Special Issue: Knowing Urban Environments in a Digitally Mediated Age

F Philosophy, Theory, Models, Methods and Practice

Smart city photo booths: Playful data

EPF: Philosophy, Theory, Models, Methods and Practice
1–17

DOI: 10.1177/26349825251360658
journals.sagepub.com/home/epf
Sage

Jin-Kyu Jung
University of Washington Bothell, USA

Ted Hiebert
Toronto Metropolitan University, Canada

Abstract

This paper shares one of the critical moments in an interdisciplinary collaboration between an urban geographer/planner and a visual artist in which we explore different ways of seeing, knowing, mapping, and imagining. Our work develops integrated and participatory spaces in which to generate stronger and more nuanced geographical and artistic insights into people's embodied experiences and encounters with/of urban space. This essay shares the example of a playful data intervention conducted by students prompted to engage in the complexities and possibilities of digital landscapes. It looks at urban surveillance as a technological ecosystem, thinking particularly about traffic cameras, weather cameras, and other visual monitoring systems—digital infrastructures premised on gathering "data." It also thinks about poetic and experiential alternatives to this way of conceptualizing space. The camera is probably the first step toward integrated urban technological living—from which we can extrapolate and research what other kinds of things are being implemented and how that might fit with the (un)availability of user experience. In response, we proposed a participatory project engaging the question of urban citizenship in which participants find themselves inside of this visual ecosystem and share pictures of themselves taken from publicly available surveillance cameras. We call it "smart city photo booths" and our hope is that it helps us rethink the relationship between data and lived experiences within digitally mediated society. It gets into the concept of "smart" data. We think about smartness as a form of research/espionage that perhaps requires citizen participation and collective human (counter) intelligence to the data-imperatives emerging in the discourses around smart cities.

Keywords

Smart city, sousveillance, playful data, urban ecology, geography and arts

Preamble

I am wandering along 3rd Avenue in downtown Seattle, thinking that today is the day I might go to Pioneer Square to see what is new in the art galleries. Then again, maybe not. It's hard to say—I am comfortably indifferent. Maybe it's because it's so gray outside—that comfortable Seattle hue (well,

Corresponding author:
Jin-Kyu Jung, School of Interdisciplinary Arts & Sciences, University of Washington Bothell, 18115 Campus Way NE, Box 358530, Bothell, WA 98011-8246, USA.
Email: jkjung5@uw.edu

not hue, tone perhaps) that lets me know I'm at home while always reminding me that the city is there too. Seattle is a city of emotions—mostly gray—"seasonal depression" they call it, I think, though I'm not really sure that's right. They say "Seattle freeze" but that's about people not weather. Well whatever. It's hard to care too much about trivialities when you live under a perpetually gray winter sky. Seattle is a city of indifference.

I'm momentarily distracted from my affective wander by a poster stapled to a telephone pole. Not an unusual sight in Seattle, band announcements and meditation groups and dog-walkers all use these urban pillars as sign posts for what's new and important. But this one catches my eye. It says, "smile—you're in a smart city photo booth." There is a QR code. I click it, curious. I see an image of the street where I am standing. I look closer and see myself there too. Caught on camera from above. Looking around I can see the photographer—a traffic light camera perched at the top of the intersection in front of me. I screenshot the image, then I smile and take a selfie with the camera in the background. Smart city photo booth indeed. Someone here shares my sense of humor.

Smart City Photo Booths is a project designed as a sousveillance experiment, following artists, philosophers, and engineers from Guy Debord (1958, 1983) (the Situationist International) to Steve Mann (2013) (a father of wearable Augmented Reality) in the attempt to create opportunities to look and think back at pervasive systems of technological vision. The sousveillance approach balances power among divergent viewpoints that creates equilibrium. It is a creative intervention that demonstrates how digital data engagement could be (re)appropriated and repurposed to produce spatial knowledges that are situated, reflexive, emotional/affected, polyvocal, and flexible rather than foundational (Bilal, 2010; Magid, 2004; Teran, 2009). It focuses on the nuances of the smart city, one particular aspect of digital urban space in the form of an integrated visual surveillance network. The provocation is simple: do a little research to see what kinds of publicly available surveillance cameras are available in our neighborhoods, then visit them, thinking of them as an opportunity to register ourselves as part of the "smart city" complex. It is performative. It is a little bit cynical. It is also a way to play with the big architecture of smart city imaginations. It turns out that most cities—certainly Seattle and surrounding communities from Bellevue to Bothell, Washington—have a robust visual infrastructure for traffic monitoring, weather monitoring, and occasionally, tourist or community promotion (monitoring). This paper thinks about the technological infrastructure of the city and the stakes of participatory citizenship, proposing a practice-based mode of inquiry designed to surface questions about our relationships to technology and to build a basis from which to think further into the modes of human engagement and data within the digitally mediated society that smart cities of the future might require.

Context

The concept of the smart city might be understood as an approach to urban planning and governance which seeks to deploy specific technologies and infrastructure—perhaps especially networked digital devices and sensor-based methods—to produce, collect, and analyze a wide variety of data and make decisions, organize structures and resources, and manage urban environments and activities based on that data (Halegoua, 2020; Kitchin, 2022b; Lampugnani, 2017; Marvin et al., 2016; Picon, 2015; Rabari and Storper, 2015; Rose, 2022; Soe et al., 2022). Technology- and data-centered orientations to smart city implementation are also closely interwoven with entrepreneurial and neoliberal ideas of urban development and has included visions that imagine urban space to be realized in ways similar to those integrated technologies developed by large corporations such as IBM, Cisco, Siemens, Microsoft, and Alphabet (Hollands, 2008; Lorinc, 2022; O'Kane, 2022; Söderström and Datta, 2024). The conceptualization of the smart city and its efforts as a way for private and corporate interests further interject themselves into urban governance and development processes in a top-down manner and as iterations of neoliberal urbanism. There are also concerns around pervasive surveillance and

the creeping technocracy associated with the centering of big data in urban decision-making processes (Dalton et al., 2020; Kitchin, 2014; Klauser, 2017).

In her book *The City is not a Computer*, Shannon Mattern (2021) argues that one limitation of smart city planning, as it currently stands, is the failure to take into account the experience of the actual people that make up the city. She critiques these, in her terms, as a form of "instrumental rationality," which is similar to what Morozov and Bria (2018) call "solutionism." Both concepts similarly point out that smart cities ideas promote a technocratic model of urban governance that presumes that various aspects of a city can be measured and quantified as technical/technological problems which can be readdressed through technical solutions. Citizenship—Mattern (2021) argues, is indelibly impacted by this shortcoming in ways that require a rethinking in particular of the relationship between citizenship and technological infrastructure. These emerging discourses and practices of "smart citizenship" are differently interpreted, often, in a passive way. Gabrys (2016) for instance, proposes the transformation of individual citizenship into the idea of citizens as sensors. Citizen sensing monitors and manages data to feed back information into urban systems; these practices then become a form of constitutive (if passive) citizenship. Within this smart-city framework citizenship transforms into citizen sensing, embodied through practices undertaken in response to and communicated with computational environments and technologies (Gabrys, 2014, 2016).

Zuboff (2019) defines "surveillance capitalism" as the translation of human experience into raw material [data] for behavioral extractive practice. Zuboff (2019) warns that surveillance capitalism not only knows everything about us but also shapes our behavior whereas their operations are designed to be unknowable to us. The fundamental goal of these capitalist data practices are not to fully capture our experience, but rather to render us a calculable data subject within systems of capitalist products and consumptions. As a result, the smart cities are principally designed to create consumers rather than serve citizens (Clark, 2020). The risk is that, in the drive to implement technological systems of operation that maximize efficient movement of people through space, people themselves are left behind (Cardullo et al., 2019; Kitchin et al., 2018; Leszczynski, 2016; Shelton and Lodato, 2019). To put it differently, people can be thought of as "sensors" but they also sense things themselves—something that quantifiable data analysis too often overlooks. What is thus needed is a discussion about "user experience" so to speak, such that the new ecology of the smart city can serve not only to optimize metrics of urban architecture but also to amplify, supplement, or at least include the awareness of the bodies on the ground who are actually impacted by these architectural and technical/technological updates.

The case is not different for smart-city orientations that frame themselves as community-centered. Often emerging directly from critiques of more normative technocratic visions of smart cities, this smart orientation aspires to processes and applications of technology that might tap into communities and urban inhabitants' collective intelligence (Costa and Oliveira, 2017; Hall et al., 2023; McLaren and Agyeman, 2015). However, these more community-centered, participatory orientations often also serve commodifying interests and deepen structural barriers by treating urban inhabitants as consumers and sources of data to be mined or commodified for profit (Cardullo and Kitchin, 2019b; Tavmen, 2019, 2020; Thatcher and Dalton, 2022). In this framework, people are largely cast as consumers and are positioned as data points (Flynn, 2022; Kitchin, 2022a) often exacerbating existing (unequal) power structures (Burns and Andrucki, 2021) that leave many "citizens" out of smart city initiatives and engagements. This could be considered as (re-)branding of smart cities as "citizen-focused" or "citizen engaged" (Cardullo and Kitchin, 2019b: 2) although it simply reproduce the actually existing neoliberal smart city that deepen structural barriers to socio-political participation related to class, gender, age, and ethnicity.

Contributing data may constitute participatory citizenship; however, a techno-systematic framework oriented toward optimization has shaped ideas about active citizenship as well. Most citizens might be considered empowered by technologies that treat them as consumers or sensors to generate

data, or data subject to be steered to act in certain ways, or as raw data which can be turned into a commodity (Cardullo and Kitchin, 2019a; Cardullo et al., 2019; Powell, 2021; Wilson and Tewdwr-Hones, 2022). Datafication—from this vantage point—is understood as a legitimate process that transforms many aspects of our everyday life into valuable data points, embedded and optimized in civic (often, commercial) data-driven intermediaries. Powell (2021) disagree with the legitimacy of datafication but notes how it can—alongside what they call platformization—provide opportunities for civic action–ways of shaping and influencing the capacity for social and cultural action to take place. It is also an example of what Powell (2021: 79) considers the "flattening and commodification of datafied citizenship."

Like Powell, we also critique the narrative of innovation as a driver of smart-city advancement and we follow scholars who believe that discourses of urban innovation yield more tension than resolve (Halegoua, 2020; Marvin et al., 2016; Zukin, 2020). Here, economic development and growth are imagined to occur through the cultivation of creative economies that attract entrepreneurial talent, and beget further technical/technological innovation. However, this is a very narrow view of innovation since it does not incorporate many other forms of creative and resourceful residents of the city, including those who have figured out how to persist and thrive despite historical and structural barriers. The intermediation of networks and technologies is designated as "smart"; however, the impetus of innovation and the agents of this "smartness" often remain obscure (Halpern et al., 2017; Halpern and Mitchell, 2023; Wilmott, 2021).

One might extrapolate from some of these more specific arguments to think of the ways that "data" itself has become a contemporary environment. We follow, for instance, art historian Amanda Boetzkes who argues that contemporary environmental conscience requires a larger context awareness of climate crisis and the ways that human impact has dramatically reshaped what is meant by "environment." Boetzkes calls for, what she terms "ecologicity" as a way to think of the environment as a system already embedded within a technical understanding of the planet (Boetzkes, 2015). Adapting this discussion to a more urban framework, one might equally call for a sort of "technologicity" that delineates itself from a purely technical understanding of urban infrastructure by insisting on the city as itself an ecosystem of sorts, an environment (in the UX sense) in which the task is not simply to update technological systems but to somehow also implement a degree of relationality, participation, or conscientious engagement among urban populations. This is more difficult than it seems. Historically, technological upgrades to city planning have tended to either ignore the individual or to treat individuals themselves as part of the problem that technology is designed to offset. We think of the trend toward minimizing human error in high stakes urban sites like subways, or the ways that systems of traffic regulation look to impose standards and codes of behaviors upon their human users. And indeed, smart site surveillance tends to follow this logic—traffic cameras, for instance, triggered by cars running red lights or motivated by a desire to determine culpability in a post-accident context.

In many ways, it makes sense as an extension of the mid-20th century logic of surveillance as a method of control and regulation. Most famously marked by Jeremy Bentham's discussion of the panopticon—and popularized by Michel Foucault (1979) in his book *Discipline and Punish*—the logic of surveillant capture has long been assumed to be a one-way system designed both for preemptive behavioral regulation and for punitive retroactive response. But what's important here is not the imagination of the system itself—the logic of surveillance simply follows the logic of photographic capture, which is premised on an objectification and externalization of human action. What matters more—as Foucault argues—is the ideological consequence of living within a surveillance grid. That is, as systems of surveillance infiltrate the lived human imagination, similar to Gilles Deleuze's (1992) account of the "control society" and Maroš Krivy's (2018) description of "cybernetic urbanism." We increasingly understand ourselves already as living under the ominous sign of technological oversight. We are captured at ATMs and on store CCTV. We are tracked through electronic purchases and Internet browsing. Indeed we increasingly embrace the transparency of

surveillance ideologies by geo-locating ourselves in social media, Air Tagging and Tile tracking our belongings (and sometimes our pets and children) such that we live under the operative assumption of continuous passive capture.

These stakes might be amplified (or exaggerated, depending on how one looks at it) by thinking about the theories of French thinker Paul Virilio (1997, 1999) who famously argued that when technology becomes ubiquitous—as we think it is fair to say about systems of technical capture—the relationship between humans and technology is reversed. No more are humans the operators of technological infrastructure but literally residents of a technological ecosystem, subjects even of the technical gaze even more so than that of human society. This "full spectrum" imagination of technological infrastructure is only amplified by discussions of the smart city, which promises greater efficiency and regulation while also providing valuable new moments for advertising, marketing, and individualized custom solutions to the challenge of integrated usership. Indeed the promise of a smart city imagination is that of a predicted experiential algorithm designed to facilitate alignment with the operational infrastructure of the city while appearing customized enough to offset the regulatory reality of systems of control. In the smart city, it is the city that is imagined to be smart—adaptive, responsive, reliable, and ostensibly neutral—not the people themselves. We believe the opposite to be the case, the ideal smart citizen is to be articulated as someone who can constantly adapt, learn, and remain resilient to changing technologies and environments. The new behavioral norm of smartness and the construction of the smart citizen embeds a cybernetic vision, for example, active engagement, contribution, and immersion into the activity of sensing (Rose, 2020; Tavmen, 2023; Zandbergen and Uitermark, 2020).

Creative methodologies

This is the context in which we propose a project called "Smart City Photo Booths," which engages the question of urban citizenship in 2 iterations, one grown from a collaborative interdisciplinary class we taught on "Mapping and Imagining," and another designed as an extension project that locates this discussion in broader urban space. We engage with critical and creative methods in geography, arts, and planning, particularly considering creative geovisualization as the visual representation of creative forms of data and thinking with spatial information–a visualization that preserves, represents, and generates more nuanced, contextual, and deeply contingent meanings of place and people with humanistic and artistic approaches. In the past 10 years, we have collaborated to bring together qualitative and creative geovisualization, contemporary art, and digital technology (Hiebert and Jung, 2019; Jung and Hiebert, 2016; Jung and Hiebert, 2019). We aim to develop a newly integrated interdisciplinary space that can generate stronger and more nuanced geographical and artistic insights into people's embodied and affective experience.

Creative geographies provide alternative ways to engage, represent, and imagine different forms of embodied and imaginative/imagined geographies (de Leeuw and Hawkins, 2017; Hawkins, 2017; Marston and de Leeuw, 2013). It requires a careful consideration of precisely how geography might be creative, generative, speculative, performative, artistic, and humanistic. Smart City Photo Booth is an example of creative digital geography that demonstrates efforts to explore, experiment, and model creative engagement with digital technologies. We think of creative practices/processes/experiments not as analytic categories but rather as examples of "doing" the creative. Whether painting, knitting, weaving, drawing, performing, augmenting, writing composite poetry, or doing other things, these practices attempt to represent a diverse array of multi-modal data through generative and participatory methods. That is, we see creative or artistic engagement not as an analytic category but as a methodological intervention into the ways that categorical analysis normally proceeds. It is intended to be generative, provocative, self-reflexive and discursive—and actively avoids the demonstrative, illustrative, or argumentative in its methods.

Taking "process-based" approaches is important to produce creative research outcomes, which is to say outcomes not already delineated in advance by predictive data analysis. Instead, we treat the process of data collection, encounter, and representation, as a generative moment. We particularly embrace iterative and recursive engagements without setting up a firm goal in our interdisciplinary collaboration. This makes the process (of doing creative geographies) sometimes complicated and contentious but at the same time sensitive to the possibilities that can grow out of these complexities. Creative methods are ways to produce and make meaning of new forms of data, related to but not limited by traditional approaches to data gathering and creation. New forms of creative practice are enhanced and inspired by different (traditional) methods such as qualitative, ethnography and photo-voice approaches, as well as opportunities for collaborative or participatory engagement. Creative methods also have potential to unearth hidden and intangible social, cultural, and humanistic relations that constitute the meanings of space as we experience it. There is also the transformative potential of creative methods where the boundaries between performance and social context begin to blur (e.g. creative methodologies underpinned by feminist, indigenous, and decolonial ontologies and epistemologies).

One might argue that acts of creativity and imagination take us away from reality; however, they also hold great potential to contribute to our understanding of the empirical world that rational and informatic representation, schemes, and experiences are based on. We acknowledge that the rational and non-rational are socially produced categories with a power laden history that matters in the constitution of creativity. Can we take creative methods more seriously and consider them with rigor? Can creative methods have deservingness and get needed respect for its serious, critical and fun engagement in the real-world implementation in urban planning and policy-making world? How can we view creative practices as making places, forming and transforming the participants who engage with these practices, and shaping forms of knowledge production? These are questions we continue tackling, and we continue exploring both the differences and the common currency between an artist and geographer and resisting the idea of reducing the project to a set of firm or final conclusion.

Using practice-based and project-driven pedagogical techniques, the project invited students to engage in the complexities and possibilities of the digital landscape to tell the narrative about their communities. It is designed to surface questions about our relationship to technology and space/city and to think further into the modes of humanistic and artistic engagement that smart cities of the future might require. Conducted over the course of 2 years, approximately 90 students participated in the Smart City Photo Booths experiment with their consent. The responses included the images taken in response to the challenge as well as a written reflection which helped us to anchor participant response to the concept.

Iteration 1: Relational mapping

The first iteration of this project involved a collaborative mapping exercise where we asked students in an interdisciplinary class to locate themselves within the surveillance grid of the City of Seattle and surrounding areas, using the Padlet platform (https://padlet.com/) as a way to geolocate sites of engagement and to share individualized responses while building a shared collaborative map (Figure 1). The challenge was twofold: first for students to find a publicly available surveillance camera, and second to photograph themselves on site, with the camera as a backdrop to their moment of public presence. The prompt was to try and make themselves visible to the camera, adopting the stance of the "sousveillant" demonstrating reworking, resilience, and creativity in response to the networked architecture of visual capture that permeates the area.

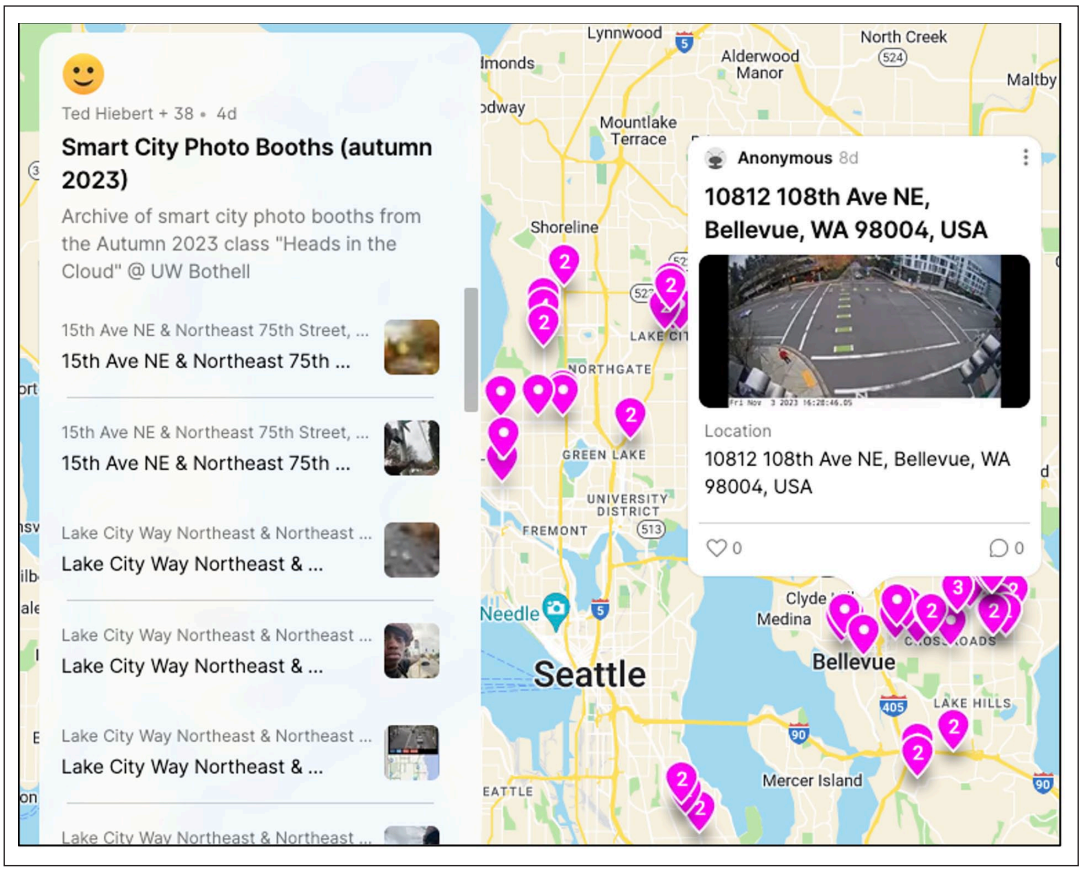

Figure 1. Padlet map showing geo-tagged student responses to the Smart City Photo Booths assignment.

Locating public cameras

It should be no surprise that it is relatively easy to find publicly available surveillance cameras, though many students expressed amazement that there were so many—and that they were so easy to locate. We pointed students to two sites, in particular, the City of Seattle Department of Transportation (SDOT) (https://seattle.gov/transportation) which post online a city map with markers and publicly available photo and video feeds to dozens of "traffic cameras" located throughout the city. We assume (or perhaps we propose) that they are called "traffic" cameras to disarm anxiety about whether the cameras photograph people or vehicles but they remain cameras at heart, photographing the intersections inclusive of sidewalk spaces and crosswalks. Equally, the Washington State Department of Transit (WSDOT) (https://wsdot.wa.gov/) maintains a similar site that includes cameras in nearby municipalities such as Bellevue, Redmond, Lynnwood, and others in Washington. There are also many other public webcams, some designed as novelty feeds (Pike Place Market, for instance) or community hubs (University of Washington Web Cams (https://www.washington.edu/cambots/)). Interestingly, while it is no surprise that such networks exist it nonetheless often solicits surprise to discover them firsthand and to see oneself on these feeds.

Capturing oneself on site

Once located on the City grid, students had two challenges. The first was to take a screenshot of themselves on the City camera—easy enough to do once they were on site. However, the angles of capture and set-up of the camera make it difficult to attribute individuality to the bodies passing through, a challenge we set the students to consider. If this was to be a "photo booth" in any way that might include conscientious interaction or an acknowledgment of positional difference or individual identity, the challenge is to make oneself stand out in some way for the picture. Many creative solutions were proposed—laser pointers, sidewalk chalk, and costumes among the most popular. Acknowledging that even with these creative interventions some of the imaginative energy of engagement might be lost we asked students to also take a selfie on site, with their target camera in the background. The selfies effectively reverse the relationship, the camera appearing often as a minor detail in the background while the student themselves take the majority stage. The pair of images (the screenshot and the selfie) were uploaded to a Padlet map which was collaboratively populated with student-generated images, creating a site of dialogue and documentation of our smart city interactions (Figure 2). The archive of images is also planned for an online exhibition displaying the actions and interventions that emerged from the project.

The participant's written responses are also important to note since they raise many questions about the differential impact of this exercise when cross-referenced with the positionality of the students implicated. While most students were somewhat self-conscious performing this "artistic" experiment, some also expressed anxiety of a more social and political nature. It is not our intent to make claims about differential impact according to categories of race or social class, except to say that differences exist in the ways that participants perceive themselves in relation to the experiment—for some it was fun and enabling, for others it was embarrassing or awkward or dangerous or even potentially illegal (one student even called the police to ask if it was allowed). Personal affective response cannot be caught on camera—but is an important part of the self-reflexive citizenship that motivates the project to begin with.

Iteration 2: Smart city rebranding

The second iteration of the project is more conceptual and also more subtle in its ambitions, attempting to find ways to draw attention to the city's surveillance network while also proposing a conceptual rebranding of surveillance in the form of "smart city photo booths." On our minds is the psychogreography of the city (Fraser and Wilmott, 2020; Hiebert and Jung, 2019; Sadler, 1998; Wood, 2010)—less as a dominant hegemonic system of control and more as an opportunity to provide moments of witness and engagement with the ubiquitous presence of visual systems of capture. Here, posters at street level simply provide an invitation for passersby to see themselves as the City sees them—an update to the ominous signage that warns "this area under closed-circuit video monitoring" that ironically posits sites of capture as smart city photo booths. The posters post a QR code which, when scanned, loads the online footage from city cameras, rebranding them as photo booths for citizen participation (Figures 3 and 4). In the website interface, the label of "City of Seattle Department of Transportation Traffic Cameras" is rebranded as "Smart City Photo Booths" providing a moment of (hopefully) reflection and self-awareness of what we see as an emergent ecology of smart city imagination. That is, whereas surveillance systems of the past relied on ambiguity around the question of whether cameras serve a documentary or pre-emptive purpose, the new imagination of smart cities—from our perspective—requires a sense of participatory citizenship that so far has yet to really be effectively implemented. While our project aims toward a creative and provocative instance of this imagination—taking a form that is at once ironic and playful—we see the stakes of this kind of technological self-reflexivity as essential to the possibility of autonomous experience in the age of increasingly responsive city infrastructures.

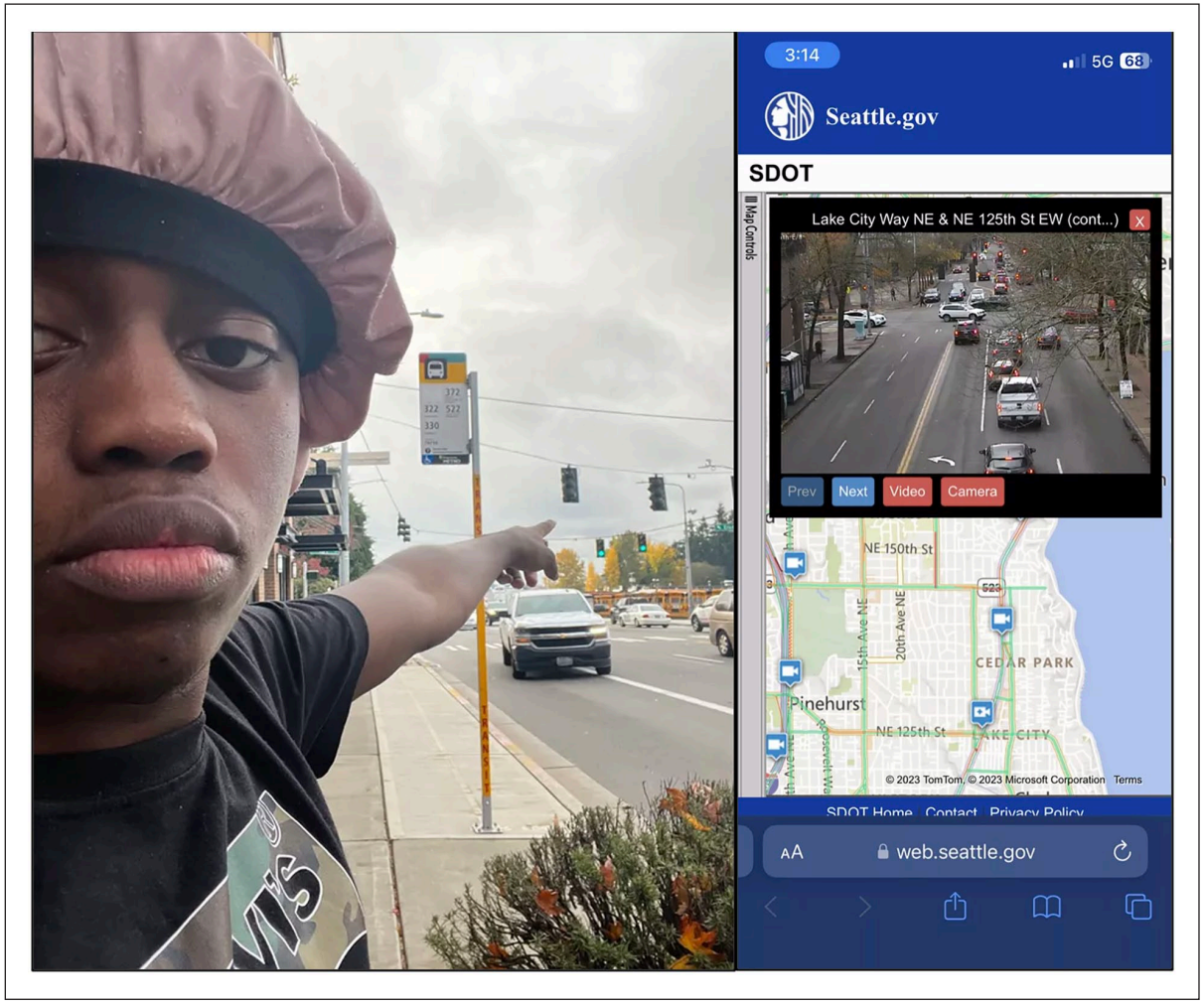

Figure 2. Student response to the Smart City Photo Booths assignment. 2023.

Figure 3. Smart City Photo Booth "red dot" poster (left). Installed at the University of Washington Bothell (right). 2024.

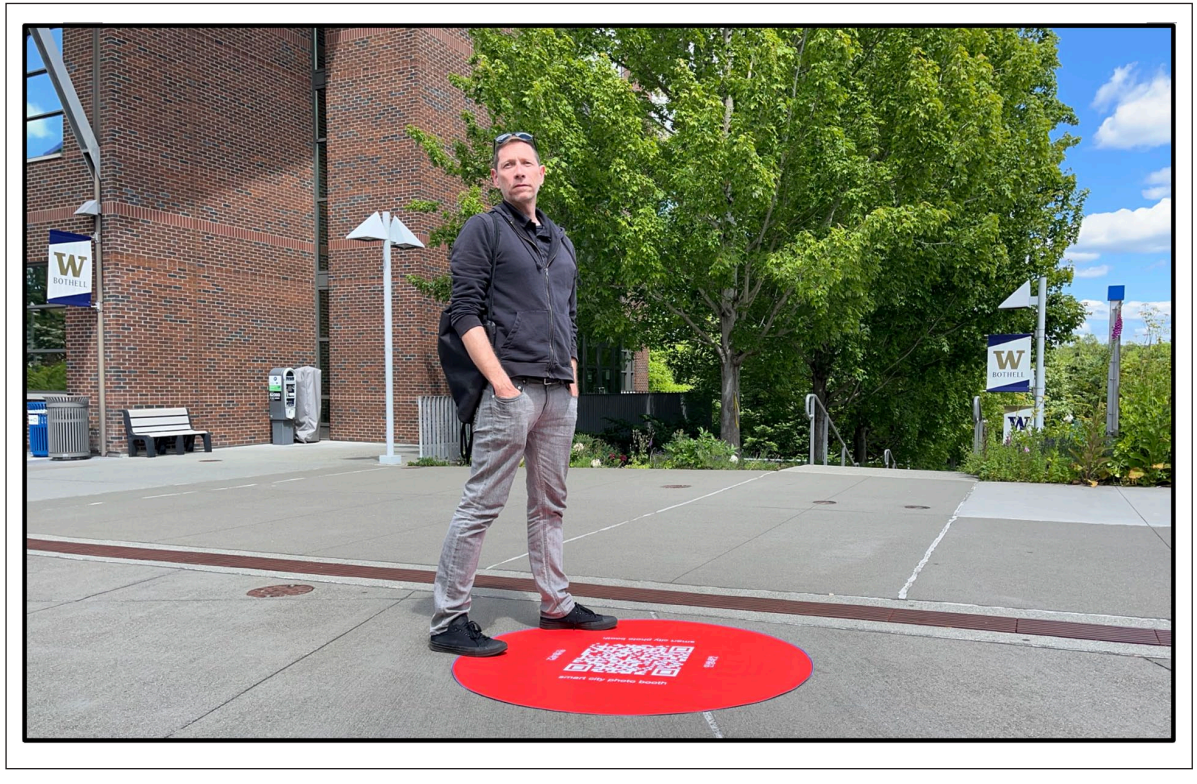

Figure 4. Smart City Photo Booth "red dot" installation. University of Washington Bothell. 2024.

This second iteration of the project is designed for mobility, and we intend to install similar sets of posters in other cities, building a larger scale vision of "smart city photo booths" as a conceptual intervention into the imagination of smart cities to come. We see this as a first site of public engagement with the technological imagination of future cities—a moment of participatory citizenship whose purpose is not to make a rhetorical point but to playfully propose an update to the human imagination of what it means to live within a technological ecosystem.

Playful data

The Smart City Photo Booths project is designed as an artistic intervention with a geographic and urban conscience, which is to say that while we use artistic methods (postering, public installation, participatory interaction) in our work, the projects themselves are always designed to help us think through the stakes of contemporary technological engagement. Much has been made (and properly, we think) about the dangers of surveillance state infrastructure and the ways that new technological trends tend to exacerbate rather than equalize existing inequities in urban space. Those who are already scrutinized become further scrutinized; targeting systems advance not toward ubiquitous monitoring but rather toward high-definition precision capture with increasingly specific targets. Surveillance has never been a friend to the project of social justice.

At the same time, the public paranoia around surveillant systems and data gathering practices has significantly dissipated in recent years. Ned's Atomic Dustbin's provocative song "Kill Your Television" has been replaced by "Birds Aren't Real" and the once-general attitude of concern around data monitoring has also upgraded to a kind of resigned irony about the inevitability of complete and total surveillance. Our students find the concept of privacy quaint—it is not that they do not care about their privacy but rather that they do not believe there is any real way to protect it. As a result, they are more concerned with hiding things from Mom and Dad than from corporations, social media conglomerates, or governments. Futility is the name of the game. Privacy is local, data is local (Loukissas, 2019), and everything else is entirely exposed.

Smart City Photo Booths is not a radical project; it is a simple reframing of existing city infrastructure that aims quite simply to push back against futility and resignation by allowing a playful counter movement to the increasingly full spectrum monitoring of citizen and consumer life. It is not a hack but a mod, not an argument but a space-maker and a proposition for forms of engagement that resist the resignation that is becoming an emotional hallmark of our times. It is not a solution; it is a game—an invitation to think about the city a little bit differently and in ways that value add to the question of lived geographic engagement with the city itself. It also has a potential for inclusive digital citizen participation.

In the spirit of giving real weight to this value-added form of urban engagement, we propose a metric by which to hold space for the moments of participation and engagement that sit in parallel and peripheral relation to the utilitarian imagination of urban surveillance. We call it "playful data" and we think of it as a register of other kinds of response and engagement that might be possible through the apparatuses of smart city technology that already proliferate and do so with a promise of further integration, immersion, and state- and corporation-sponsored capture. Smiles for the traffic camera, or the ATM, or the CCTV—treat them as moments to playfully acknowledge the city, giving them another possible meaning and purpose, even if only as a game, even if only as a moment of play. To do so registers a data point in the geography of "playful data," not simply a reinvention of the sous-veillance tactics of the Situationists, Steve Mann (2013), the Surveillance Camera Players (SCP) (2006) and others, but one that understands it is too late to change the system and so new ways of rethinking our own modes of participatory and engaged citizenship are required. Smile for the smart city photo booths.

Playful ecology

Acknowledging the specific theme of this special issue we want to also gesture to the ways in which we think "playful data" contributes to the reimagining of contemporary environment and ecological thought. First and foremost, playful data insists on an environmental understanding of technology, and an acknowledgment that data is a real element of the actual ecosystem in which human life (especially but not exclusively) takes place. That is, we believe that environment is technological, following thinkers such as Marshall McLuhan (1964), Arthur Kroker (2004), Sherry Turkle (2011), Margret Grebowicz (2015), Amanda Boetzkes (2010), and others who insist that the contemporary global landscape is so heavily inflected by technological processes, pollutions, interventions, and imaginations, that it no longer makes sense to think of the environmental and the technological as categories with any convincing boundary between them. This is a similar perspective to what has come to be called "platform(ed) urbanism," thinking in particular about Tarleton Gillespie's (2010) *The Politics of Platform*, Shannon Mattern's (2017) book *Code and Clay, Data and Dirt* and Sarah Barns' (2020) *Platform Urbanism.* Gillespie (2010) and Mattern (2017) both illustrate how "[I]nfrastructure [platform] begets infrastructure [platform]." It is similar to what Keller Easterling (2014) noted as a method of "extrastatecraft" intended to serve as a platform for the operation of new software for governing human activity. Previously separated and independently operated services, systems, and technologies are integrated as one smart city platform (e.g. sought to integrate traffic, crime, and health together) and acts to accelerate urban innovation through data harvesting. Urban platforms are increasingly "the platform[s] that many urban dwellers are constituted *by* (Barns, 2020: 13) Smart city platforms are digital urban infrastructures for optimizing urban planning and development and gathering and analyzing data about urban activities and systems. Brett Nielsen and Ned Rossiter (2011) invoked the future of the 'logistical city' and Halpern considers this as a 'zone' in which to make the same point about governmentality and computation. Playful data is an emergent ecology of smart city imagination.

Second, playful data keeps in mind that the intentional and unintentional effects of technologies are not equally distributed due to social/societal and material context. Playful data challenges participants to think together about what it means to present and imagine the world around us and reflect on living within an evolving digital and technological landscape attuned to the structural social, political, and political-economic processes. Technologies frequently reinforce and reproduce social biases, for example, often in new powerful ways. There is thus a risk in overinvesting in the authority of data infrastructures—that risk being the opposite of progressive social change and instead a reinforcement of the panic biases that cause such alarm to skeptics of new technology. Allowing for an inflection of play does not, of course, undermine the authority of urban organization—but it does provide a moment of relief from the immersive paranoia of monitored living, a Bahktinian moment of carnivalesque in which the dynamics of power are playfully reversed, even if sort of as a joke, even if only as an artwork, even if just for a moment before the surveillance streams resume their operationalized function.

The trick is in capitalizing on a tactical means of countering the optimization of the system—thinking of Halpern and Mitchell's (2023) discussion of "optimization" in particular. For Halpern and Mitchell, optimization is the technique by which smartness promulgates the belief that everything—every kind of relationship among humans, their technologies, and the environments in which they live—can and should be algorithmically and computationally managed. Here, smart optimization demands the ever increasing evacuation of private interiority on the part of individuals, for such privacy is often implicitly understood as an indefensible withholding of information that could be used for optimizing human relations. Conversely, to optimize a system for play is simply to seek out a moment where that which is already algorithmically and computationally managed can be subjected to human interaction. Play is in the moments of seeing one's reflection in the system—not as a monitored subject (nothing playful about that) but instead as an agent in the moment of appearance. Playful

data involves a feedback loop through which users encounter themselves as data subjects but cast anew, not just as monitored individuals but as part of a participatory moment that exists as surplus to the system (that is how it remains non-threatening and thus playful) while nonetheless allowing for self-encounter and reflection. And maybe a little laugh.

Smart City Photo Booths are a bit of a one-liner, but they are one-liners that allow for specific moments of encountering oneself slightly differently, not just as a detached and monitored subject of the system but as, in some way, in on the joke, even if just for a moment–less as a dominant hegemonic system of control and more as moments of witness and engagements with the ubiquitous presence of visual systems of capture.

While our project aims to make a creative and provocative reflection on the imaginary of the smart city–taking a form that is at once ironic and playful–we see the stakes of this kind of technological self-reflexivity as essential to the possibilities of participatory experience in an age of increasingly responsive city infrastructure. At stake for us are the ways that playful engagements with digital technology and urban space can be made relevant within a "smart" urbanization process that is not intuitively open-ended, inclusive, or participatory. Play is simply one way of providing alternatives to the (usually) technocentric imagination of smart cities to come. Smart photo booths are an example of playful (if still cynical) urban citizenship.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Jin-Kyu Jung https://orcid.org/0000-0001-7222-2532

References

Barns S (2020) *Platform Urbanism: Negotiating Platform Ecosystems in Connected Cities*. Sydney, NSW, Australia: Palgrave Macmillan.

Bilal W (2010) About project. Available at: www.3rdi.me (accessed 7 January 2025).

Boetzkes A (2010) *The Ethics of Earth Art*. Minneapolis, MN: University of Minnesota Press.

Boetzkes A (2015) Ecologicity, Vision and the Neurological System. In: Davis H and Turpin E (eds) *Art in the Anthropocene: Encounters among Aesthetics, Politics, Environments and Epistemologies*. Ann Arbor, MI: Open Humanities Press, pp.271–282.

Burns R and Andrucki M (2021) Smart cities: Who cares? *Environment and Planning A* 53(1): 12–30.

Cardullo P and Kitchin R (2019a) Being a "citizen" in the smart city: Up and down the scaffold of smart citizen participation in Dublin, Ireland. *GeoJournal* 84(1): 1–13.

Cardullo P and Kitchin R (2019b) Smart urbanism and smart citizenship: The neoliberal logic of "citizen-focused" smart cities in Europe. *Environment and Planning C: Politics and Space* 37(5): 813–830.

Cardullo P, Di Feliciantonio C and Kitchin R (2019) *The Right to the Smart City*. Bingley: Emerald Publishing.

Clark J (2020) *Uneven Innovation*. New York: Columbia University Press.

Costa EM and Oliveira ÁD (2017) Humane Smart Cities. In: Frodeman R, Klein JT and Pacheco RCS (eds) *The Oxford Handbook of Interdisciplinarity*. Oxford: Oxford University Press, pp.228–240.

Dalton C, Wilmott C, Fraser E, et al. (2020) "Smart" discourses, the limits of representation, and new regimes of spatial data. *Annals of Association of American Geographers* 110(2): 485–496.

de Leeuw S and Hawkins H (2017) Critical geographies and geography's creative re/turn: Poetics and practices for new disciplinary spaces. *Gender, Place & Culture* 24(3): 303–324.

Debord G-E (1958) Théorie de la derive. *Internationale situationniste* 2(December): 19.

Debord G-E (1983) *Society of the Spectacle*. Detroit, MI: Black and Red.
Deleuze G (1992) Postscript on the Societies of Control. *October* 59(Winter): 3–7.
Easterling K (2014) *Extrastatecraft: The Power of Infrastructure Space*. London: Verso.
Flynn S (2022) *Equality in the City: Imaginaries of the Smart Future*. Bristol: Intellect.
Foucault M (1979) *Discipline and Punish: The Birth of the Prison*. New York: Vintage Books.
Fraser E and Wilmott C (2020) Ruins of the smart city: A visual intervention. *Visual Communication* 19(3): 353–368.
Gabrys J (2014) Programming enviornments: Environmentality and citizen sensing in the smart city. *Environmental and Planning D* 32(1): 30–48.
Gabrys J (2016) *Program Earth: Environmental Sensing Technology and the Making of a Computational Planet*. Minneapolis, MN: University of Minnesota Press.
Gillespie T (2010) The politics of "platforms.." *New Media & Society* 12(3): 347–364.
Grebowicz M (2015) *The National Park to Come*. Redwood, CA: Stanford Briefs.
Halegoua GR (2020) *Smart Cities*. Cambridge, MA: The MIT Press.
Hall PA, Dávila P and Maria J (2023) *Critical Visualization: Rethinking the Presentation of Data*. New York: Bloomsbury.
Halpern O and Mitchell R (2023) *The Smartness Mandate*. Cambridge, MA: The MIT Press.
Halpern O, Mitchell R and Geoghegan BD (2017) The smartness mandate: Notes toward a critique. *Grey Room* 68(Summer): 106–129.
Hawkins H (2017) *Creativity*. New York: Routledge.
Hiebert T and Jung J-K (2019) Psychogeographic visualizations: Or, what is it like to be a bat? *Cultural Geographies* 27: 477–484.
Hollands RG (2008) Will the real smart city please stand up? *City: Analysis of Urban Trends, Culture, Theory, Policy, Action* 12(3): 303–320.
Jung J-K and Hiebert T (2016) Imag(in)ing everyday geographies: A case study of Andrew Buckles' why wait? project. *GeoJournal* 81(4): 597–614.
Jung J-K and Hiebert T (2019) Imagining the details: Happy places and creative geovisualization. *Living Maps Review*. Available at: http://livingmaps.review/journal/index.php/LMR/article/view/172
Kitchin R (2014) *Data Revolution: Big Data, Open Data, Data Infrastructures & Their Consequences*. Los Angeles, CA: Sage.
Kitchin R (2022a) Afterword: Decentring the Smart City. In: Flynn S (ed.) *Equality in the City: Imaginaries of the Smart Future*. Chicago, IL: The University of Chicago, pp.260–266.
Kitchin R (2022b) Conceptualising smart cities. *Urban Research & Practice* 15(1): 155–159.
Kitchin R, Lauriault TP and McArdle G (2018) *Data and the City*. London and New York: Routledge.
Klauser FR (2017) *Surveillance & Space*. Los Angeles: Sage.
Krivy M (2018) Towards a critique of cybernetic urbanism: The smart city and the society of control. *Planning Theory* 17(1): 8–30.
Kroker A (2004) *The Will to Technology and the Culture of Nihilism: Heidegger, Nietzche, Marx*. Toronto, ON, Canada: University of Toronto Press.
Lampugnani D (2017) Questioning the Smart City: From techno-entrepreneurial to intelligence-enabling. In: Aiello G, Tarantino M and Oakley K (eds) *Communicating the City: Meanings, Practices, Interactions*. New York: Peter Lang, pp.17–30.
Leszczynski A (2016) Speculative futures: Cities, data, and governance beyond smart urbanism. *Environment and Planning A* 48(9): 1691–1708.
Lorinc J (2022) *Dream States: Smart Cities, Technology, and the Pursuit of Urban Utopias*. Toronto, ON, Canada: Coach House Books.
Loukissas YA (2019) *All Data Are Local: Thinking Critically in a Data-Driven Society*. Cambridge, MA: The MIT Press.
McLaren D and Agyeman J (2015) *Sharing Cities*. Cambridge, MA: The MIT Press.
McLuhan M (1964) *Understanding Media: The Extensions of Man*. New York: McGraw-Hill.
Magid J (2004) Trust. Available at: https://vimeo.com/62092355 (accessed 7 January 2025)
Mann S (2013) Steve Mann: My "augmediated" life. Available at: https://spectrum.ieee.org/steve-mann-my-augmediated-life (accessed 22 June 2024).

Marston SA and de Leeuw S (2013) Creativity and geography: Toward a politicized intervention. *The Geographical Review* 103(2): iii–xxvi.

Marvin S, Luque-Ayala A and McFarlane C (2016) *Smart Urbanism: Utopian Vision or False Dawn?* London and New York: Routledge.

Mattern S (2017) *Code and Clay, Data and Dirt: Five Thousand Years of Urban Media*. Minneapolis, MN: University of Minnesota Press.

Mattern S (2021) *A City Is Not a Computer: Other Urban Intelligences*. Princeton, NJ: Princeton University Press.

Morozov E and Bria F (2018) Rethinking the smart city: Democratizing urban technology. Rosa Luxemburg Stiftung New York Office. Available at: www.rosalux-nyc.org (accessed 8 January 2025).

Nielsen B and Rossiter N (2011) The logistical city. *Transit Labour: Circuits, Regions, Borders* 3: 2–5.

O'Kane J (2022) *Sideways: The Google Couldn't Buy*. Toronto, ON, Canada: Random House Canada.

Picon A (2015) *Smart Cities: A Spatialised Intelligence*. West Sussex: Wiley.

Powell AB (2021) *Undoing Optimization: Civic Action in Smart Cities*. New Haven, CT; London: Yale University Press.

Rabari C and Storper M (2015) The digital skin of cities: urban theory and research in the age of the sensored and metered city, ubiquitous computing and big data. *Cambridge Journal of Regions, Economy and Society* 8: 27–42.

Rose G (2020) Actually—Existing sociality in a smart city. *City* 24(3–4): 512–529.

Rose G (2022) *Seeing the City Digitally: Processing Urban Space and Time*. Amsterdam: Amsterdam University Press.

Sadler S (1998) *The Situationist City*. Cambridge: The MIT Press.

Shelton T and Lodato T (2019) Actually existing smart citizens: Expertise and (non)participation in the making of the smart city. *City* 23(1): 35–52.

Söderström O and Datta A (2024) *Data Power in Action: Urban Data Politics in Times of Crisis*. Bristol: Bristol University Press.

Soe R-M, de Azambuja LS, Toiskallio K, et al. (2022) Institutionalising smart city research and innovation: From fuzzy definitions to real-life experiments. *Urban Research & Practice* 15(1): 112–154.

Surveillance Camera Players (2006) *Amnesia, We Know You Are Watching*. New York: Factory School.

Tavmen G (2019) "Open data means business": When monetary potential in open data usurps aspirations for accountability and transparency in the Smart City. In: *The 20th Annual Conference of the Association of Internet Researchers*, Brisbane, QLD, Australia, 2–5 October.

Tavmen G (2020) Data/infrastructure in the smart city: Understanding the infrastructural power of Citymapper app through technicity of data. *Big Data & Society* 7(2): 1–15.

Tavmen G (2023) Cybernetic urbanism: Tracing the development of the responsibilized subject and self-organizing communities in smart cities. In: Mackinnon D, Burns R and Fast V (eds) *Digital (In)justice in the Smart City*. Toronto, ON, Canada: University of Toronto Press, pp. 96–106.

Teran M (2009) Life: A User's Manual. Available at: https://archive.transmediale.de/content/michelle-teran (accessed 7 January 2025).

Thatcher J and Dalton C (2022) *Data Power: Radical Geographies of Control and Resistance*. London: Pluto Press.

Turkle S (2011) *Alone Together: Why We Expect More of Technology and Less from Each Other*. New York: Basic Books.

Virilio P (1997) *The Vision Machine*. Bloomington, IN: Indiana University Press.

Virilio P (1999) *Politics of the Very Worst*. New York: Semiotext(e).

Wilmott C (2021) From Panopticons to the Partial: Digital and blockchain mapping in platform urbanism. In: Hodson M, Gasmire J, McMeekin A, et al. (eds) *Urban Platforms and the Future City*. London and New York: Routledge, pp.191–206.

Wilson A and Tewdwr-Jones M (2022) *Digital Participatory Planning: Citizen Engagement, Democracy, and Design*. New York and London: Routledge.

Wood D (2010) Lynch Debord: About two psychogeographies. *Cartographica* 45(3): 185–200.

Zandbergen D and Uitermark J (2020) In search of the smart citizen: Republican and cybernetic citizenship in the smart city. *Urban Studies* 57(8): 1733–1748.
Zuboff S (2019) *The Age of Surveillance Capitalism*. New York: PublicAffairs.
Zukin S (2020) *The Innovation Complex: Cities, Tech, and the New Economy*. New York: Oxford University Press.

Jin-Kyu Jung is a Professor in the School of Interdisciplinary Arts & Sciences at the University of Washington Bothell and an Adjunct Professor at the Department of Geography at the University of Washington. He is an urban geographer/planner whose interdisciplinary research program develops new ways of expanding critical, qualitative, and creative possibilities of GIS and geographic visualization in understanding socio-spatial processes and politics of urban space in an engaged way.

Ted Hiebert is a Professor and Chair of the School of Image Arts at Toronto Metropolitan University. He is an interdisciplinary artist and theorist. His artworks – individual and collaborative – have been featured in exhibitions around the world. He is the author of several books, including *In Praise of Nonsense* (2012), *A Formalized Forum for Informal Inquiry* (2015), and *Ludic Dreaming: How to Listen Away from Contemporary Technoculture* (with David Cecchetto, Marc Couroux, and Eldritch Priest, 2017).

This article is part of the *Environment and Planning F: Philosophy, Theory, Models, Methods and Practice* special issue on 'Knowing Urban Environments in a Digitally Mediated Age', edited by Michael Duggan and Gunes Tavmen.