Data-Based Civic Participation

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Within the past five years, a new form of technology-mediated public participation that experiments with crowdsourced data production in place of community discourse has emerged. Examples of this class of system include SeeClickFix, PublicStuff, and Street Bump, each of which mediate feedback about local neighborhood issues and help communities mobilize resources to address those issues. The experiments being playing out by this new class of services are derived from a form of public participation built on the ideas of smart cities where residents and physical environments are instrumented to provide data to improve operational efficiency and sustainability (Caragliu, Del Bo, and Nijkamp 2011). Ultimately, smart cities is the application to local government all the efficiencies that computing has always promised—efficiencies of scale, of productivity, of data—minus the messiness and contention of citizenship that play out through more traditional modes of public engagement and political discourse.

The question then, is what might it look like to incorporate more active forms of civic participation and issue advocacy in an app- and data-driven world? To begin to explore this question, my students and I have developed a smartphone app as part of a larger regional planning partnership with the City of Atlanta and the Atlanta Regional Commission. The app, called Cycle Atlanta, enables cyclists to record their ride data—where they have gone, why they went there, what kind of cyclist they are—in an effort to both generate data for planners developing new bicycling infrastructure and to broaden public participation and input in the creation of those plans.

Cycle Atlanta bridges the domains of digital democracy and smart cities by creating a platform for cyclists to influence policy making through data production. When cyclists record a ride, they are contributing to the planning process without having to attend a public meeting—much in the way the vision of digital democracy decouples democratic participation from the requirements of in-person participation (Hacker and van Dijk 2001). This asynchronous public participation enables more people to provide input into the planning process, solving one of the ongoing challenges in urban planning where achieving broad and substantial public participation improves the quality and acceptance of plans, but is often constrained because attending public meetings can be onerous (Insua et al. 2008).

In the case of Cycle Atlanta, over 1500 cyclists have contributed (and continue to contribute) data about their rides. In contrast, at a public hearing that occurred after the app had been release, about 20 people turned up to discuss and advocate for particular bike facilities. The different quantities of participation is important, but so is the difference in *kind* of participation: by recording their rides and sharing that data with city planners, Atlanta cyclists are enacting a new form of civic participation accomplished through their collected data.

Unlike apps like StreetBump, the Cycle Atlanta app data are not just a metric of cycling traffic patterns—a measurement of some kind of "ground truth"—but are a form of public advocacy that is changing how cyclists interact with local policy making on the creation of future infrastructure. Where citizens could once only advocate for particular decisions at the microphone, they can now advocate through data-driven civic participation with the added force of argument afforded by data. This new form of advocacy creates an urgent need for tools that enable planners to constructively respond to and incorporate these new sources of data (Evans-Cowley 2010). Issues of bias, public intent, and equity become ever more pressing as digital forms of participation arise and compete with in-person public consultation processes.

When it comes to new approaches to public participation, like those enabled by our app, it is not just that the data, and the categories of data have politics (Bowker and Star 1999), but that the actors producing the data have politics as well. The challenge then, is to develop both social and technical innovations that recognize that the data "do

not exist in isolation but are created by social actors" (Räsänen and Nyce 2013, 659). If new models of digital democracy are to work, then the kinds of participation they involve need to reflect the labor and agency of those participating, which is to say that data are introduced into the process from ways of knowing about the city rather than being the atomic components that lead to knowledge (Tuomi 1999).

Such a position exposes a tension: if we work from the assumption that data produced by cyclists in the City *lead* to knowledge to guide the development of new infrastructure, we have certain choices about what data to excise and under what conditions. On the other had, if we start from the position that the data result *from* a way of knowing about the City, then we have a different orientation to those same trade-offs, including what attributes of the data are considered as bias and which analysis strategies might be deployed to represent the element of advocacy present in and via the data. These trade-offs are critical as digital democracy is not just about working toward some imagined institutional efficiency, but about providing tools that help particular constituencies advocate for access to resources (Hacker and van Dijk 2001). We cannot separate the knowledge that is conveyed by the data from the knowledge conveyed by the act of collecting and contributing the data: in the case of Cycle Atlanta, these two things are not just records of where cyclists were, but are acts of issue advocacy and a kind of public participation in and of themselves.

When advocacy for public resources—transportation infrastructure or otherwise—occurs in public, there are clear places and ways to respond to such advocacy; they are communicative acts that bridge social bonds with professional practice (Innes 2007; Evans-Cowley 2010). However, when those arguments occur through data, the visibility of the argument changes along with the accessibility of supporting or refuting its claims. The visibility of participation matters on two counts. First, there is a miss-match between the individual act of submitting data to guide policy and the aggregate analysis that planners and transportation researchers are accustomed to subjecting the data to. We see the by-product of this miss-match in the recorded data where a very small number of active cyclists accounted for a vastly disproportionate component of the data, creating tensions in deciding which metrics to use for excluding or normalizing the ride data. It again comes back to privileging different ways of representing cycling patterns and cyclist-based knowledge about the City.

Second, as Gilbert rightly points out, "the problem of democracy is never simply that of making collective decisions, but is also, indissolubly, the problem of bringing 'the collective' into being at all" (Gilbert 2013, 24). The problem of bringing "the collective" into being was not obviated by the app, even when the app enabled many more peo-ple to participate: over a 1500 active users compared to the tens of people that turned up at a planning meeting during the same period.

However, because the medium for acting through the Cycle Atlanta app was asynchronous and individual, the affordances for enriching the interaction between the cycling public as a political constituency were obscured. So while the app satisfied the need to be connected to a local community, that connection was based on individual and one-way data transactions between cyclists and the planning department and not in support of building out robust collective that could act tactically to marshal limited public resources.

At a minimum, addressing the challenges of broadening public involvement through data-based civic participation means engaging with the epistemic questions bound up in data as a form of participation. We need to be able to account for data production (Räsänen and Nyce 2013), attending to the ways the data often convey authority divorced from the agency motivating their production. Programs that develop such data-based modes of participation need to develop support for participation that goes beyond simple data collection and instead cultivates public analysis and interpretation of the data to guide policy makers and governance. Without taking up these considerations, app- and data-driven modes of civic participation risk undermining the very notions of democratic governance they seek to promote by displacing discourse with black-boxed data analysis and reconfiguring public discourse into individual bureaucratic transaction.

References

Bowker, Geoffrey, and Susan Leigh Star. 1999. *Sorting Things Out: Classification and Its Consequences*. MIT Press.

Caragliu, A, C Del Bo, and P Nijkamp. 2011. "Smart Cities in Europe." *Journal of Urban Technology*.18 (2): 65–82.

Evans-Cowley, Jennifer. 2010. "Planning in the Age of Facebook: the Role of Social Networking in Planning Processes." *GeoJournal* 75 (5): 407–420.

Gilbert, Jeremy. 2013. *Common Ground*. Pluto Press.

Hacker, Kenneth L, and Jan van Dijk, eds. 2001. *Digital Democracy: Issues of Theory and Practice*. Sage.

Innes, Judith E. 2007. "Information in Communicative Planning." *Journal of the American Planning Association* 64 (1): 52–63.

Insua, D R, G E Kersten, J Rios, and C Grima. 2008. "Towards Decision Support for Participatory Democracy." *Information Systems and E-Business Management* 6 (2): 161–191.

Räsänen, Minna, and James M. Nyce. 2013. "The Raw Is Cooked: Data in Intelligence Praictce." *Science, Technology & Human Values* 38 (5): 655–677.

Tuomi, Ilkka. 1999. "Data Is More Than Knowledge: Implications of the Reversed Knowledge Hierarchy for Knowledge Management and Organizational Memory." *Journal of Management Information Systems* 16 (3): 107–121.