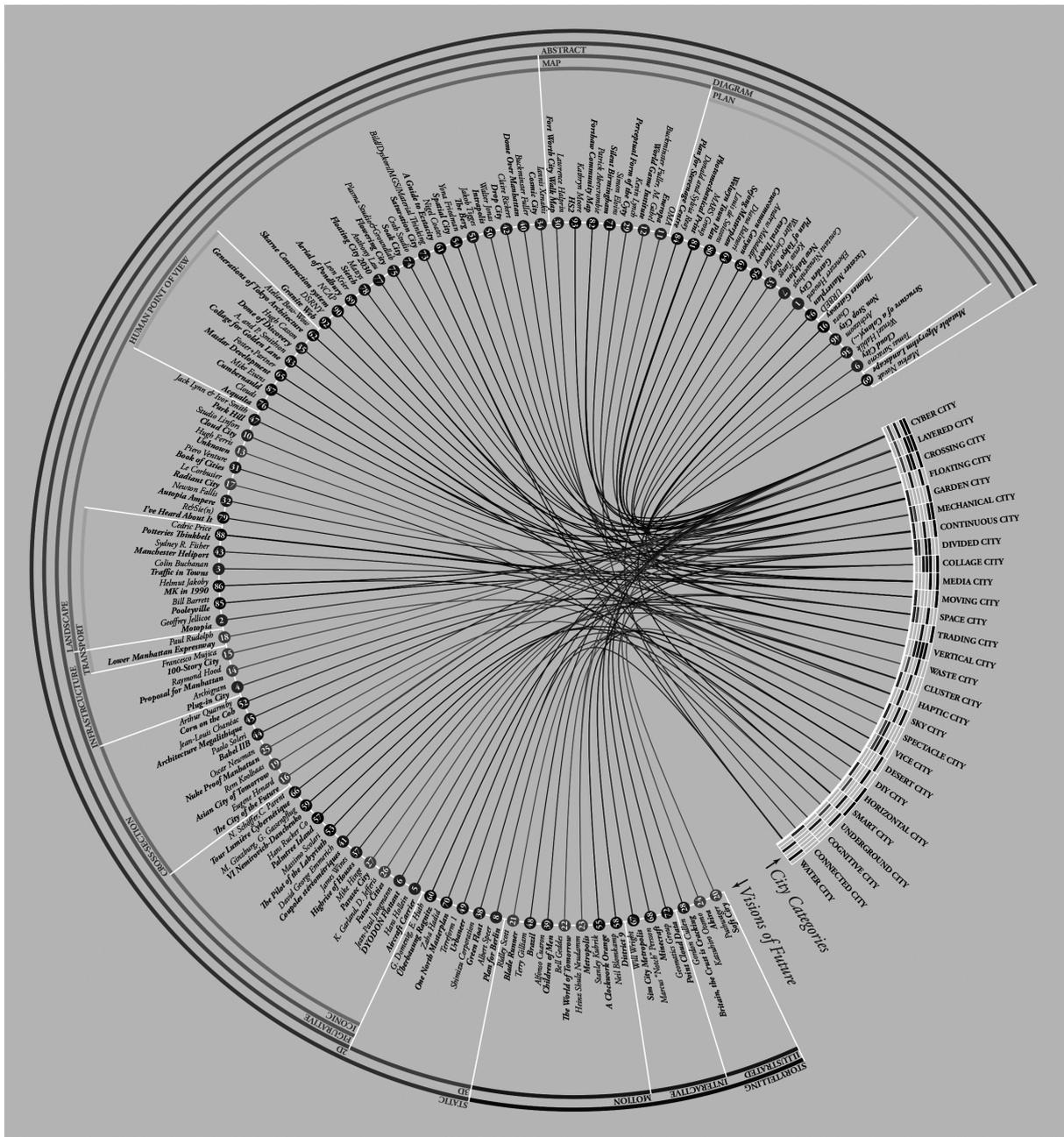


Figure 1. Taxonomy for visualization of future cities, 2014. It is arranged in relation to the type and elements of the images themselves and illustrates demonstrates the fluidity of urban imaginaries which rarely belong to one category.

This work accounted for the proliferation and impact of urban imaginaries across a spectrum of media. In order to contribute to the understanding of such varied materials, it also sought to identify and establish connections between different characteristics within these visualizations including: method of production, contexts, technologies, socialities, digital features and data.

This led to the setting out of six dominant visual paradigms of urban imaginaries as follows:

- *Regulated Cities* - urban imaginaries that integrate aspects of rural/country/green living.
- *Layered Cities* – portrayals that have explicit multiple but fixed levels typically associated with different types of mobilities.

- *Flexible Cities* - urban imaginaries that allow for plug-in and changes but are still fixed in some manner to context.
- *Informal Cities* – present urban imaginaries that suggest much more itinerant and temporary situations and include walking, nomadic, and non-permanent sites for inhabitation.
- *Ecological Cities* - depictions of urban imaginaries that demonstrate explicit ecological concerns, renewable energies, and low or zero carbon ambitions.
- *Hybrid Cities* - urban imaginaries that deliberately explore the blurring between physical place and digital space, including augmented reality and 'smart' cities.

These six principal paradigms were subsequently checked for their integrity and flexibility. The survey of further visualizations of urban imaginaries, initially collated during the early stages of research for the report, facilitated a cross-checking process to see if they could all be accommodated within one or more of the six paradigms above. Admittedly, the nomenclature of these paradigms is open to critical debate and further scrutiny. This is expected and welcomed in order to further such research. However, for the purpose of the present discussion they represent comparatively discrete and robust types that provide overarching, primary classes within which the twenty-eight categories of future cities identified.

When arranged in relation to a timeline (figure 2) the different themes can be appreciated from a conventional historical perspective. This enables six visual dominant paradigms to be understood as flows throughout the time period examined, illustrating connectivity and reoccurrence, where applicable.

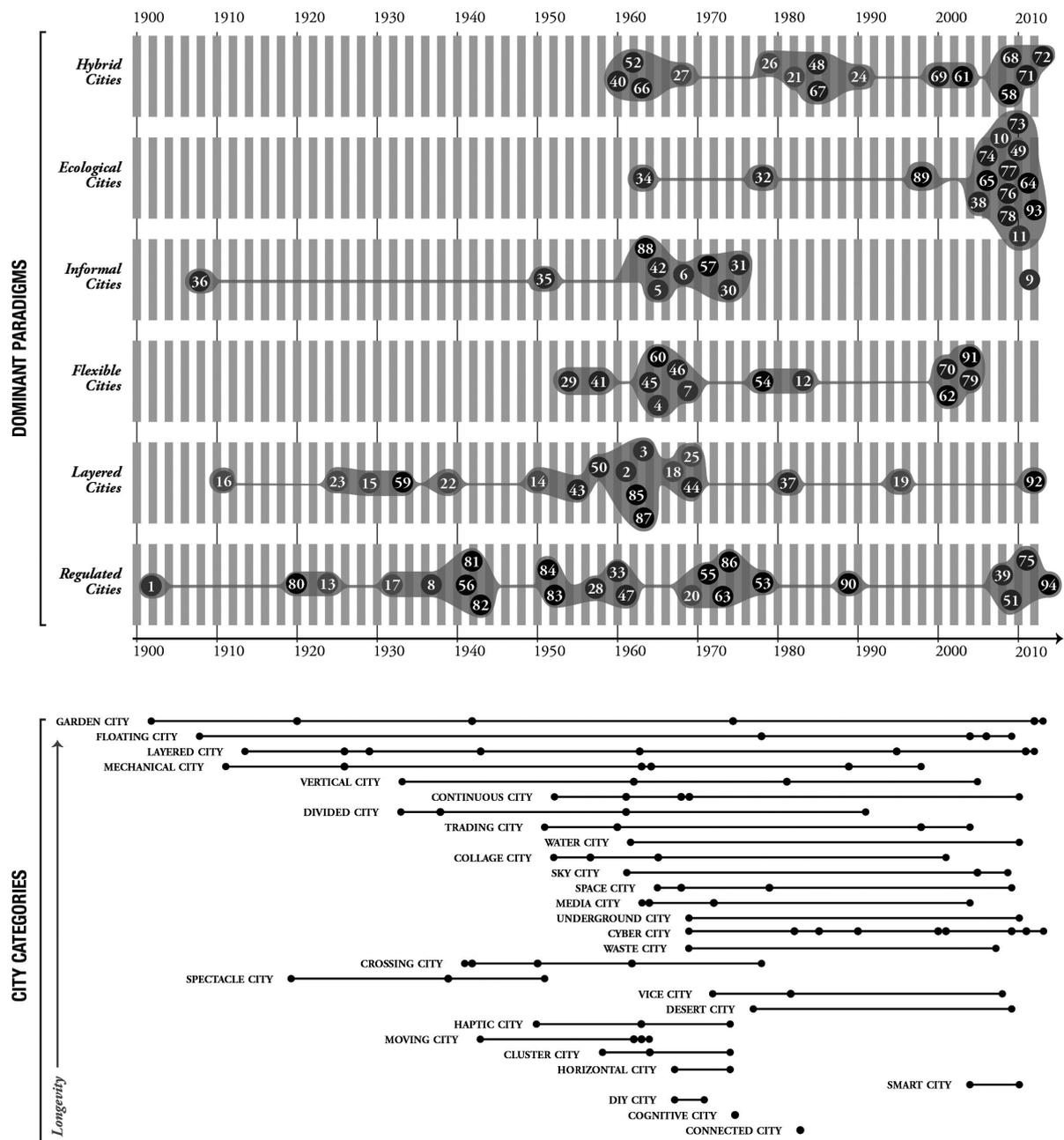


Figure 2. Timeline of the six principal paradigms and twenty-eight future city categories between 1900-2014.

The intention of this work is to provide a useful resource for catalyzing and rethinking the potential of perspectives on urban imaginaries more widely. It enables dominant trends and patterns, such as the apparent recurrence and growth of more socially engaged future urban visions in the early twenty-first century. However, we need to be circumspect when trying to draw neat conclusions from this kind of survey. On the one hand, this identifiable trend may be representative of greater societal and global ambitions of ecological and social sustainability for urban life. But an alternative reading might suggest that the branding of contemporary visions to align with political and economic agendas so these ecological urban imaginaries are likely to represent a wide spectrum from legitimate and innovative strategies to deliver low or zero carbon development to proposals that have been subject to 'greenwashing'. Whilst this demonstrates the agency and plasticity of visualizations of urban imaginaries, it also raises complicated issues

concerning the communication and interpretation of them. Environmental concerns and technological possibilities point toward the two most dominant paradigms that since compiling the original report have only increased in their prominence, Ecological Cities and Hybrid Cities. However, these are often bound together in a compelling urban imaginary narrative, the Smart City.

Is there an art to being 'smart'?

The Smart City discourse is highly pervasive, offering an optimistic view on what can be achieved in digitally-enabled cities that utilize data extensively to address and improve the operation of various urban issues and management systems (Ratti and Claudel, 2016; Townsend, 2013). Whilst many of the ambitions and goals behind Smart Cities are positive and potentially beneficial for collective life, the over-reliance on software that typically features in their concept has led to their visions largely being promoted by major IT corporations who have a vested interest in the deployment of technical solutions for city development and management. As Gillian Rose (2017) has observed when discussing the Future Life project by Siemens, it presents a pleasurable albeit smooth and untethered view, replicating digital visuality rather than actual spatial experience and it is here that we may detect some problematic issues. This example is synonymous with other corporate visions, which despite their innocuous display contain powerful agency in how we conceive future urban life. By representing the future from a technocratic position these urban imaginaries consolidate the role of corporations in providing a dominant view "where data and software seem to suffice and where, as a consequence, knowledge, interpretation and specific thematic expertise appear as superfluous" (Söderström, Paasche, and Klauser 2014, 308). Indeed, despite their diversity of approach and features, the imaginary of most Smart Cities is one of conspicuously bland, generic, ahistorical, apolitical spaces whose identity is characterized by information technologies that could be applied anywhere. So why are they so successful?

As Lars Lerup noted in *After the City*, memes help affect our values. They do not exactly determine our values, but they direct and constrain them. A variety of memes are thus somatically and socially produced and disseminated. A good example of this is the Smart City - a great meme: easy to remember and difficult to contest on some levels - after all do we really want to live in a stupid city? Even if we resist the technocratic determinism that such a paradigm is largely predicated upon, we find ourselves struggling, grasping for radical alternatives for urban imaginaries or resuscitating the ghosts of previous ideas, the Garden City being an enduring example in the context of the UK since its original conception in 1898.

Right now, as cities face new challenges and are reexamined for their potential to provide radical systemic revision and social restructuring, it is essential to reclaim urban imaginaries as a means of questioning the present and demonstrating that what we think may be impossible is possible (Levitas, 2013). It may be that a major barrier in this reworking is the scope of the object in view. Brenner and Schmid's (2015) planetary urbanism suggests that modern societies are necessarily underpinned by the urban and it has become a worldwide condition in which all aspects of life are intertwined and inseparable from it. Importantly for our discussion here, they also state "the urban is a collective project in which the potentials generated through urbanisation are appropriated and contested" with the urban being "produced through collective action, negotiation, imagination, experimentation, and struggle." It is here that we can identify some of the hopes and beliefs in the Smart City idea. By absorbing other variations on urban futures, the Smart City imaginary is powerful: its very intangibility directly correlating to its appeal. This has

also facilitated its position as the site for urban experimentation *par excellence* since numerous future pathways for cities and urbanism are keen to develop a technology-based, specifically data-driven, version. In the contemporary climate and particularly the Smart City movement dissonance is rarely encountered and, as a result, no real challenging alternative is able to emerge. How can we respond and provide a pluralistic and collective account of urban imaginaries to better enable us to identify radical alternatives?

False dichotomies and addressing complexity

One of the imperatives going forward may be to understand the false dichotomy of urban imaginaries presented by the Smart City paradigm as it suggests anything alternative to it is inherently regressive or inefficient. In order to do so it is important to recognize many urban imaginaries for how they are presented i.e. they are exactly that - stories broadcast *at* people - rather than being more open, suggestive and enabling, perhaps empowering, the viewer to respond and actively shape her or his own formulation. Therefore, it appears vital that we are able to create urban imaginaries that include and valorize plurality and agonism (DiSalvo, 2010) especially in the visioning process (Pløger, 2004). Such an approach as Pollastri et al. note, not only challenges analytical and rational methods of examining the future by enabling controversies and diversities that characterize the urban to emerge but also that we may "question assumptions, propose unthinkable alternatives and highlight unforeseen conflicts" (2016: S4375).

Whilst in times of rapid change and uncertainty there may be considerable comfort in finding clarity and agreement, it is suggested here that articulating divergence is a vital step to explore truly radical alternatives. Stepping back from a solution-orientated approach affords us to visualize and better understanding latent tensions, and to critically question assumptions about what futures are or should be desirable. This also recalls Wood's (2007) argument for 'micro-utopias' and its plea for all citizens to imagine alternative futures. Therefore, the argument for socially constructed urban imaginaries alongside and combined with technological ones is fundamental to our ability to develop compelling visions that reflect the competing and pluralistic complexities of contemporary urbanization, its processes and the lived experiences within it.

There are three key issues here that warrant further research. First, how such visioning as creative agonism may be explored more fully to ensure it provides robust urban imaginaries that are able to capture and articulate the complexity of situations that dominant paradigms currently omit (indeed, the belief in Smart Cities as a technical system that can manage such contexts is part of their considerable appeal for governments, city leaders and other stakeholders). Second, having been able to formulate new urban imaginaries is the examination of potential delivery mechanisms for the translation of vision into actions to achieve these futures. Third, is an acknowledgement of the amount of time, energy and commitment that such a process requires is essential to its success, not only within the practices of the associated design disciplines, policy and governance organizations, but also the need for it to be taken seriously academically.

In trying to avoid path dependency, urban imaginaries can only provide transformative capacity if they are able to account for elements that explicitly produce friction toward a radically alternative future (Albrechts, 2015). Different ways of thinking about cities and our fundamental relationships and experiences within them are essential. Urban imaginaries require us to explore improbabilities, paradoxes and risks against which we can question the consensual and rationalistic narratives that currently dominate our purview. Pioneers of the future may need to

identify apparent voids in existing places and narratives through which we can reimagine the urban. This inquiry therefore necessitates us to find new spaces for creative rethinking (Dunn, 2016) or articulations of alternative futures (Porritt, 2013) so that we may better conceive different trajectories. Perhaps then we might be able to create and share urban imaginaries that offer an escape from the paths we are currently converging along.

References

- Abbott C (2016) *Imagining Urban Futures: Cities in Science Fiction and What We Might Learn from Them*. Middletown, CT: Wesleyan University Press.
- Ache P (2017) Vision Making in Large Urban Settings: Unleashing Anticipation? In: Poli R (ed.) *Handbook of Anticipation: Theoretical and Applied Aspects of the Use of Future in Decision Making*. Cham, Switzerland: Springer, 1-21.
- Albrechts L (2015) Ingredients for a more radical strategic spatial planning. *Environment and Planning B: Urban Analytics and City Science*, 42(3): 510-525.
- Appadurai A (1990) Disjuncture and Difference in the Global Cultural Economy. *Theory, Culture & Society*, 7: 295-310.
- Bassett C, Steinmueller E and Voss G (2013) *Better Made Up: The Mutual Influence of Science fiction and Innovation*. Nesta Working Paper No. 13/07.
- Brenner N and Schmid C (2015) Towards a new epistemology of the urban? *City*, 19(2-3): 151-182.
- Brook D (2013) *A History of Future Cities*, New York: W.W.Norton & Company Inc.
- Clear N (2009) A near future. *Architectural Design*, 79(5): 6-11.
- Coulton P and Lindley J (2017) Vapourworlds and Design Fiction: The Role of Intentionality. *The Design Journal*, 20(Suppl. 1): S4632-S4642.
- De Wit W and Alexander CJ (2013) *Overdrive: L.A. Constructs the Future 1940-1990*, Los Angeles: Getty Research Institute.
- DiSalvo C (2010) Design, Democracy, and Agonistic Pluralism. *Design & Complexity*. Montreal. <http://www.drs2010.umontreal.ca/data/PDF/031.pdf>.
- Dunn N (2016) *Dark Matters: A Manifesto for the Nocturnal City*. Winchester: Zero Books.
- Dunn N, Cureton P and Pollastri S (2014) *A Visual History of the Future*, London: Foresight Government Office for Science, Department of Business Innovation and Skills, HMSO.
- Glaeser E (2011) *Triumph of the City: How our greatest Invention Makes Us Richer, Smarter, Greener, Healthier, and Happier*, London: Penguin.
- Gleeson B (2012) Critical commentary. The Urban Age: Paradox and prospect. *Urban Studies*, 49(5): 931-943.
- Graham S (2010) *Cities under Siege*, London: Verso.
- Greenfield A (2013) *Against the Smart City: The City is Here for You to Use*, 1.3 ed. New York, NY: Do Projects.
- Hall P (2002) *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century*, 3e. Oxford: Blackwell Publishing.
- Hewitt L and Graham S (2015) Vertical cities: Representations of urban verticality in 20th-century science fiction literature. *Urban Studies*, 52(5): 923-937.
- Hollands RG (2008) Will the real smart city please stand up? *City*, 12, 303-320.
- Hollis L (2013) *Cities Are Good for You: The Genius of the Metropolis*, London: Bloomsbury.
- Hunt DVL, Lombardi RD, Atkinson S et al. (2012). Scenario Archetypes: Converging Rather than Diverging Themes. *Sustainability* 4 (4): 740-772.
- Kitchin R and Kneale J (eds) (2005) *Lost in Space. Geographies of Science Fiction*. London: Continuum.

- Kwinter S (2000) Television: the Infrastructural Revolution. In: Koolhaas R, Boeri S, Kwinter S et al. (eds) *Mutations*. Barcelona: Actar, 508-523.
- Law J and Urry J (2004) Enacting the social. *Economy and Society*, 33(3): 390-410.
- Lerup L (2000) *After the City*, Cambridge, MA: The MIT Press.
- Levitas R (2013) *Utopia as Method: The Imaginary Reconstitution of Society*, New York, NY: Palgrave Macmillan.
- Mami H et al. (2011) *Metabolism, the City of the Future*, Tokyo: Mori Art Museum.
- Montgomery C (2013) *Happy City: Transforming our lives through urban design*, London: Penguin.
- Murphy D (2016) *Last Futures: Nature, Technology and the End of Architecture*, London: Verso.
- Neuman M and Hull A (2009) The futures of the city region. *Regional Studies*, 43(6): 777-787.
- Pinder D (2005) *Visions of the City: Utopianism, Power and Politics in Twentieth-Century Urbanism*, Edinburgh: Edinburgh University Press.
- Pløger J (2004) Strife: Urban planning and agonism. *Planning Theory*, 3(1): 71-92.
- Pollastri S, Boyko CT, Cooper R et al. (2017) Envisioning urban futures: from narratives to composites. *The Design Journal*, 20(Suppl. 1): S4365-S4377.
- Porritt J (2013) *The World We Made*, London: Phaidon.
- Ratti C and Claudel M (2016) *The City of Tomorrow: Sensors, Networks, Hackers, and the Future of Urban Life*, New Haven, CT: Yale University Press.
- Robinson J (2006) *Ordinary Cities: Between modernity and development*, New York: Routledge.
- Rose G (2017) Screening Smart Cities: Managing Data, Views and Vertigo. In: Hesselberth P and Poulaki M (eds) *Compact Cinematics: The Moving Image in the Age of Bit-Sized Media*, London: Bloomsbury Academic, 177-184.
- Sassen S (2001) *The Global City: New York, London, Tokyo*, Princeton: Princeton University Press.
- Söderström O, Paasche T and Klauser F (2014) Smart Cities as Corporate Storytelling. *City* 18(3): 307–320.
- Thomas V, Wang D, Mullagh L and Dunn N (2016) Where's Wally? In search of citizen perspectives on the smart city. *Sustainability*, 8(3), 207: 1-13.
- Townsend AM (2013) *Smart Cities: Big Data, Civic Hackers, and the Quest for a New Utopia*, New York, NY: WW Norton & Company Inc.
- UNFPA (2007) *State of World Population 2007: Unleashing the Potential of Urban Growth*, New York: United Nations Population Fund.
- Urry J (2016) *What is the Future?* Cambridge: Polity Press.
- Voros J (2003) A generic foresight process framework. *Foresight*, 5(3): 10-21.
- Wood J (2007) *Design for Micro-Utopias: Making the Unthinkable Possible*. Aldershot: Gower.
- Wright EO (2010) *Envisioning Real Utopias*. London: Verso.