

## Article | Digital Platforms, Porosity, and Panorama

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### Abstract

The concept of porosity, developed by Walter Benjamin and Asja Lacin, is proposed as a useful concept for examining the political, social, and economic impacts of digital platform surveillance on social space. As a means of characterizing and comparing how interconnected spaces are shaped through a diversity of interfaces, porosity bypasses a simplistic distinction between analog and digital technologies without losing sight of the actual material affordances, social and surveillance practices, and politics that these differing and interacting technologies enable. As part of Benjamin's project of uncovering the tension between the present and the utopian visions that capitalism repeatedly invokes through new technologies, an attention to the politics of porosity can situate the effects of digital platforms within the ongoing history of struggle over the production and experience of urban space.

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### Introduction

The concept of *porosity*, developed by Walter Benjamin and Asja Lacin (1986), can be used to examine the political, economic, and social impacts of digital platform surveillance on social space. Porosity is a politics of the relationships between spaces in which “building and action interpenetrate” (ibid.: 165), from processes of enclosure and individuation to the formation of publics and the possibility for democracy. As Dan Hill (2010) observed, the ability of digital platforms “to see through the concrete, and through the built fabric, to how the city is actually being used” alters the relationship between private and public, making the invisible not only visible but also interactive and responsive. While this transformation has shown liberatory potential (Gerbaudo 2012), actually existing platforms from Facebook to Uber and Airbnb have been notorious for acting as (per Hill) “urban parasites” (Hill 2014). The politics of porosity frames struggles over the control of labor, data, and the production of space through digital platforms.

Here, porosity will be explored as the effect of the ways that interfaces connect or close off spaces of interaction and inhabitation. Porosity is not an either/or condition but a relative quality, the product of a diverse range of effects of materially distinct interfaces on distinct spatial forms. Though we can think of sites and cities as being “more” or “less” porous, porosity is more accurately considered qualitatively rather than quantitatively. Thus, I will not be arguing that cities should be more or should be less porous, but I will instead use the concept of porosity as a frame in which controversies over these diverse effects can be understood.

With rare exceptions (e.g., Zaporozhets 2016), the concept of porosity has not been used to examine the effects of digital platforms. Srnicek (2017) defined digital platforms as “digital infrastructures that enable two or more groups to interact” (43). Furthermore, platforms productively constrain the interactions that

they enable. Srnicek acknowledges that platforms need not be digital and that non-digital platforms, such as a shopping mall (as he suggests) or (I would add) a newspaper, also limit and channel the interactions of their users. On digital platforms, interaction takes place by means of a platform space or “code/space” (Kitchin and Dodge 2011) that interconnects multiple social sites (home, street, park, etc.), “augmenting” the spaces which it connects (Manovich 2006). This infusion of code into social interaction makes possible the automatic data collection and machine learning used by digital platforms to track, monitor, and nudge users. Such data collected by digital platforms can often be sold or put to uses quite distinct from the context in which they were gathered; the real or expected economic value of such data is the foundation of the business model of many platforms (Zuboff 2019).

Among the variety of digital platforms identified by Srnicek, I will focus on those which users access through a digital interface, such as a smartphone app or home voice assistant. These interfaces—whether carried as mobile devices or installed as “coded objects” (Kitchin and Dodge 2011)—situate digital platforms within the built environment, and digital platforms work by harnessing the power of digital interfaces to affect space.

### Porosity and Interface

Porosity is a complex and emergent phenomenon. First applied by Benjamin and Lacis (1986) to the city of Naples, it is rooted in myriad interpenetrating aspects of the everyday: most notably the street-overflowing popular culture of the working classes; the architecture that reflects and encourages this culture; the disorientingly multilayered landscape and the material affordance of the volcanic rock on which and out of which the city has been formed; and the markedly political history of this forming, including the struggles among state, church, and *camorra*. Porous effects disseminate and reinforce each other. Music, colored paper, ice cream, “pale, aromatic juices,” the process of dilapidation, and the practice of confession contribute to the “dispersed, porous, commingled” experience of Naples (*ibid.*: 168, 171). For northerners Benjamin and Lacis, this is imperatively a politics of openness and closedness as well as the complex interweaving of those supposed opposites; they repeatedly contrast Neapolitan architecture with “the gloomy box of the Nordic house”: “Buildings are used as a popular stage. They are all divided into innumerable, simultaneously animated theaters. Balcony, courtyard, window, gateway, staircase, roof are at the same time stage and boxes” (Benjamin and Lacis 1986: 167). “Building and action interpenetrate” by means of these architectural interfaces, producing the “great panorama” of Neapolitan life (*ibid.*: 165, 167). This architecture enables, and is impressed into shape by, the collective performance of this great panorama or theater; for Benjamin, the playfulness and unexpectedness of street life is a primary source of egalitarian democracy (Benjamin 1999: 418).

In his essay on mechanical reproduction, Benjamin further noted the ability of technology to transform the experience of the urban environment composed of closed, demarcated spaces: “Our taverns and our metropolitan streets, our offices and furnished rooms, our railroad stations and our factories appeared to have locked us up hopelessly. Then came the film and burst this prison-world asunder by the dynamite of a tenth of a second, so that now, in the midst of its far-flung ruins and debris, we calmly and adventurously go traveling” (Benjamin 1969: 236). Porosity is about how lived spaces *interface*, both by design and otherwise. Porous interfaces function by connecting two or more spaces and enabling the reshaping of each space by the other (or by dividing spaces: walls are also interfaces). Thus, the presence of a window transforms a room, but it also transforms the space outside the room by virtue of all that can pass through that window—smells, sounds, gazes both real and imagined. Not all spaces linked through such interfaces are linked equally, however. Through various interfaces such urban sites as the home, bus, car, shop, and sidewalk are opened up, framed, and/or exposed in relation to other spaces—through doors and windows to adjoining sidewalks, yards, neighborhoods, and the broader space of the city; through fixed or mobile devices, such as smartphones, radios, and computer screens, to the representational space of the internet or the broadcast news; and through security cameras, payment processing terminals, and similar technologies to the “space of flows” of surveillance, credit, and financial systems (Castells et al. 2007).

At stake in the concept of porosity is much more than “buildings with lots of holes in them” (Dovey and Wood 2015: 3). As a concept incorporating the technologies of the built environment along with human experience and movement, porosity is inherently about socio-technical relationships (Bingham 2005). Porosity is relative, and it is about how spaces are not simply more or less open or closed but about how they are connected through the movements of people and objects and by modes of sensing—“visibilities,” both literal and metaphorical (Benjamin 2010). Benjamin highlights not only the importance of porosity to social relationships but also the penetration of spaces by institutions such as the Church or organized crime; relations of porosity are also relations of power. The contest between centralizing and subaltern or subversive uses of porous relations is inherent to the politics of porosity as a factor in urban space (Brighenti 2010: 138).

Finally, the concept of porosity provides a means by which the effects of any technologies acting on the interconnection of social spaces—new or old, digital or analog—can be compared and contrasted at once. Porosity involves the effects of numerous technologies, new and old, that do not so much displace each other as layer onto and supplement each other; newer technologies may mobilize the old, or they may counter or even contradict each other as competing rationalities, creating new complexities in interaction. The porosity of space affects the experience and use of those spaces, including the social interactions that produce space and the practices of movement and communication that connect spaces; newer porous technologies, thus, actively transform space in significant ways by making possible (or enforcing) new connections.

For Benjamin, the ultimate importance of porosity as an urban phenomenon was the breaks that it introduces in a superficial, homogeneous narrative of the triumph of capitalist modernity, insofar as this narrative is embodied in the urban fabric. Just as Benjamin sought to recover the “wish image” of a future utopian society that is eternally invoked yet deferred by the commodities and new technologies of capitalism, so too the transformation of space by digital platforms often involves liberatory promises that challenge, yet ultimately remain chained to and reproduce, contemporary relations of power. Below, I will discuss how digital interfaces and platforms intervene in the porosity politics of urban homes and automobiles, and I conclude with observations on Benjamin’s ambiguous stance on the panoramic, as this relates to the way digital platforms shape the experience of urban space.

### **Digital Porosity and the Urban Home**

As Benjamin and Laciš’ (1986) contrast between the porous homes of Naples and the closed-off “Nordic box” makes clear, urban living spaces exist along a continuum from private, demarcated space to open, public space. To insist on the porosity of digital platforms is to situate them within the longer history of architectural forms, particularly the history of networked communicative technologies that establish relationships of reach, interaction, and simultaneity between urban homes and linked spaces of commerce, labor, entertainment, and community. Interfaces enabling action-at-a-distance, whereby urban citizens reach out into a city of services from the comfort of their own homes, date back as far as the 1870s home callboxes of the American District Telegraph system (Anderson 2018); increased interactivity through conversation, and the affective connection of the far-away voice, came soon after with the telephone (Fischer 1992). The radio and television, great mass media of the twentieth century, linked the home with a vast network of other homes all experiencing the same broadcasts in the simultaneity of the “imagined community” (Anderson 1983; McQuire 2008).

Digital platforms contribute to, and generally expand, these connected relationships of reach, interactivity, and simultaneity in which homes exist, but they differ most dramatically in terms of the increased intensity and persistence of automated surveillance. Automated surveillance is not, of course, new to these networks and was, in fact, the prime feature of the fire and police telegraph alarm systems connecting the very first networked homes back in the mid-nineteenth century. Utility systems delivering water, gas, or electricity, along with telephone and internet, have long involved such tracking as part of their operations, but with the proliferation of appliances as “coded objects” (Kitchin and Dodge 2011) and digital home platforms such

as Google Nest, surveillance is more persistent and extensive in its use to monitor and influence a wider array of user behaviors.

The significance of the smart home as a frontier for digital platformization is underlined by the spread of home voice assistant (HVA) boxes such as Amazon Echo and Google Home, the most successful introduction of a new connected device in the wake of the smartphone's ubiquity (and, thus, standing in contrast to the poor adoption rates of smartwatches and smartglasses). Although consumers are invited to interact with these interfaces as “robots,” they are more accurately openings of the space of the home onto a vast, interconnected dataspace monitored by machine-learning algorithms. The desire is that these interfaces “disappear” (Ebling 2016) and that interacting through them should become a naturalized part of everyday life, a necessary part of the digital home as an essential site of consumption and subjectification.

### Digital Porosity and the Automobile

As with the urban home, the porosity of the automobile is characterized by competing tendencies toward openness and separation, and the introduction of digital platforms and interfaces takes effect within a pre-existing ecosystem of technologies. Like the urban carriage was before it, the automobile in the city is a site of social stratification through the demarcation of “private” from public space—what Jason Henderson (2006) has called “spatial secession.” A personal car is an extension of the private space of the home into the city street; to ride through a city in a car is markedly not to walk, bike, or ride the bus. As a site of conspicuous consumption, the car has long been a vehicle for the deployment of cutting-edge technologies that, like “miniature world's fairs” (Katz 2001: 44), keep the public's eyes focused on the promise of future technology. The transformation of cars by digital platforms continues this trend.

In addition to being a private space, the automobile must move through the city and so must also be porous, opening through windows, doors, and mirrors onto the space of the street to enable interactions and the exchange of information with pedestrians, other vehicles, and the built environment. For this reason, the automobile is neither fully public nor private but a liminal site of interaction. Being a mobile, liminal site, it is the object of suspicion and surveillance. Police surveillance of automobiles has long been part of a larger disciplinary project of the training and monitoring of drivers and passengers possessing enough freedom of movement and choice to be responsible for their own actions and/or mistakes (Packer 2008).

Digital interfaces both open up and close off the space of the car in new ways. Digital platforms re-intermediate older, slower technologies, such as those involved in wayfinding (maps replaced with mapping platforms) or entertainment (radios displaced by streaming services), and in so doing, such platforms make possible individualized tracking and nudging of users to an extent impossible with non-connected technologies. While allowing users to “see” farther beyond the exterior of the vehicle, mapping and information services also direct or nudge users toward certain routes and destinations, thus closing off others. Social media platforms compete with the road for drivers' attention, and smartphones find their way onto laps, into hands, or onto dash or window mounts that creep ever closer to drivers' faces. The promised fully automated or “autonomous” car represents the culmination of these trends: designs call for windows that turn into interactive screens for displaying films, games, or imaginary landscapes, and seats in which occupants—relieved of all need to interact with the city and street outside the vehicle—swivel inward into a “digital living space” (Wayner 2015). Here, the secessionist dream of the automobile as an extension of the private home dovetails with the transformation of the car into a digital platform feeding off the attention and data shadows of its occupants.

The urban taxicab, as a moving, liminal site in which strangers interact and are afforded access to the space of the city, has long been a target of suspicion and surveillance (Anderson 2012), and the relative independence (and subsequent reputation for “rudeness” and unreliability) of cabdrivers finds expression both in their romanticization as “the last cowboys” (Berry 1995) and their denigration as unruly outsiders, often exacerbated by ethnic stereotypes (Facey 1999). The reformation and rebranding of the cab have been the particular targets of so-called ridesharing platforms, here referred to as *soft cab* platforms (Anderson

2016, 2017) because they are a reaction to, and an affective reframing of, the older site of the urban taxicab. A long list of surveillance technologies has been deployed to police this polytropic site (Anderson 2012, 2017). Soft cab platforms re-intermediate almost all of these older technologies, in part because they enable digital labor platforms to make use of data that had been left unused or uncollected by previous technologies. Several studies have documented how soft cab platforms exert new extents of surveillance and control over drivers, further precarizing an already precarious workforce (e.g., Anderson 2016; Geesey 2017; Rosenblat and Stark 2015); drivers respond with a monitored performance (Hall, Monahan, and Reeves 2016) meant to assure passengers that, unlike the traditional taxicab, the soft cab is a space rendered safe and knowable by platform surveillance.

As with the “driverless” car, the domestication of the taxicab into soft cab is part of a broader project of submitting urban space to protocological control through platform surveillance. Whether or not the promise to consumers of a fully automated car is ever truly fulfilled, to working drivers the threat of impending automation serves a real purpose today as a “border wall across the future,” creating a docile workforce and undermining the rationale of organizing to improve working conditions (Kalamar 2016).

### Digital Platforms and Panorama

Benjamin was fascinated by the great nineteenth century panoramas that sought to recreate the experience indoors of looking out over great spaces. His critique of panoramas as complicit in the construction of a consumerist “dreamworld” has been continued by scholars such as Schivelbusch (1979) and Latour (2005), according to whom “panoramas . . . see everything. But they also see nothing since they simply show an image painted (or projected) on the tiny wall of a room fully closed to the outside” (187). However, as is so often the case with his views on technology, Benjamin was not merely critical of panoramas. Specifically, he recognized them as having given impetus to the later technologies of photography and film; in addition, he saw in them the potential for opening up new spaces for interaction and imagination of the social: “Due to the ‘peephole’ through which the viewer gazed, . . . it remained private and individual; due to the panorama of images that moved past the viewers sequentially, it was public and collective” (Buck-Morss 1989: 396). It is, thus, significant that Benjamin and Lacis (1986) described Naples as a “great panorama” due to its porous commingling of spaces. For Benjamin, the technology that “sees everything and nothing” is not just an aesthetic substitute for real social connection but provides a name for a broader, more complex, and unrulable space of collective action that is, in fact, composed not of a unifying image of the city but of a diversity of views from a wealth of perspectives that transcend the distinction between “box” and “stage.”

Like the pre-digital platform of the panorama, the digital platforms of today must be interrogated as to what they promise and what they deliver, how they unify and how they individuate, and what they imply for the politics of urban porosity. Clearly, the extent to which digital platforms—particularly social media—unify and/or individuate is at the forefront of current debates, as is the fact that they expose the publics they compose to an unprecedented level of surveillance and manipulation. Foucault (1977) argued that in a panoptic society, the training of subjects in diverse sites—school, workplace, prison, and so on—operated together as a “disciplinary archipelago,” producing unified subjects who internalized the gaze of power. Against Foucault’s panopticon—and against the illusory unity of panorama—Latour opposed the small-scale and partial views of *oligoptica*, partial systems constructing partial subjects in particular circumstances (Latour 2005; Murakami Wood and Ball 2013). The oligoptic gazes of digital platforms through porous interfaces assign value to what they “see” in accordance with the demands of the economic system that formed them. Yet, there is no “oligoptic archipelago.” In tandem with the dissolution of the “integrated ideal” governing the vision of public space as universally accessible (on the basis of such qualities as human rights or of citizenship), such splintering mechanisms of subjection govern only the access of partial subjects (evaluated through credit, ratings systems, and so on) to specific platform-governed spaces or services (Graham and Marvin 2001).

The “great panorama” referred to in the Naples essay is neither an oligopticon nor a panopticon, nor is it a projected image that portrays everything while seeing nothing. It is something in between and beyond these,

a product of the multilayered complexity of diverse (analog and digital) interfaces, practices, and movements, along with the sublimated but inextinguishable desire for revolution. If something like that Neapolitan panoramic can be ascribed to digital platforms, it is because of these porous politics in which they take part.

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