ENTR'ACTE

PERFORMING PUBLICS, PERVASIVE MEDIA, AND ARCHITECTURE

Edited by Jordan Geiger



THE HYPERCITY THAT OCCUPY BUILT

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Over the past few years, activists around the world have used urban spaces in dialogue with online and location-based media to build new publics and polities dedicated to systemic social change. From Tehran to Cairo and from Madrid to New York, citizens have claimed streets and squares to press citizenship claims and realize more insurgent forms of self-government. In parallel, they have used smartphones and computers along with social media, blogs, and crowdmaps to assemble online and in digital communications circuits. Many of today's most turbulent political actions emerge through the dialogue between physical places and virtual spaces as citizens and activists leverage the affordances of streets and squares as well as online media to perform temporary publics and counterpublics.

Some of the characteristics of this new social and spatial dynamic are evident in Occupy Wall Street (OWS) actions in and around New York since summer 2011. In planning, implementing, and sustaining the occupation of Zuccotti Park, as well as other New York City sites through which Occupy activists subsequently addressed the foreclosure crisis and the impact of Superstorm Sandy, Occupiers used social media and urban places to practice distinctive forms of open-source urbanism (Figure 5.1).

HYPERCITY

Occupy—the array of protests, urban camps, working groups, and online discussions that sprang up around the world in fall 2011—addressed economic inequality, high levels of individual debt, corporate influence in government, state support for the banking industry, and many related

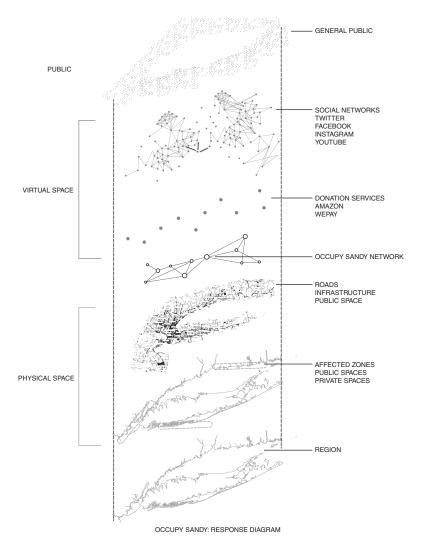


Figure 5.1 The Occupy Sandy response wove together physical and virtual networks while capitalizing on the individual strength of each system

issues. The movement was inspired by the Occupy Wall Street camp founded in Zuccotti Park in Lower Manhattan in September 2011, as well as by the M-15 protests and camps that began in Spain in May 2011 as well as by many earlier alter-globalization and worker's rights movements.¹

Much of what the activists of Occupy Wall Street did in fall 2011 and 2012 was activism aimed at changing public policy at the federal or municipal level. Marches, rallies, signs, and performances targeted banking laws, campaign finance practices, and corporate bailouts, sometimes within a nationalist framework that asserted citizenship rights by invoking the principles and rhetoric of the US constitution.

But there was another dimension to the movement, too, as anarchist thinking and practice shaped the ways Occupiers worked and governed themselves. Rather than present themselves as citizens making demands of the state, many Occupiers constituted themselves as a counter-polity governing itself and operating partially outside the framework of the nation-state. Camps, working groups, and local assemblies governed themselves through consensus and sought to make change through direct action rather than by petitioning elected officials. They built relationships and practices of everyday life that strove for autonomy from the capitalist market and the state. In this respect, Occupy Wall Street had a dissident character. At times it succeeded in forming a set of localized yet globally linked self-governing alternative polities or counter-polities, a dimension of its activities that unsettled many officials and commentators. Whereas some aspects of the Occupy movement evoked the tradition of civil disobedience, these others constituted a form of what Bernard Harcourt has called "political disobedience": dissent from the premises of representative government as currently constituted.²

The Occupy Wall Street counter-polity emerged in a dialogue between physical places and virtual spaces that conflated near and far in distinctive ways. As Saskia Sassen has observed, global capital flows and trade networks reshape not only the economies of "global cities" but also political movements, as workers and other actors operate within transnational economic and media geographies that largely bypass the nation-state. Occupy Wall Street is one example. In New York it created a highly localized community centered on Zuccotti Park, tightly linked to many other sites and resources in Lower Manhattan, and more lightly connected to the rest of the city and its metropolitan region. But this "thick subnational space," in Sassen's terms, operated across a "trans-local geography" that linked it to Occupy camps in hundreds of other cities across North America and the globe.³ As they interleaved blocks and streets with blogs and tweets, Occupy activists built a trans-local geography of activism and dissent.

Moving between physical places and virtual spaces, near and far, Occupiers created a trans-local, transmedia hypercity built of granite and asphalt and algorithms and information. Specific features of the built environment—the height and orientation of a bench, the width of a street, the layout of a restaurant, the placement of an

outlet—conditioned the size, scale, time, and character of Occupy groups and actions. The features and functions of online media likewise shaped the assemblies they hosted. The architecture of Occupy, if you will, lay in the deliberative processes and modes of spatial appropriation through which participants organized themselves and conducted their work. It emerged as Occupiers cultivated new social and political imaginaries across the disparate affordances of urban places and online spaces during an "American Autumn" that still resonates in the US political imaginary three years later.⁴

HYBRID FORUMS

For the duration of the Occupy encampment in Lower Manhattan, crowds gathered every evening at the eastern end of Zuccotti Parkrenamed Liberty Plaza—where a shallow crescent of stairs creates a modest amphitheatre. A facilitator reviewed rules for prioritizing speakers and gestures by which participants could signal agreement or dissent. Over two hours or more, they worked through issues of common concern every word repeated by the assembly, which formed a human microphone amplifying the speaker's voice—until they reached consensus. These gatherings of the New York City General Assembly (GA) felt like the essence of Occupy. They constituted a primordial form of direct democracy through which participants founded a new polity based on principles drawn from anarchism, Quaker meetings, Latin American popular assemblies, Spanish acampadas, and other sources. Exceedingly local, GA was a few hundred people standing in the park, deliberating through the ritualized chanting of the human microphone. It enacted something foundational to the western democratic tradition: constituting a polity as a group of speaking bodies gathered in a central public place.⁵

Even though GA constituted a very localized polity, it also wove the deliberations in Zuccotti Park into another set of conversations among participants dispersed throughout the city and the world. GA minutes taken on laptops in the park were posted online at NYCGA.net, sometimes in the form of real-time Google Docs. Assemblies were livestreamed, and participants also live-tweeted the assemblies to thousands of followers, many of whom responded. These media threaded online conversations into face-to-face assemblies through what Anthony Dunne has termed the Hertzian space of technologically activated electromagnetic radiation, as cell phone and Wi-Fi signals mediated between physical and digital discussions.⁶

Hybrid online-offline discussions were also the norm for the working groups that handled the day-to-day and week-to-week activity of Occupy

Wall Street. Working groups met regularly at Liberty Plaza, the atrium at 60 Wall Street, Union Square, and other locations, but at NYCGA.net nearly every working group had a page with a blog, activity wall, shared documents and event calendar, and discussion forum involving members who had never attended the face-to-face meetings. As early as July 2011, advance planning meetings held in city parks were paralleled by online voting. Thousands of Facebookers responded to a poll Adbusters created using the site's "question" function: "What is our one demand?" Through this asynchronous online polling, Facebook supported a weak form of political discussion that prefigured the stronger and more interactive deliberations that filled the city square.

AGGREGATED PUBLICS

To mobilize people for actions in city streets, Occupy organizers used e-mail lists, listservs, Internet relay chatrooms (IRC), Facebook events, and blog posts to tap social networks forged through magazine publishing, local advocacy, and alter-globalization protests. But Occupy also encompassed what the sociologists Jennifer Earl and Katrina Kimport call "e-movements": politically effective campaigns that circulated in the media without necessarily coalescing into mass gatherings.⁷

The anthropologist Jeffrey Juris contrasts the network logics that predominated in summer 2011, when organizations and activists used e-mail lists and websites to mobilize preexisting networks, with a new set of aggregation logics that developed as the event took off. Social media engaged thousands of people who had no preexisting connection to social change organizations and activist networks. "Rather than providing spaces for particular networks to coordinate actions and physically represent themselves," Juris writes, "the smart mob protests facilitated by social media such as Facebook and Twitter make visible crowds of individuals aggregated within concrete locales." In other words, the Internet amplified local associations by linking them to larger publics, but it also worked in the other direction, precipitating crowds into city streets from the ether.

The political scientist Stephania Milan has characterized Occupy as a form of "cloud protesting," comparing the movement to "a cloud where a set of 'soft resources' coexist: identities, narratives, and know-how, which facilitate mobilization," much as social media accessed via cloud computing give individuals the tools for "producing, selecting, punctuating, and diffusing material like tweets, posts and videos." This captures only part of the story, and the cloud metaphor tends to obscure the specificity that different media channels gave to discourse and action. But it is an

evocative figure for the role of social media in creating publics distinct from those constituted through more familiar means.

One such tool for Occupiers was the image-based microblogging site Tumblr. In late summer, the 99 Percent Project invited people to make themselves visible as part of a majority disenfranchised by the superrich. Under the slogan "We Are the 99 Percent," the image blog featured self-portraits of working- and middle-class Americans holding handwritten signs or letters describing the circumstances of their indebtedness. The project called attention to the rise in income inequality and helped popularize the rhetoric of "the 99 percent." After September 17, it became an online analogue to the camp in Zuccotti Park, enabling a geographically dispersed set of participants to join the occupation of Wall Street and forging a common consciousness about debt and disenfranchisement. The self-portraits were often shot at a computer desk with a webcam, and overwhelmingly they were set in domestic interiors like living rooms, dens, and bedrooms. But the handwritten signs pointed to a world outside those walls, evoking the signs of both homeless people and protesters. The 99 Percent Project aggregated the visual fields of thousands of webcams, cell phones, and cameras into the tiles of an Internet sidewalk.

WIKICAMPS

The city government and the New York Police Department prevented Occupy Wall Street from using publicly owned places like parks and squares except on a very limited short-term basis. The state used legal and extralegal means, including violence, to maintain its control over public assembly. Rather than in public space, Occupy Wall Street found its opportunity in the privately owned public space of Zuccotti Park. The Occupy camp showed that possibilities foreclosed on private and public land could be actualized in the liminal territory of the city's privately owned public spaces (POPSs)—plazas, arcades, and other spaces built by real estate developers in return for density bonuses under the terms of the 1961 Zoning Resolution. The occupation of Zuccotti Park was made possible by ambiguities in the POPS system, which created places where the city government must negotiate authority with corporate owners as well as site occupants. ¹⁰

It is not surprising, then, that Occupy flourished on Facebook, Twitter, and Tumblr—the POPSs of the online world. These massively capitalized private enterprises are the corporate plazas and shopping malls of the online world, and like Zuccotti Park they hosted large volumes of Occupy activity. Nonetheless, many Occupiers avoided them in favor of open-source software, sources, and methods such as wiki coding. Occupy

websites were almost always built using open-source tools like WordPress or GitHub, and these basic but rapidly built and collaboratively produced websites proliferated like the camps themselves.

These sites became spaces for the elaboration of what Christopher Kelty calls a recursive public: "a public that is vitally concerned with the material and practical maintenance and modification of the technical, legal, practical, and conceptual means of its own existence." 11 Liberty Plaza and other occupied spaces functioned as offline analogues of a wiki page as participants without much prior affiliation built new worlds and organized themselves to maintain them while avoiding hierarchy and formalization whenever they could. This self-conscious practice of building new publics and polities to bypass those of the state might be Occupy's most compelling feature. When cold weather challenged the viability and openness of the "wikicamp" in Zuccotti Park, for instance, decisions on how to transform the camp were worked out by individuals and collectives via discussions that crossed from General Assembly to small meetings to the discussion forum of the Town Planning Working Group. 12 The reconfiguration of the camp at the beginning of November was negotiated simultaneously in the park, in dispersed work-group meetings, and on the Internet.

The movement's open-source urbanism developed trans-locally. From the earliest planning meetings, the New York Occupation drew on the firsthand experience of activists who had participated in Syntagma Square protests, Madrid or Barcelona M-15 camps, "horizontalist" associations in Buenos Aires, popular assemblies in Chiapas, and other localized yet globally cognizant movements. These embodied and personalized links were complemented by digital links. The square, for instance, provided extensive discussion of the Spanish M-15 movement for an English-language readership, including "social software for activist networks" like the Amsterdam-based N-1 communication software system or the roughly translated guide to *acampada* tactics called "How to Cook a Pacific Revolution." The New York camp was built with knowledge, idea, and resources from Spain and Argentina, Chiapas and Cairo, as well as local coalitions.

CROWDMAPS

Among the open-source tools building Occupy's wiki geography were crowdmaps. Online maps populated by user-generated content were published at several websites, including Take the Square, US Day of Rage, OccupyWallSt.org, and Occupy.net. Some used Ushahidi, free open-source crowdmapping software developed in 2008 in Kenya to

support disaster relief and response efforts. By compiling data into a common geospatial framework, these crowdmaps visualized Occupy participants and camps as discrete elements that aggregated to form a global phenomenon. They associated people, texts, images, and videos with particular places, constructing hypergeographies of action and potential. Animated timeline features encouraged users to visualize themselves and local events as part of a process of "#globalchange."

The most robust crowdmap was the #OccupyMap at Occupy.net, built by the Tech Ops working group of NYCGA. It provided a web interface for reporting events such as marches, rallies, and police interventions, with easy media embedding directly from mobile devices. In December 2011, for instance, a few weeks after the New York Police Department had violently evicted Occupiers from Zuccotti Park, activists rallied around the call to "Occupy Foreclosure" by challenging bank foreclosures that stemmed from predatory lending prior to the recession that began in 2008. Archived in the OccupyMap is a series of reports generated as activists used Twitter and spin-off apps like TwitPic, TwitVid, and Telly to geotag information relating to a march and rally protesting a foreclosure action at 702 Vermont Street, a two-story brick house on a long block of the East New York section of Brooklyn. The crowdmap contains photos that tag vacant foreclosed houses nearby as potential sites for occupation, pictures of crowds marching, quotes from a rally, a video of speakers, and footage of a march culminating at 702 Vermont. "Our homes are under attack, we've come to take them back!," chant protesters under a canopy of umbrellas and balloons. The OWS tweeter DiceyTroop recorded a video of some of the Occupiers laying claim to the house with a candle to symbolically warm it for the threatened family. Another participant posted a photo of the Occupy 99% "bat signal" projected on vinyl siding, along with a link to a live stream that broadcast a subsequent confrontation between Occupiers and the police. By pulling together disparate events and data across space and time, the OccupyMap created a counterpublic integrated through its use of online and location-based media to contest state and corporate control of urban places.

Occupy crowdmaps visualized landscapes fundamentally distinct from those visible in city streets. In counterpoint to the intense attention paid to Zuccotti Park, these virtual geographies redefined the public of Occupy Wall Street as a dispersed set of agents linked by online communication channels. At the same time, they created potentialities based on propinquity and proximity. Like real estate apps, these crowdmaps create value by aggregating data into geo-coded arrays that create information capable of being used in highly localized ways. The live crowdmaps of the Occupy movement afford emergent publics tools for geo-referenced

"sousveillance," a form of inverse surveillance or dataveillance in which mobile technologies allow individuals and subaltern groups to generate their own data sets and transcripts. By mobilizing dispersed technologies and bricolaged constellations of open-source software, they build alternatives to the totalizing, market-driven geographical information systems that power real estate databases. The trans-local polity of Occupy Wall Street occupies a "neo-geography" created by the interplay between online and offline crowds linked by ad hoc and off-the-shelf mapping and geo-coding practices as well as by more familiar bonds of association. ¹³

ANARCHIVES

Changing regimes of power and capital call for new politics and modes of dissent. Occupy carried forward practices of dissent ranging from Quaker consensus methods to the strategies of refusal deployed during the 1960s and 1970s by countercultural communes. It also used online platforms to mobilize trans-local assemblages of information, ideas, people, and territory. The weak ties afforded by social media supported the stronger ties that formed in rallies and camps, and online forums mobilized widely dispersed people and resources to address trans-local concerns. In Occupy Wall Street—from the wikicamp in Zuccotti Park to the foreclosure activism at 702 Vermont Street and elsewhere—these tools enabled like-minded people perform alternative polities beneath and beyond the nation-state.

They also created a set of online archives that prompt reflection on the role of social and spatial information in performing politics. In 2012, a pair of activists urged their fellow Occupiers to resist consolidating their records into an archive, on the grounds that "to create an OWS archive risks perpetuating the archival practice of fabricating history from a hegemonic perspective." They called instead for an "anarchive" based on a potlatch and anarchist ethos: a dispersed set of objects and records sustaining "open space in which history is allowed to take place." The #OccupyMap and other crowdmaps associated with the movement partially answer this call. At the same time, these banks of geospatial data are intertwined with those used in governance and real estate investment. Though built on open-source software using open-source rather than proprietary geodata, they adapt forms of knowledge production pioneered and exploited by corporations and states.

No doubt, companies, police forces, and other government entities have mined Occupy crowdmaps for their data and the value it can generate—much as states and police forces around the world have used social media to identify and punish activists and insurgents. One limit to our ability to assess fully the character of Occupy's performances of self-governance is our lack of knowledge regarding the full range of impacts generated by the movement's information trails.¹⁵

RELIEF AND RECOVERY

When some New York area Occupiers mobilized to assist in disaster relief and recovery during and after Superstorm Sandy, the hurricane-like storm that struck New York, Long Island, and the Jersey Shore in fall 2012, they deployed many of the practices developed in and around Zuccotti Park a year earlier. Decentralized decision-making that privileged individual autonomy and loose, "horizontal" coordination through online and social media tools allowed Occupy volunteers to respond quickly and effectively to a wide range of impacted residents and their needs (Figure 5.2).

Facebook, Twitter, and websites newly set up by existing Occupy tech teams disseminated information. Volunteers coordinated via SMS networks along with Google document-sharing and voice-over-Internet services, and organizers also used Sahana open-source relief management software, the crowdmapping app Mappler, and constituent relation management software designed to run fund-raising efforts. Financial and commercial tools such as WePay and the online gift registries of Amazon and local companies channeled funds and coordinated donations with specific needs. Participants complemented these digital tools with more familiar analogue media such as whiteboards, Post-it notes, and flyers—particularly in the many places where electricity and the media it supports had been knocked out by the storm. Occupy Sandy established main distribution and activity hubs in two Brooklyn churches, as well as secondary hubs at a donated warehouse and other facilities in the Rockaways, Coney Island, and Staten Island.

What did it mean for a portion of Occupy Wall Street to become "a laterally organized rapid-response team," in the words of one participant, collaborating with the American Red Cross as well as the Federal Emergency Management Agency (FEMA), which heralded Occupy Sandy in a report bearing the headline "youthful energy and idealism tackles real world disaster"?¹⁶

In some ways, the shift gave the movement new impetus. Providing material assistance to a broad range of everyday citizens, including many outer-borough residents marginalized by poverty, disability, or immigration status, allowed Occupy "to expand its message" and "demonstrate the values it sometimes struggled to articulate during its Zuccotti Park chapter," as one writer observed. When the storm exposed

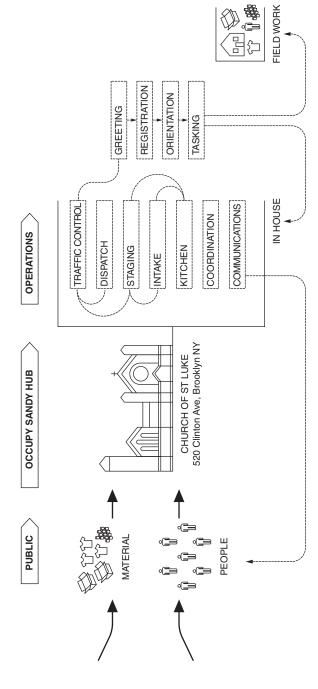


Figure 5.2 A diagram of the Occupy Sandy response. Adapted from Adam Greenfields "A Diagram of Occupy Sandy" on Urban Omnibus

the vulnerability of many New Yorkers and the incapacity of official response agencies to respond effectively, addressing the aftermath allowed Occupiers to connect their earlier focus on debt, income inequality, and corporate power to broader failures of capitalism and the state. Occupy Sandy suggested to one volunteer that a "bottom-up, self-assembling syndicate" operating based on principles of loosely coordinated mutual aid could assemble the beginnings of "a permanent, regional, mutual-aid infrastructure here in New York, tuned not just to the needs of recovery from a disaster" but also to addressing "structural and endemic" factors, causing many to live in permanent emergency. ¹⁸

At the same time, the pivot to disaster mitigation dissociated Occupy's methods and principles from the political reflexivity that so strongly marked the occupation of Zuccotti Park and other sites. By demonstrating how the anarchist principles and organizing techniques of OWS could address community needs through flexible and decentralized mutual aid, Occupy Sandy began to merge into a generally depoliticized realm of "relief and recovery." Similar Occupy endeavors emerged in 2013 to address tornadoes in Oklahoma and floods in Colorado, and none of these initiatives marshaled either the "political disobedience" or the citizenship claims-making that characterized Occupy Wall Street.

To a large extent, Occupy Sandy seems to have been absorbed into the urban resilience discourse of state and civil society institutions. The Resilient Network, a report issued a year after Superstorm Sandy by the Homeland Security Studies and Analysis Institute, heralded Occupy Sandy for "filling the gaps" in the existing humanitarian relief system and modeling practices suitable for adoption by FEMA and other state agencies. The 103-page study highlighted Occupy Sandy's effectiveness at providing help without cultivating "dependence on aid," its relevance in modeling flexible and responsive management practices suitable to the corporate "workplace of the future" (including "just-in-time training"), and its ability to take risks because individual volunteers assumed personal liability for their actions. In these traits, Occupy Sandy converged with neoliberalism, as it did in other ways. Observing that many volunteers were "tech-savvy," highly educated, white, and middle class yet unor underemployed, the study noted that some had subsequently taken jobs with FEMA and other relief groups. 19

"We can learn lessons from Occupy Sandy's successes to ensure a ready and resilient nation," the institute report concluded. One lesson was the capacity for online media to feed back into the physical city: the study authors proposed that the Department of Homeland Security create software to automate some of the Occupy methods, improving disaster relief coordination by creating a "common operational picture" that would allow organizations to navigate better their territory.²⁰ Another lesson is

perhaps the difficulty of using a spectacular disaster like Sandy to mobilize for structural change or political disobedience.

URBAN AFFORDANCES

The interactions between physical places and digital spaces have played out differently across the many distinctive national, cultural, urban, and political situations presented in and around Cairo's Tahrir Square, Manama's Pearl Roundabout, Tripoli's Green Square, New York's Zuccotti Park, Istanbul's Gezi Park, and Kiev's Maidan Nezalezhnosti. The historian Nasser Rabbat has argued that in many North African and Middle Eastern cities—including Tunis, Cairo, Alexandria, Benghazi, Manama, and Sana'a as well as smaller cities, among them Dar'a, Homs, and Hama in Syria or Ta'izz in Yemen—Arab Spring activism initiated online created a new relation between "spaces of tradition" such as mosques and "spaces of modernity" such as the public squares created by nineteenth-and twentieth-century colonial urbanism.²¹ The urban designers Diane E. Davis and Prassanna Raman suggest that activists around the world have appropriated urban places differently depending on whether they were asserting their rights as citizens or challenging the basic legitimacy of government in a more insurgent mode. "[T]he former is more likely to be enacted in public squares and other physically bounded spaces that are recognized by states as appropriate sites for claim-making," they write, "while the latter unfolds in interstitial, marginal, dispersed, and less easily controllable spaces where the state's power and authority is less easily wielded." In these circumstances, traffic intersections and transportation facilities can become "infrastructures of insurgency." 22

In Tehran, tight control by the Islamic Republic of Iran over conduct in the city's parks and streets has forced much public discourse into the private realm of the home, where family conversations and small gatherings of friends and strangers engage a global array of television broadcasts accessed through illegal rooftop satellite dishes. When the state removes dishes or jams satellite signals, residents and entrepreneurial black-market installers replace and reposition the hardware to recapture signal. In the cat-and-mouse game between the state on one hand and its citizens on the other, abetted by the "satellite man," the architect Rudabeh Pakravan discerns a distinctive, if weak, form of temporary public space constituted by the archipelago of living rooms connected by shared watching of illegal TV and by the informal networks of expertise that work around state signal jamming.²³ In this way, the modes of public discourse and assembly hosted by virtual spaces of broadcast and online media feed back into social practice and the built environment. Iran's government also regulates Internet access, shutting down the Web at times of insurgency and unrest.

When this happens, as the architect Taraneh Meshkani has observed, Tehran's residents perform a kind of offline social networking by using the city in new ways. They shout messages roof to roof. They write messages on money so that ideas circulate along commercial vectors. They tag walls and streets with green paint.²⁴

The heavy infrastructure of the built environment and the lighter infrastructures of social media, online networks, and location-based technologies inform one another as they enable and shape practices of citizenship, insurgency, and political disobedience. Both physical places and digital spaces bring particular affordances that shape the spatial and social character of political action. As Occupy Wall Street and Occupy Sandy show, these armatures are open to multiple social and political determinations, with long-term consequences that continue to play out.

These Occupy-based performances of publicity in New York were short-lived, lasting a few weeks or months. While they originated with preexisting networks of social and political affiliation, they gained mass participation rapidly and explosively as the galvanizing act of occupying urban places interacted with discussions and gatherings in digital communications media (Figure 5.3). Because the consequences of these

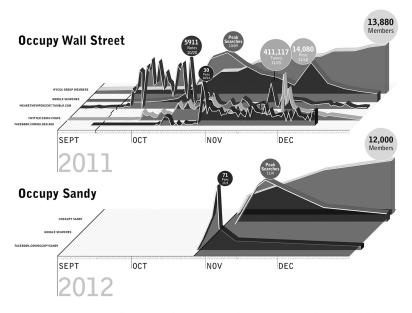


Figure 5.3 Occupy Wall Street and Occupy Sandy respective timelines. The diagrams parse usage patterns of each event's online activity

popular mobilizations are still evolving, it is difficult to judge their long-term impacts. Have they initiated meaningful shifts in policy and practice, or are they brief interruptions in histories determined primarily by other factors? The encampments and street actions are gone, memorialized in crowdmaps that have stopped growing. But Occupy's topical focus on inequality and corporate political hegemony continues to inform political discourse, and the imbrication of digital media into the physical city in practices of politically engaged open-source urbanism seems still to be accelerating, not only in commerce and social life but also in political engagement.

Notes

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- 3. Saskia Sassen, "To Occupy," in Beyond Zuccotti Park, 67-69.
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- 9. Stephania Milan, "Cloud Protesting: On Mobilization in Times of Social Media," Lecture, February 10, 2012, abstracted at http://www.infoscapelab.ca/node/722.
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- 11. Christopher Kelty, *Two Bits: The Cultural Significance of Free Software* (Durham NC: Duke University Press, 2008), http://twobits.net/discuss/. See also http://p2pfoundation.net/Recursive_Public.
- 12. "Wikicamps" adapts the term that the sociologist Manuel Castells used to describe the camps that filled Spanish plazas beginning in May 2011. See Castells, "The Disgust Becomes a Network" (translation of "#Wikiacampadas," *La Vanguardia*, May 28, 2011), trans. Hugh Green, *Adbusters* 97, August 2, 2011, http://www.adbusters.org/magazine/97/manuel-castells.html.
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