WHO'S MAP? EVERYDAY ACTIONS OF SPATIAL DATA RESISTANCE

Craig M. Dalton
Hofstra University

Jim Thatcher
University of Washington-Tacoma

Abstract

Data is the lifeblood of mapping. Without it, even the most rhetorically powerful lacks substance. Recent counter-mapping by groups like the Anti-Eviction Mapping Project and Argentina's Iconoclasistas reveal how data can be powerfully repurposed in the right setting. In contrast, personal location data, whether big data or data science, tends to be the tool of major corporations and governmental initiatives, from Facebook to Google, the New York Police Department to the Chinese social credit system. Popular media suggest that people have little input or ability to influence how they are mapped and profiled, and subsequently advertised to or their movements blocked. In this paper, we seek to survey how people actively and passively resist and/or shape the collection and use of their personal location information, a form of everyday counter-mapping, as people attempt to exert influence over their data. We develop a typology of strategies of how people engage the production and use of their personal geographic data: acceptance, active resistance, making present, and escape. By identifying and cohesively conceptualizing such strategies, we aim to develop a series of approaches to exert more control over spatial data about oneself. We focus on strategies for two reasons. First, modes of resistance are highly contextual in terms of the political and social processes at work. Second, discrete technical efforts, such as turning off your phone's GPS or using a VPN, can be quickly rendered obsolete or circumvented as technologies change in the continuing arms race of privacy and data capitalism. The strategies we hope to shed light on can adapt their specific implementations, remaining relevant and useful as conditions shift.

Introduction

Spatial data, be it lat/long locations, mailing addresses, What3Words, or a sense of where you are have always been essential to making maps. Technological developments over the last 15 years now produce data at newly granular, individualized scales: not just the zip code in which you live, but your mailing address; not just your phone's area code, but your GPS coordinates. Frequently, such data are produced and used by corporations and governments in ways that exceed the scope of expected services and that may not be to the benefit or with the consent of the person that geographic data represents.

Inspired by counter-mapping, we survey strategies that resist the production and extraction of geographic data in order to develop a cohesive typology: *acceptance, active resistance, making present,* and *escape.* We focus on strategies rather than specific technical practices, such as

turning off a phone's GPS, because such practices can be quickly rendered obsolete or circumvented as technologies shift within the ever-continuing arms race of privacy within data capitalism.

As geographers, we focus on geographic data, any form of data that includes a reference to a location, place, or area. Thus, they include both traditional spatial data such as geodatabases of zip codes, but also individualized lat/long coordinates and simple place names. This kind of data frequently include not only where someone is, but also where they live and places they frequent, and sometimes similar information about their social contacts. Within data capitalism, these shifting temporal and spatial scales shift and merge as this data becomes the individual that capital can see (Thatcher et al. 2016).

Geographic data with this individualized degree of specificity have produced some genuinely useful and enjoyable services including Google Maps, Seamless, and Pokemon GO. But for all their convenience and fun, these services are built for capital or governmental purposes in which benefits to the user are a means to that larger end.

Three of the most prominent (and overlapping) of those purposes are data production for targeted advertising, security and social order, and classification for financial/credit ratings or insurance. Google is the prototypical example of the first, as the company includes geographic data about its users, such as their location history, in the pool of information it uses to target advertisements at them. Geographical information is also crucial to the second, as home addresses are directly connected to government-issued IDs. Similarly, credit card companies track the location of your transactions lest one be out of place and thus potentially fraudulent. Third, location has long been a factor in assigning financial ratings, including redlining to exclude racial minorities from getting mortgages by neighborhood. These kinds of ratings are reaching new heights in the digital age. For example, Chinese citizens with low "social credit ratings" have their air and train travel restricted (Thacher 2013; Kuo 2019).

The result is both scary and banal; technological systems may feel intrusive, but also disappear in the bustle of everyday life as they achieve ubiquity. In popular media, this is frequently framed as a totalizing tradeoff between surveillance and privacy made by the tech designers. However, in actual practice, geographic information is not a simple either/or. Moreover, framing it that way assumes that these technologies actually work as advertised, particularly in how the people who are the subject-objects of this data production will behave.

No doubt, many users acquiesce to most technological conditions, but many also resist or acquiesce in partial, personal, articulated ways. Those reactions are the focus of this piece. We seek to develop a typology how people can actively and passively resist and/or shape the collection and use of their geographic information. In this endeavor, we are directly inspired by the approach of counter-mapping. In Harris and Hazen's (2005) words, counter-mapping is "any effort that fundamentally questions the assumptions or biases of cartographic conventions, that challenges predominant power effects of mapping, or that engages in mapping in ways that upset power relations" (2005, 115). Counter-mapping mixes ideas and practices in creative,

productive ways to envision and produce alternative worlds. This approach emphasizes what Foucault calls subjugated knowledges (2003), as a way to imagine, develop and make real alternative social formations. Crucially, "counter-mapping" is an umbrella term to describe forms of grassroots mapping; it's not necessary to know the term or the theory to practice it. Recent examples include the Counter-Cartographies Collective, the Anti-Eviction Mapping Project, Mapping Police Violence, and Iconoclasistas.

Strategic responses to spatial data production:

Acceptance

Many, if not most people click 'accept' when prompted by their phone to allow a host of data to be extracted, aggregated, shared, analyzed, and resold. The End-User-License-Agreement is both rarely read and a foundational moment in the commodification of one's data. On one level, this might reflect ignorance of the technical processes, business models, and thus the consequences in play. Terms of service are long and difficult to understand. It can be hard to know how your data is being monetized because it is hard to see beyond the service rendered. Advertisements related to items or places you recently searched for are relatively visible compared to impacts on your insurance or credit ratings. It is even less feasible to see every surveillance camera and know what each connects to.

The extent of geographic data production is most visible during the brief media flash of a data scandal, and in such cases it can be hard to know if your own data is part of it or not. In these cases, digital privacy is momentarily becomes a matter of public debate, and an apparently increasing number of users are to some extent aware that their data is being collected and the general business model behind it. Nevertheless, many choose to ignore the process, perhaps as it feels overwhelming or because the perceived trade-off is so minor as to be worth it. That may be true in a single instance, but as data accrues into increasingly detailed profiles over time, the balance turns in favor of the data broker. This strategy can be re-evaluated those periodic moments of unexpected consequences, whether personal, as my current browsing experience reflects my recent travel, or widely social, such as the case of Cambridge Analytica.

Active Resistance

In contrast to the various levels of acceptance described above, active resistance attempts to directly impede the production or extraction of geographic data. Active resistance is less common than acceptance for several reasons. First, resistance entails a high degree of motivation and engagement. Practitioners of this strategy have a wide variety of motivations, from disgust with the latest data scandal, to fascination with the technology among cryptonerds, to the pragmatic needs for privacy among journalists and their sources. Second, active resistance tactics tend to be dependent on specific technologies and their flaws. Thus, they are vulnerable to obsolescence as technologies change. Today, bandanas can be worn to evade facial recognition algorithms; a decade ago, finding someone in surveillance footage required a human observer, ten years before that, it was possible to avoid CCTV in many cities. Regardless of the specific

technology, forms of active resistance tend to involve complicating the production of data or obfuscating that data to make it less precise or meaningful, or some combination of the two.

Perhaps the easiest way to complicate geographic data production is to turn off location services/GPS on your phone. Your location can still be tracked, but to the degree that your device complies, doing so forces apps and the OS to fall back on secondary, less accurate geographic sources, such as the closest cell phone tower or the known location of a nearby wifi network. Other digital complicating methods include regularly erasing your browsing history, cache, and cookies. On the street, there are also a variety of clothing and makeup styles that are designed to confuse or elude facial recognition systems.

Obfuscation can take many different forms from simple to highly technical. Supplying fake, fabricated information, such as on grocery store loyalty programs, burner email accounts, social media profiles, or setting your Google Maps turn-by-turn destination near, but not at your real destination, are usually easy but inconsistently effective. More complex measures include using cryptography, virtual private networks (VPNs), and spoofing GPS readings. The security-oriented Tor browser employs several of these methods simultaneously. Nevertheless, while such approaches make the generation and extraction of your spatial information more difficult, they do not make it impossible. Even Tor can be compromised with enough resources. feels overwhelming or because the perceived trade-off is so minor as to be worth it. Maybe a single data point is worth that free doughnut. That may be true in a single instance, but as data accrues into increasingly detailed profiles over time, the balance turns in favor of the data broker. This strategy can be re-evaluated those periodic moments of unexpected consequences, whether personal, as my current browsing experience reflects my recent travel, or widely social, such as the case of Cambridge Analytica.

Making Present

In contrast to actively resistive practices that attempt to forestall the production of data, this strategy attempts to make the mechanisms of data production and extraction visible and understandable. Employed by artists, journalists, and scholars, making present renders the unseen data, analysis, and infrastructures that support data platforms visible to a wider audience, and thus potentially opens them to a wider debate of their consequences.

For example, artist-activist Ingrid Burrington's work on identifying, mapping, and visualizing mapping data centers and major data cables show the very material infrastructure on which the web relies (Burrington 2016). Similarly, a variety of scholars reverse engineer the sorting and ranking algorithms behind services like Google Maps and Twitter (Zook and Graham 2007).

Frequently, journalists make present questions and concerns about data by publicizing cases of major data hacks, of mobile apps and operating systems collecting and retaining data with and without consent, and of legal proceedings involving law enforcement's use of geographic data. While these exposés often take the form of a breathless and ahistorical recounting, making

present in the press remains a very powerful way to impact public discourse more quickly and directly than most scholarly articles or college classes can.

Escape

This strategy seeks to withdraw from data production. As with the other approaches, escape is a matter of context and degree, often in tension with corporate or governmental imperatives and the social expectations impacted by them: Where's your ID? Why aren't you on Facebook? Escape as a strategy also raises questions about access and privilege. It is important to be sensitive to what extent escape is a choice versus a manifestation of the digital divide by class, race, gender, geography, age, or other lines. These axes press both ways. On the one hand, it is far easier for someone in an extremely privileged position to opt-out of the constant communicability offered by smartphones, as Keanu Reeves has with his 'dumbphone'. On the other, lack of access to technologies inherently delimits the data produced through their usage, leaving some people literally off the map (Graham et al. 2014). Given the increasing perceived commodity value of data, this helps to explain why some smartphones are cheaper than their 'dumb' alternatives.

As such, escape may take the form of a simple lack of need, a lack of access, or be part of a more active choice: Why use turn-by-turn directions if you already know how to get to your destination? How can one use facebook without access to an internet enabled device? Why volunteer a rating of a restaurant one knows will be shared publicly? More extreme versions of escape may involve not participating in one or another digital platforms, or even living off the grid. However, such strategies may not be possible due to social or professional obligations and this degree of escape raises the largest questions about the extent to which this is the choice of escape or the exclusion of a digital divide.

Conclusions

Self-consciously engaging data often comes down to a critical mindset, one ready to ask the questions "why is this necessary?" and "what would I prefer?". The above typology is not meant definitively, but rather heuristically. Individuals may move through multiple categories in a given day, accepting Google Maps directions, turning off GPS at their destination, tweeting about an invasive query from a newly installed App, and refusing to use Facebook. Developing a typology allows us to better leverage that mindset to help choose preferable options for that context. Moreover, as scholars, the typology allows us to better understand users' positions, choices, and actions.

We welcome suggestions and cases; this is an early phase of a larger project.

Works Cited

Burrington, Ingrid. 2016. *Networks of New York: An Illustrated Field Guide to Urban Internet Infrastructure*. New York: Mellville House.

Foucault, Michel. 2003. *"Society must be defended" Lectures at the college de France* 1975-76. New York: Picador.

Graham, Mark, Bernie Hogan, Ralph K. Straumann, Ahmed Medhat. 2014. "Uneven Geographies of User-Generated Information: Patterns of Increasing Informational Poverty." *Annals of the Association of American Geographers*. 104(4). https://doi.org/10.1080/00045608.2014.910087

Harris, Leila M., and Helen D. Hazen. 2005. "The power of maps: (Counter) mapping for conservation." *ACME An International E-Journal for Critical Geographies* 4(1): 99–130

Kuo, Lily. 2019. "China bans 23m from buying travel tickets as part of 'social credit' system". *The Guardian*. Newspaper. March 1st, 2019. Available: https://www.theguardian.com/world/2019/mar/01/china-bans-23m-discredited-citizens-from-buying-travel-tickets-social-credit-system

Thatcher, Jim. 2016. "The object of mobile spatial data, the subject in mobile spatial research." *Big Data & Society*. Available: https://doi.org/10.1177/2053951716659092
Thatcher, J. 2013. "Avoiding the ghetto through hope and fear: an analysis of immanent technology using ideal types." *GeoJournal* 78(6). 967-980. https://doi.org/10.1007/s10708-013-9491-0

Zook, Matt, and Mark Graham. 2007. "The Creative Reconstruction of the Internet: Google and the privatization of cyberspace and DigiPlace." *Geoforum* 38(6) 1322-1343. https://doi.org/10.1016/j.geoforum.2007.05.004