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Urban atmospheres in a digital world

Abstract

Our cities are diverse, complex and dynamic shared spaces, drawing together people with different aspirations, needs and perspectives and increasingly shared with and understood by way of digital technologies. We can grasp that digital aspects such as the movement of data, automation and social media will be important in our future shared environments, but how these might shape the feel of our future cities remains unknown. Despite this uncertainty, the city's affective and sensorial affordances will remain crucial in how we make sense of and understand them. In this talk I speculate on what thinking atmospherically might open up for how we think about and design for our future shared environments, by way of recent work on the role of light, dark and lighting design in constituting urban atmospheres.

Introduction

Our cities are diverse, complex and dynamic shared spaces, drawing together people with different aspirations, needs and perspectives that are increasingly shared with and understood by way of digital technologies. We can grasp that digital aspects such as the movement of data, automation and social media are important now and in our future shared environments, but how these might shape the feel of our future cities remains less examined. Despite this uncertainty, the city's affective and sensorial affordances will remain crucial in how we make sense of and understand them. In this paper I aim to connect existing work on atmospheres of public city spaces to concepts of the digital world, exploring how these might come together to shape how cities feel.

There are multiple digital aspects of the city, a relationship so broad that it touches almost every aspect of our lives; indeed it is so imbricated in our daily activities that it often only becomes noticeable when it fails or does not work as we expect.¹ In this paper I do not seek to provide an exhaustive account of the feel of urban digital futures, but rather speculate on what thinking atmospherically might open up for how we think about and design for our shared environments. I will discuss how city atmospheres are constituted and composed in a digital world, and outline how design ethnography can help us think about this ethereal, fleeting and unstable aspect of cities that is nonetheless vital in how we experience them. In doing so, I

pair two conceptual areas. The first is recent literature in cultural geography on atmospheres, which I then connect to recent critical social science inquiry on digital technology and the experiential world. Against this conceptual background, my main critical move in this paper is to use this to explore how urban 'communities of sense',² are now constituted in 'more or less' digital ways. To exemplify this framework, I then discuss my research concerning light, dark and lighting design in urban contexts and conclude by sketching some of the implications of this for the sensorial and affective experience of urban environments.

Digital technology in public atmospheres

Recent work on atmospheres in human geography and architectural theory has deployed it as a concept to bring together spatial, material, representational and mobile aspects of urban settings, in order to shed light how people understand these surroundings. Here, atmospheres are taken up in experience, but are a sort of force field that pull us together with our surroundings as we attune to them.³ Our bodies are always emplaced in specific empirical configurations, or spaces 'tuned' to atmospheric effect that guide their impressions, feelings and capacities for action.⁴ This 'guidance' is not complete or irresistible, however, and Griffero points to the excessive qualities of atmosphere, calling it a 'a something-more... perceived by the felt-body in a given space, but never fully attributable to the objectual set of that space'.⁵ Building on this, Sumartojo and Pink have anchored atmospheres empirically in specific settings, arguing that it is composed in the combination of 'sensation, temporality, movement, memory, our material and immaterial surroundings, and other people'.⁶ Others have called these atmospheric building blocks 'quasi-things' through which we perceive the world as an 'atmospheric field of situations, potentialities or quasi-things...such as feelings, voices or other corporeal forces'.⁷ Thibaud similarly highlights the importance of 'the situated, the built and the social dimensions of sensory experience'.⁸ What this points to is that atmospheres cannot be properly understood in the abstract, but rather are always empirically tethered and must be conceptualised and analysed in the context of the specific settings in which they arise and with the people who apprehend them.

It follows that, rather than placing particular objects, built forms or technological systems at the centre of inquiry, an orientation to atmosphere instead pulls these together with the affective, sensed and immaterial aspects of human experience, and asks how these configure together, and what these configurations do. While design is an important part of these entangled elements, atmospheres are not usually the explicit aim of design attention, perhaps because the overall feeling of city spaces exceeds the control of any one actor or aspect, and changes constantly as experience unfolds. Nevertheless, thinking atmospherically amounts

to a call to attend to the everyday experience of urban places, and designing into and with their everyday flows. Sumartojo and Pink identify this ongoing quality:

atmosphere emanates from connections between things and how they shift and align around and with us and with each other. While atmospheres are sensed, experienced and often understood in spatial terms, they are not limited by particular spaces - that is, they should not be thought of as bound or contained by space, or beginning and ending in clearly identifiable ways.⁹

Such an approach accords with work on urban public place that understands it as constantly changing and shifting, thickened by affective encounters that attach particular meanings for individuals.¹⁰ It also calls us to attend to memory and anticipation, alongside the material and sensorial aspects of the environments in which we dwell and move, as crucial to how we make sense of our surroundings.

The focus on the experiential world has also been taken up in scholarship concerning digital technologies and everyday life. For Pink, Ardèvol and Lanzani, this means treating any digital encounter as open and ongoing, with a continuing resonance in people's lives. They explain 'digital materiality' as an emergent process 'not as an end product or finished object', allowing them to 'break down the boundaries that are assumed when questions are asked about what is digital and what is not'.¹¹ An important aspect of this work is the sense that we cannot now disimbricate ourselves from digital technologies, as in Lupton's work on the quantified self, where she shows the variety and depth of engagement with self-tracking technologies that measure and record multiple aspects of people's bodily experience including exercise, sleep, diet, heart rate and weight.¹² However, despite the growing ubiquity of this and other intimate engagements with technology, quantification does not lead to order or perfect control, and does not operate outside the contingency of normal experience. This means that we must continue to recognise the 'messiness, unpredictability and relationality of a whole range of digital technologies in people's experiences' rather than 'seeking to somehow separate out or privilege the digital as a focus of inquiry'.¹³

This entanglement with the experiential world is also reflected in work that takes a critical social science approach to the smart city. Mattern, for example, questions current approaches to quantifying, representing and interfacing with cities that treat them as assemblages of data, instead proposing that we use existing 'windows into the urban operating system' to consider whether our cities 'are upholding an open, democratic ethic'.¹⁴ Here digital technologies are not simply about efficiency or forms of metropolitan governance, but are inextricable from how

we experience urban environments and create the structures that will condition their futures. As researchers, this suggests that when we interrogate people's experiential worlds, we should treat the algorithmic or code-based aspects of the digital as folded together with the affective and perceptual. Berry also identifies this, arguing that 'the historical distinction between the digital and the non-digital [has become] increasingly blurred, to the extent that to talk about the digital presupposes an experiential disjuncture that makes less and less sense'.¹⁵

For Mattern, an important location of research inquiry is the interface between people and the computational systems embedded in cities. Taking a somewhat different starting point to the interface, Rose proposes it as a way for thinking about how we now encounter and make sense of 'cultural objects' that are increasing mutable and move across different forms of media, a change from their historical treatment as stable, inert units.¹⁶ This is important, she argues, because digital technologies have transformed how we can think about those things, images, ideas or forms that culture is built upon – and by extension, this includes built urban form and other articulations of design processes. Thus, for example, a building is not just an immersive bodily experience in 'real' space, but is constructed with the aid of digital technologies, can be visually explored via digital photography or in virtual environments, can have its energy usage quantified and evaluated, and so on.

It follows that we can think of most aspects of our surroundings and our experiential worlds as now 'more or less digital,' recognising the entanglement and mutual permeability of the so-called 'offline' and 'online', and 'non-digital' and 'digital' without separating out these realms and treating them as somehow in opposition to each other.¹⁷ Rather, thinking about our experiential worlds as always now 'more or less digital' gestures towards both the imbrication of digital technologies in almost all aspects of human experience in some way, as well as the contingency, fluidity and dynamism of the shape, scope and influence of the digital from moment to moment and person to person. Connecting this with the discussion of atmospheres above, it follows that we can also conceive of shared public feelings that are composed, experienced and made sense of across different spaces, platforms, activities and objects as 'more or less digital'.¹⁸

Approaching such shared feelings in the context of diverse urban publics from another, affective angle, Hinderliter *et al* identify what they call 'communities of sense'. In such temporary communities, the feeling of being with others that is composed through a shared sensory world that, in turn, gives rise to a sense of belonging.¹⁹ These transitory feelings of togetherness can take the form of short-term public gatherings, in which individual participants

identify with and help to make shared affective and sensory states, drawing together with each other for a moment and then dispersing. An example is in Edensor's study of the swiftly changing feelings and sensations that course through a crucial football match, drawing people together temporarily into moments of collective anxiety, excitement and ecstasy.²⁰ Such 'communities of sense' are powerful but ephemeral, and operate on a more fleeting register of response than more fixed discourses that might also characterise our ways of feeling the city, such as security, accessibility or economic inequality. This is also important because it highlights that how cities feel varies enormously depending on who is experiencing them, and that communities of sense might coalesce in different ways around the same object, as we can see in protests over historical memorials, for example, where different groups have very different political and cultural understandings and responses to symbolic built form in public space. That such cultural contests occur across multiple digital and spatial realms at different moments and with different intensities also demonstrates their 'more or less digital' character.

So far in this paper I have brought together the concept of atmospheres with the idea of the 'more or less digital', showing how these are a part of how feelings are shared and how such feelings might draw people together into important if temporary 'communities of sense'. In the next section I briefly discuss recent research that deploys this conceptual linking, before turning to some general implications of using such a framework.

Shared urban atmospheres in a digital world

Since 2018, with colleagues I have been developing a program of research that looks at the role played by light and dark in helping to compose atmospheres in public places. This has included work concerning projection art, mass commemorative events, automation and the 'lit world', the possibilities offered by darkness and light and lighting design 'on the move'.²¹ Digital technology underpins much of this work, because of its role in lighting technologies themselves as well as the automated (and manual) systems in our cities that control them. However, as mentioned above, it is impossible to controls all forms of light and dark in cities, because there is no system that perfectly aligns urban luminaries. Light from buildings, cars, crosswalks and illuminated advertisements spills out, mixes, clashes, confuses and enchants, highlighting the messy, contingent and changeable aspects of digital technology 'in the wild'.

Light, dark and lighting are a useful means to understand atmospheres in a digital world because of how they are central to our experiential worlds. Indeed, Ingold insists that light is 'a phenomenon of experience, of that very involvement in the world that is a necessary precondition for the isolation of the perceiver as a subject with a "mind", and of the environment as a domain of objects to be perceived'.²² Light is foundational to how we experience and

make sense of our surroundings, and to how we understand ourselves as spatially and socially located. It also supports particular shared moods. For example, Edensor's discussion of the convivial, playful and fun atmospheres at the annual Blackpool Illuminations, a well-known and longstanding local attraction in the northwest of England; or my own work on the role of darkness on Anzac Day in symbolising martial sacrifice and linking people to historical soldiers during a commemorative ceremony.²³

Bringing the symbolic, affective and expressive qualities of light together with digital technology, Sarah Pink and I conducted a study of automated light in daily routines to conceptualise the 'lit world' as comprised of complex and unpredictable digital materialities.²⁴ Asking participants to photograph examples of automated light on a normal day's commute, these 'light route' photographs surfaced many things that usually go uninterrogated: how the light is often multi-source; the mixing and mingling of different lights; the importance of the colour, movement and brightness of light; the activities that light indexes; the feelings it gives rise to or is associated with, and so on. It also revealed assumptions about what people understood 'automation' to mean, because they had to decide for themselves what to photograph as examples. This revealed the workings the everyday digital world, even when our participants made sense of such technologies by way of different feelings, activities or moods. It also showed how automation itself is messy and complex, and even uncertain. For example, one participant related that while she believed crosswalk signals at peak times in the city were automated, she still found herself pressing the button to decrease her sense of frustration at having to wait for the lights to change. As we explain:

The ambiguity of the definition of automation was common for participants, and they were consistently uncertain about whether lights were automated, but assumed they were in many cases for the purposes of taking photographs, and these assumptions were based on the effect the lights had on their activities and movements through the city as much as whether a person had actually and directly switched them on.²⁵

This work on the lit world demonstrates how we must understand the 'more or less digital' as much in terms of how it feels as in terms of its actual digital aspects. Put differently, the value of interrogating the digital atmospherically lies in the fact that we often experience it as sensory and affective – and because of this, light, dark and lighting are useful 'quasi-things' that draw these aspects together. Moreover, they also draw us into proximity with others, creating temporary groupings, brief 'communities of sense' organised by way of the affective and perceptual aspects of automated light, whether these be the people assembled for a few

moments at a busy city intersection or, as I will discuss next, attendees at a local projection art festival.

My second example of more or less digital atmospheres is drawn from a 2017 study of the Gertrude Street Projection Festival, an annual light art event that takes place in an inner-city Melbourne neighbourhood. Australia's longest-running projection festival, it combines the work of well-known artists with installations from emerging artists and students, and includes collaborations with local residents. Projection art has the capacity to refigure public space, transforming the materiality of the surfaces that it is projected onto, introducing novel movement, colour and imagery that concentrates attention in new ways, and drawing people out onto the streets and into affective proximity with each other.²⁶ The content of the artworks is also important in making meaning, but here I am more interested in the effects and affects of the lighting itself. Such events precisely illustrate how 'communities of sense' can arise by way of lighting technologies that configure into atmospheric experience, as in this example of a shopfront projection installation:

As we observed and discussed the work, individuals commonly entreated their companions to draw closer: "Come and look at this!" Small crowds huddled around, drawing more curious onlookers, and generated discussion about the mechanics of the piece and what it might signify. This further underlines how the festival was coproduced by affective engagements of visitors with the projections, who contributed to the unfolding atmosphere, which fluxed according to weather, time of day, and quantity of pedestrians and vehicles.²⁷

Moreover, the works did not just contribute to atmospheres in the immediate vicinity of the projections themselves. The whole festival was imbued with a sense of community engagement and shared excitement as people moved from site to site, following maps, discussing the works with friends or strangers, or simply standing together, looking. This begins to get at Mattern's comments about how engagement with urban computational systems provide an opportunity to consider whether our cities are meeting the challenge of being open and ethical. As with the brief examples of automation above, the sensory and atmospheric affordances of the lit world provide strong examples of how we can pull these concepts together into an actionable research agenda focused on digital technologies.

Implications

Jean-Paul Thibaud asks 'what does an ambiance make it possible to be, to experience, to do, to perceive and to share?'²⁸ This moves away from trying to define atmospheres in the

abstract, and instead attends to what has to configure empirically for them to be apprehended. As I have pointed out in this paper, this means that atmospheres are always situated, and also carry a seed of action in them. Put differently, what is useful about atmospheres as a concept is what they make possible, rather than simply what they are, which is a category that will always resist definition anyway. In the examples of automated light and projection art, we can see both the specific location of atmospheres in city environments, but also the distinctive if temporary 'communities of sense' they help to compose precisely because of how in these examples people were drawn together via shared sensory and affective experiences – or in other words, atmospheres.

The commonplace observation about digital technologies is that they are inextricably entangled in contemporary spaces, societies and economies and that they exceed our ability to control or even understand them. In this paper, I have taken a different view of this relationship, exploring instead how we experience them as part of our everyday, and often shared, surroundings. Accordingly, staying with the question of what atmospheres might do, empirically and conceptually, in this section I speculate on three implications for design.

First, atmospheres do not uniformly adhere to the intentions of the people who seek to design, stage, orchestrate or engineer them, not matter how skilled this work may be. Even though they are often an object of design, empirical research shows the limits of these attempts and the unpredictability of individual and shared experience. Instead, we can think of atmosphere as a form of potential because it is always in emergence, which allows us to acknowledge that it is never completed.²⁹ The question for designers is how to design *into* this potential, without seeking to control it, but rather recognizing its capacities to draw people together via sensory and affective experience.

Moreover, and as the example of the lit world shows, discontinuity and messiness are the norm in human experience, when systems or activities work only imperfectly, behave unpredictably or do not join up with other things. This pulls somewhat against the logic of smart cities as a vision of automated systems calibrated for efficiency, but it means designing for a complex world where design will be taken up in the experience of people who will ongoingly complete it for themselves. This means designing with the open, ethical shared futures that Mattern alludes to in mind, perhaps via speculative design processes, or by attending to improvisational, everyday forms of design that people are constantly doing.³⁰

Finally, atmospheres are excessive – they cannot be controlled. We cannot predetermine, control or predict people's experiential worlds, which are messy, unsynchronised and

unfolding, as I have said. Instead, I suggest that the role of design is to create interventions that make possible the circumstances that might encourage particular types of atmosphere to emerge – not to design atmospheres as such, but to contribute to the conditions of its coalescence.³¹ This means recognising the limits of design, but also how it goes forward in unpredictable ways, into a world with other people, objects, technologies and systems – including digital ones – that will inevitably transform it from the moment it is manifest.

¹ Rob Kitchin, R and Sung-Yueh Perng (eds.), *Code and the City* (Abingdon: Routledge, 2016), 2.

² Beth Hinderliter, William Kaizen, Vered Maimon, Jaleh Mansoor, and Seth McCormick (eds.), *Communities of Sense: Rethinking Aesthetics and Politics* (Chapel Hill: Duke University Press, 2009).

³ Ben Anderson, 'Affective atmospheres', *Emotion, Space and Society* 2 (2009), 77-81. Gernot Böhme, 'The art of the stage set as a paradigm for an aesthetics of atmospheres', *Ambiances* (2014) <https://journals.openedition.org/ambiances/315>. Accessed 19 November 2018.

⁴ Böhme, 'The art of the stage set'.

⁵ Tonino Griffero, *Atmospheres: Aesthetics of Emotional Spaces* (Sarah de Sanctis (trans)) (Farnham: Ashgate, 2014 [2010]), 6.

⁶ Shanti Sumartojo and Sarah Pink, *Atmospheres and the Experiential World: Theory and Methods* (London: Routledge, 2018), 6.

⁷ Mikkel Bille and Tim Flohr Sørensen, 'A Sense of Place', in Mikkel Bille and Tim Flohr Sørensen (eds.), *Elements of Architecture: Assembling Archaeology, Atmosphere and the Performance of Building Spaces* (London: Routledge, 2016), 13. See also Tim Ingold, *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill* (London: Routledge, 2011).

⁸ Jean-Paul Thibaud, 'The backstage of urban ambiances: When atmospheres pervade everyday experience', *Emotion, Space and Society* 15 (2015), 40.

⁹ Sumartojo and Pink, *Atmospheres*, 56.

¹⁰ Cameron Duff, 'On the role of affect and practice in the production of place', *Environment and Planning D* 28 (2010), 881-895. David Bissell, *Transit Life: How Commuting is Transforming Our Cities* (Cambridge, MIT Press, 2018).

¹¹ Sarah Pink, Elisenda Ardèvol and Dèbora Lanzeni (eds.), *Digital Materialities: Design and Anthropology* (London: Bloomsbury, 2016), 10.

¹² Deborah Lupton, *The Quantified Self: A Sociology of Self-Tracking* (Cambridge: Polity, 2016)

¹³ Shanti Sumartojo and Matthew Graves, 'Feeling through the screen: Memory sites, affective entanglements and digital materialities', *Social & Cultural Geography* (2019) DOI: 10.1080/14649365.2018.1563711.

¹⁴ Shannon Mattern, 'Interfacing Urban Intelligence' in Rob Kitchin and Sung-Yueh Perng (eds.), *Code and the City* (Abingdon: Routledge, 2016), 52.

¹⁵ David Berry, 'Post-Digital Humanities: Computation and Cultural Critique in the Arts and Humanities', *Educause*, May/June 22-26 (2014), 22.

¹⁶ Gillian Rose, 'Rethinking the geographies of cultural "objects" through digital technologies: Interface, network and friction', *Progress in Human Geography* 40, 3 (2016), 334-351.

- ¹⁷ Sam Merrill, Shanti Sumartojo, Angharad Closs Stephens and Martin Coward, 'Togetherness after Terror: Commemorative Public Atmospheres during the Manchester Bombing's First Anniversary', *under review*.
- ¹⁸ See Sam Merrill and Simon Lindgren, 'The rhythms of social movement memories: the mobilization of Silvio Meier's activist remembrance across platforms', *Social Movement Studies*, Online First (2018).
- ¹⁹ Hinderliter et al, *Communities of Sense*.
- ²⁰ Tim Edensor, 'Producing atmospheres at the match: Fan cultures, commercialization and mood management in English football', *Emotion, Space and Society* 15 (2015), 82-89.
- ²¹ Sarah Pink and Shanti Sumartojo, 'The Lit World: living with everyday urban automation', *Social & Cultural Geography* 19,7 (2018), 833-852; Shanti Sumartojo and Sarah Pink, 'Moving through the Lit World: The emergent experience of urban paths', *space and culture* 21,4 (2018), 358-374.
- ²² Tim Ingold, *The Perception of the Environment*, 258.
- ²³ Tim Edensor, 'Illuminated atmospheres: anticipating and reproducing the flow of affective experience in Blackpool', *Environment and Planning D* 30 (2012), 1103-1122; Shanti Sumartojo, 'On atmosphere and darkness at Australia's Anzac Day Dawn Service', *Visual Communication* 14, 2 (2015), 267-288.
- ²⁴ Sarah Pink and Shanti Sumartojo, 'The lit world'.
- ²⁵ Sarah Pink and Shanti Sumartojo, 'The lit world', 843.
- ²⁶ Sarah Barns and Shanti Sumartojo, 'When one idea led to another: Re-inscribing and recombining thinking spaces using night-time projections at the Australian National University', *The Senses and Society* 10, 2 (2015), 1-21.
- ²⁷ Tim Edensor and Shanti Sumartojo, 'Reconfiguring Familiar Worlds with Light Projection: The Gertrude Street Projection Festival', *GeoHumanities*, DOI: 10.1080/2373566X.2018.1446760 (2017), 14-15.
- ²⁸ Jean-Paul Thibaud, 'The backstage of urban ambiances, 40.
- ²⁹ Ben Anderson, *Encountering Affect: Capacities, Apparatuses, Conditions* (Farnham: Ashgate, 2014).
- ³⁰ Melisa Duque, *Everyday Designing for Revaluating* (Doctor of Philosophy), RMIT, Melbourne (2018). Retrieved from: <http://researchbank.rmit.edu.au/view/rmit:1625042018>
- ³¹ Sumartojo and Pink, *Atmospheres*.