

The data city as public experiment?

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Above: Panorama of London, Claes Visscher, 1616

Right: Diorama of London, 2010



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Cities have long been imagined as “machines for living,” and today's data technologies carry the promise of making them more “intelligent” - more attuned to the lives of citizens; better able to ensure feedback and the re-adjustment of relations between people, environments, and institutions.¹ How might data, and data culture, play a role in reshaping city life, for whom, and to what end?

Multiplying accounts of city life

The life of a city may be understood from accounts and artefacts such as maps, music, fiction, films, plans, photographs, paintings, newspapers, conversations, reports, records, statues and street furniture. Such items reflect certain aspects of urban life and leave others out: the schematic abstraction of tube maps highlights sequences of stops for transport users; monuments relate public spaces to historical events; photographs portray scenes in accordance with certain political or aesthetic visions. The significance of such things depends on who uses them and how.

Cities have collected data in order to organise city life for a long while: recording inhabitants, property, crimes, births, marriages and deaths. Such records are often a byproduct of the running of the city, but can also reflect the activities of other bodies including the state, companies, charities, churches, journalists, artists and activists.² Digital technologies multiply the sites where data is made, where it is made sense of and made actionable. The clicks, pings, pushes and swipes of card machines, phones, meters, sensors, and the growing repertoire of network-enabled objects associated with the Internet of Things make for a different kind of data than the formal records kept by bureaucracies. They often record activities and are not always tied to individuals; they are increasingly used to monitor, model, estimate, allocate, optimise, nudge, manage and display urban activities.



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Above: City Dashboard

While the contexts of creating and using data may seem utterly practical and mundane, the visions and aesthetics associated with them can be sweeping, panoramic, sometimes even sublime.³ Just as balloon flights and panoramas were said to enable new “scopic regimes” and perspectives on the city,⁴ today's data technologies provide apparently comprehensive insights into the particulars of urban living: a sudden increase in “footfall” in a given street, a neighbourhood where the lights stay on at night longer than elsewhere. They suggest ways of knowing intimate details of urban life at a distance, as millions of transactions are depicted as constellations on sprawling maps or as pulses in animated video.⁵ Data work creates a culture that ends up not just in dashboards or boardrooms, but also in exhibitions and coffee table books.

The multiplication of digital data places serious responsibilities on its producers, as well as on analysts and regulators, to avoid surveillance and discrimination. We need responsible practices to safeguard, secure and anonymise data (as well as to prevent its collection) to be seen as a matter of ethical concern, not just of compliance.⁶ But the undoubted need for precaution shouldn't make it impossible to be inventive with urban data. Indeed, insofar as digital technologies make it possible to gather data pertaining to activities rather than named persons, they may have the potential to shift the focus from surveillance of individuals to creating new different kinds of data collectives.⁷

Below: Selfiecity
London

Right: Pulse Twitter Visualisation in the
Museum of London Cafe, 11 March 2018

Machines for living differently?

Many cities are in the process of being “smartened”, with data companies and social enterprises hosting labs, incubators, meet-ups and startup initiatives. To this end, data from hospitals, schools, universities and other institutions is opened up and used beyond conventional settings. London's Datastore⁸ offers hundreds of datasets for downloading which are used as the basis of publicly available apps and reports. Cities are also implicated in data-making coordinated from outside the city (through multinational technology companies or national and international agencies) which render city dwellers as administrative subjects, national citizens, and consumers.

Social media platforms such as Facebook amass data through what has been called the “double logic” of the



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platform – centralising data collection while distributing platform features through which data is collected.⁹ The self-declared contribution of such platforms is to enable us to live otherwise (to make new friends, visit new places); but they equally affect existing ways of doing, requiring new policies and public oversight.

Cities seem well positioned to use regulatory mechanisms to intervene in the activities of multinational companies on the ground – as in the decision not to renew Uber's license in London, or to restrict the activities of Airbnb in Berlin. But the real potential benefit to cities – the development of alternative, public-minded frameworks and methodologies for defining, designing and intervening in data – requires the involvement of civil society. This is what we mean by public data experiments.

Experimenting on or experimenting with?

Proponents of the smart city invite us to envision the city as a “living laboratory”, a term that has been enthusiastically adopted around the world.¹⁰ This metaphor frames our living environments and lives as open to experimentation and modification. But the role of a city dweller is very different from that of a laboratory subject: we make sense of our own lives and actively participate in defining our world in ways beyond the scope of analysts. Data offers opportunities for city dwellers to make sense of the city themselves: to appropriate it creatively. Data can make visible urban collectives in which we participate as inhabitants, passengers, visitors, or carers. Which other streets are organising play streets¹¹ in London and what could we learn from them?

Urban data does not just represent city life, it also renders it intelligible. The way in which digital technologies render data (spreadsheets, databases) should not be understood as merely making visible behaviour as it is naturally “given”. Data infrastructures should be understood not just optically (as lenses or microscopes), but as scripting or framing devices, which actively format the activities they purport to measure.

In over-emphasising the capacities of data to denote aspects of city, we may under-emphasise other capacities: what it can tell us and how it can bring people together. Data technologies do more than merely monitor urban life. They may also shape it, inviting users to take on the role of participants and play an active role in defining and taking action. For this reason, researchers suggest that data infrastructures can be considered in terms of their relations rather than as “things”.¹²

Public experiments with urban data

What then might urban digital data do for city dwellers? What counts and who decides? Who and

what do data infrastructures draw together? What capacities do they confer, and to what end? Could data and data technology enable different forms of participation in the city? In addition to smartening and optimising cities, data is also being used as the basis for other kinds of public experimentation.

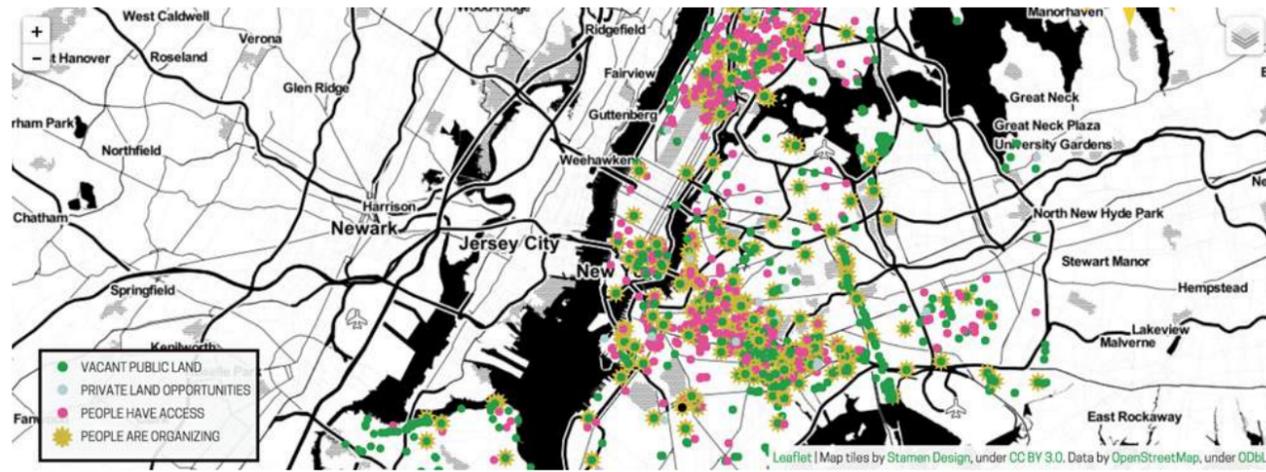
Many big data experiments treat parameters and questions as fixed in advance. But data may also involve non-experts in research: considering what is asked, which problems are deemed important, and which categories guide interpretation. Surveys and opinion polls solicit citizens to take positions on the issues of the day through interviews, focus groups or the ballot box. Data technologies enable other means to elicit, articulate and evaluate public concerns at different scales.

As city dwellers, we do not always have the time and/or “good enough” reasons to participate in governance through formal public consultations. Could data technologies help realise alternative, more flexible and creative ways of engaging city dwellers? Data makes possible not only new ways of knowing and governing, but also new types of experiments in participation.¹³ It may serve as an alternative device for responding to urban issues across space, time and social settings. Could data diversify how issues, things and people are involved in city life?

Data and urban issues

There are many ways that data can be put to work in civic settings besides borrowing from practices in governance, management and commerce. In some projects, official data is repurposed to change how people can relate to cities. For example, Code for America's Adopt-a-Hydrant¹⁴ project enables “community members to volunteer to take care of local infrastructure like fire hydrants in severe weather”. The site enables users to find hydrants in their vicinity and maintain them during extreme weather conditions, such as snow storms. The project is open-source, and the code has been used in other cities, giving rise to counterparts such as Adopt-a-Siren¹⁵ and Adopt a Drain.¹⁶

On the one hand, such projects signal a worrying reluctance on the part of some governments to take responsibility for running cities, advancing a shallow “solutionism” compatible with austerity and privatisation.¹⁷ But given how difficult it can be to force the state to take responsibility, they also demonstrate the commitment of citizens to make cities liveable. The 596 Acres¹⁸ initiative similarly repurposes official data to encourage city dwellers to (re-)appropriate land, lots, and other spaces in the city, bringing them into “resident stewardship”, by facilitating community organising efforts.



Above: Living Lots NYC project

Official data can be re-used to address different kinds of questions and concerns from those for which it was intended. In New York, data that was originally gathered to monitor crime has been repurposed by journalists and activists to highlight problematic and discriminatory policing practices.¹⁹ In the UK, a network of local data journalists has gathered data from PDF documents in order to identify and report on cuts to council spending.²⁰ In Manchester the TaxHack²¹ initiative has combined data on public procurement with company ownership information in order to identify which city contractors use tax havens. Activists used scraped data from Airbnb's website to show how official datasets had been "photoshopped"²² to remove unwanted listings.

Other projects make their own data. In Chicago, a map-based reporting system is being used to highlight the lack of residential recycling facilities.²³ Distributed data-gathering operations can be used to create what anthropologist Helen Verran describes as "enumerated entities: objects of concern that emerge from diverse practices of numbering and counting."²⁴ Participatory initiatives enumerate aspects of city life that may be overlooked or under-represented in official data, including urban ecology (such as trees,²⁵ hedgehogs²⁶ and bees)²⁷ cyclists and pedestrians,²⁸ wheelchair accessible features,²⁹ public space usage³⁰ and rough sleepers.³¹

Data can stimulate public imagination, facilitating the exploration of different possible futures.³² The Public Data Lab's³³ Save Our Air³⁴ project explores how data can be used not just to identify pollutants but also to explore different ideas about who is responsible for tackling it. Data technologies can thus bring to light issues of concern and raise wider questions of who should be accountable and how responsibility should be distributed between governments, citizens and private actors.

Finally, data can enable different ways of experiencing cities. Experiments in "citizen sensing" explore public involvement in the use of digital sensors to attend to environmental pollution, flora and fauna, and damp in homes.³⁵ Some of these projects aim to materialise data beyond the screen, such as the Yellowdust³⁶ project, which translated air quality measurements into clouds of yellow mist in Seoul, South Korea. "Data walks"³⁷ invite participants to locate material signs of data infrastructures shaping city life, such as credit-card based bike lockers, and reflect on how data might be used differently (for example by simplifying access to public facilities).

Below: Yellowdust project in Seoul



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Whose data experiments?

What ways of knowing the city can data give rise to? Which forms of citizenship, sociability and subjectivity do they enable? As well as implementing and improving administrative, economic and technical schemes, data projects can enlist citizens as sensors, auditors, entrepreneurs, witnesses, hackers, users, curators, carers and investigators.

These offer different ways of participating - in research, governance and ownership - using both centralised data platforms and open data commons. Both are at risk of appropriation; and the social, moral and political ends they serve may shift in the process of their implementation. It is consequently vital to define the different forms of knowledge and politics they make possible as precisely as we can.

Data can allow for public experimentation, enabling citizens to examine creative and responsive ways to make cities legible and liveable. The crucial question remains how, by whom and to what end such experiments are organised.

In the face of growing concerns that digital data technologies first and foremost serve to consolidate and amplify privatisation, surveillance, discrimination and exploitation enabled by platforms, the disability activist slogan "nothing about us without us"³⁸ takes on a new and different resonance. Digital data technologies require participation if they are to be implemented responsibly. More than that, they open up the very methods and distribution of roles in how we represent and intervene in what the city is and who and what it is for.

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