Introduction

Data are often framed as tools of organized, entrenched power. The etymology of the word “statistics” reveals its origins as an aspect of the operation of the state, and it has traditionally been states, bureaucracies, and large capitalist enterprises that accumulate and manage through data, and especially through digital information processing technologies. Indeed, since the 1960s, the dominant models of organizational action have been information-processing models (Simon 1997). Data, then, have largely lived within these centers of power and indeed have been thought of largely as consolidating that power.

To some extent, though, recent shifts have challenged this status quo. While most data sets remain located exactly where they were—in centers that have the capacity to produce, analyze, and make use of data—technical developments, such as the burgeoning capacity for information processing in the hands of everyday users, and social developments, such as transparency initiatives and movements advocating for more public access to data and data literacy, have begun to put similar kinds of big data and data processing tools in the hands of individual citizens, grassroots organizations, activist groups, and others engaged in what we might broadly class as “data activism.” This offers the potential for new forms of activism and a reconfiguration of power relations—the opportunity for forms of “sousveillance” to counter the “surveillance” at the heart of data-driven governance, for example.

We ask, what happens when these new opportunities must be enacted in the richer textures of practical organizations, and how do actors and activists resolve the tensions and frictions that shape the contexts of their action? In this paper, we examine the practical realities of everyday data activism in urban governance, with a particular focus on the ways in which people balance the activist ideals and institutional mechanisms of their daily work. In so doing, we seek to unpack notions of “activism” itself and identify within it multiple different moments, functions, and positions individuals may adopt for achieving activist goals and for opening up opportunities for others. Our argument draws on material from an ongoing research investigation into civic data work. For the last ten months, the first author has been conducting ethnographic fieldwork with an official urban data team. This team sits in the office of the mayor of one of the largest cities on the West coast of the United States. Our ongoing study looks at the practical, day-to-day work of the data team, including advocacy work (articulating and communicating the value of open data and extending data capabilities, both internally to departments and externally to the public), organizational work (including formulating, running, and publicizing specific data-driven initiatives, and developing and maintaining collaborative relationships with other parts of city government), and technical work (working with the city’s legacy systems, and cleaning, regularizing, publishing, and maintaining data sets). Through participant observation, it becomes apparent that many of the grand notions surrounding the revolutionary power of big data for both social justice aims, or for the reinvention of the bureaucracy, occur incrementally, collectively, and non-linearly, in the quotidian moments of data work. Here, the ambivalences and contested dynamics of fields of activist action become more prominent.

The data team itself comprises a range of diversely skilled individuals who evince (in casual conversations, presentations, and formal mission statements alike) a strong individual and collective concern with open government and the value of
data. They see open access to data as a site for accessible and equitable city services, enhanced quality of life for all citizens, and deeper forms of citizen engagement across the range of city government functions. Some members of the data team consider themselves data activists, or at the very least more on the “radical” side of the civil servant ethos, as stated by the chief data officer in conversation with a social media platform research team in the planning of a forthcoming partnership. The actors leverage a variety of resources—such as county and state, or private, sources of data, as in the case of this collaboration—to achieve these “open” aims even as they work inside city government and within its practical limits.

Drawing on Meyerson and Scully’s notion of “tempered radicals” (Meyerson and Scully 1995), we consider how the staff of municipal data offices, and other informal data workers, enact their own “more radical” agendas and forms of data activism while negotiating the complex dynamics and organizational structures of city governments. This formulation encourages us to adopt a more nuanced approach to questions of power, activism, and resistance, one that focuses on the variety of configurations of “insider” and “outsider” perspectives, the complexities of meshing politics and practical action, the diversity of positions within the landscape of resistance, and the ongoing daily encounter with the ambiguities of positionality. Our ethnographic work, then, provides a starting-point for a broader reconsideration of how politics and activism are enacted in practice.

Data Activism, Organizing, and Ambivalence

Exploring the political consequences of the contemporary spread of data-driven analytics, Milan and van der Velden (2016) describe data activism efforts as supporting “the emergence of novel epistemic cultures within the realm of civil society, making sense of data as a way of knowing the world and turning it into a point of intervention and generation of data countercultures.” They suggest that data activism might even incite new populations of tech activists, stating:

because datafication is such a prominent feature in public life, data activism, as a mode of dealing with it, might progressively appeal to more diverse communities of concerned citizens, beyond the expert niche of previous incarnations of tech activist engagement (Milan and van der Velden 2016, 4).

Milan and van der Velden describe the opportunity for activists to appropriate the technical tools of data analytics typically associated with sites of corporate power and municipal governance, and the opportunities that those tools provide both for holding such entities to account and for offering alternative accounts of matters of concern. Central to the authors’ concern is a notion of resistance, counter-hegemony, or alterity— that is, the idea that the core of any activist position is its opposition to mainstream thought or to traditional power.

However, as writers such as Turner (2006, 2013), amongst others, have noted, stark dividing lines and oppositional stances are not always so clear. Particularly in the domain of digital technology and its development, a complex interplay can be seen between mainstream culture and counter-culture “resistance.” This interplay results in complicated, hybrid contexts, such as former Merry Prankster Stewart Brand operating the camera for Douglas Englebart’s famous demonstration of his military-funded NLS project. Turner traces a complex lineage, reaching back to American anti-fascist movements, in which the distinctions between “conventional” and “counter-cultural” positions are not always easy to discern.

Noting that “politics always takes place in a field criss-crossed by antagonisms,” Chantal Mouffe (2013) has advanced a political philosophy focused on disagreements, local tensions, and radical plurality. Perhaps most important for us here is the intricate texture of the forms of agonistic political relations that she explores, in which, again, no global orientations are easily sustainable in the face of a multi-dimensional and multi-faceted series of local tensions and distinctions of position. In light of Mouffe’s thinking, any activism must always be read locally, as a relational matter, and as a matter of degree, allowing again for a complex internal polyvocality. Sometimes, this polyvocality reflects intersectional concerns and the
work involved in engaging in, and maintaining positions of, strategic essentialism in order to achieve particular political ends. Sometimes it speaks purely to the pragmatics of effecting action.

In a recent episode of the Politically Reactive podcast series (Bell and Kondabolu 2017), guest Patrisse Kahn-Cullors—one of the founders of the Black Lives Matter movement, and a decorated social organizer—spoke briefly on her role as an organizer. When one of the hosts queried why she identifies as an organizer instead of an activist, Kahn-Cullors answered that she works to make distinctions between the various critical roles in resistance movements, namely the activist and the organizer. The activist, to paraphrase, is the one who goes out and does the action, one such example being attending a protest. Conversely, the organizer lays the groundwork for there to be a protest in the first place, through planning, organizing, and networking. Kahn-Cullors states, that for her, activists are “super important” as “they sign the petition, they show up to the rally, they show up to the board meeting. But the organizer is the one who develops the petition, they are the ones that bring communities together so that activists can show up.” Both roles are critical in order for social change to take place.

Within the revolutionary rhetoric of the digital, these pragmatic considerations and organizing efforts often go unrecognized. Tufekci (2017) draws attention to this oversight when discussing the role of digital technologies in supporting and organizing protest movements in sites such as Istanbul’s Gezi Park and Cairo’s Tahrir Square. While celebrating the power of social media to mobilize and connect large numbers of people in the absence of prior large-scale social infrastructure, she cautions that traditional protest movements build infrastructure slowly as they grow, and so are more likely, when decisive moments come, to already have in place the support structures necessary to, say, provide food, clothing, material assistance, and medical care to protesters. In enabling mass assembly without passing through the phase of building a community, movements grounded in social media risk focusing on the “activism” component of Kahn-Cullors’ construction without proper attention to the “organizer” role.

Building on these analyses, we want to take a further step, moving from the organizational requirements of activism towards a consideration of the potential configurations of activism in organizations more broadly. We see “activism” here as a complex set of practices and acts of positionality, encompassing many different kinds of work. Importantly, we aim to underscore a need to look at activism and social change at the scale of the micro negotiations of the everyday, while understanding their affects are neither discrete nor direct. Our field site is one where the data team members find themselves navigating and leveraging the uncertainty in large formal institutional structures undergoing change, working to effect social change, but charged too with the need to acknowledge limits and conditions upon that change. The questions that this paper attempts to open up is just how radicalism is “tempered,” in Meyerson and Scully’s (1995) terms, and how that shapes encounters with new understandings of data, particularly in terms of what new forms of data and data technologies can mean for social justice and urban governance.

The budding forms of data collection and expression that we see in the data team (making data open, automated, and interoperable), provide new ways of knowing, or new knowledge, and along with them alternative methods for challenging hegemonies. We approach activism in this domain as a collective process. In reflecting on our own experiences at the study field site, we ask: how might those with more radical aims incorporate activist modes and ideals into the everyday operations of a large urban bureaucracy? What does it mean to do so at a politically volatile time? We focus on data activism as it is expressed in organizing roles, embodied by the ambivalent data activist. Here, we consider the productive ambivalence in everyday data work for understanding how uncertainty is leveraged to push activist ideals in a bureaucratic setting. The characteristics of this setting, along with the motivations of the individuals who inhabit it, allow for expressions of activist ideals and of “making sense of data as a way of knowing the world and turning it into a point of intervention” (Milan and van der Velden 2016, 1).
Possibilities in Being Data-driven

The broader domain of this inquiry is the increasing turn to data-driven approaches in urban governance. Promising greater transparency, quality of life, and civic participation, these data-driven approaches avow to more effectively and efficiently address complex social problems. While information objects have long been a key resource in the creation of systems, products, and policies that shape the world in which we live, this current movement—what many term a “data revolution”—marks the advent of a new and forceful volume, variety, and velocity of data (Kitchin 2014). Derived from sources such as citywide sensor systems and more pervasive online tracking through a myriad of personal devices, these new data assets engender new forms of data curation and processing, along with a greater anticipation of new possibilities.

Milan and van der Velden characterize the big data movement writ large as evoking “a broad set of socio-technical phenomena enveloped in quasi-mythological narratives that univocally emphasize possibility and magnitude” (Milan and van der Velden 2016, 2). The “datification” of everything, from sleep habits to stock-brokering to municipal sanitation services, emphasizes in particular the possibilities of better, faster, and more accurate decision making; these “better decisions” become the foundation for a more effective problem solving. This is owed in part to the seeming objectivity and representativeness located in big data’s near constant accumulation and administering, as compared to earlier forms of quantification. This data-as-truth account is leveraged by data activists and the civic realm (citizens, civic technologists, and city staff) alike; each hope for data to more objectively expose entrenched injustices and enable equitable futures.

The movement is not without its critics. Many are quick to point out that these new forms of data-driven decision-making may—much like extant forms of social rationalization—end up reinforcing both existing inequities and hegemonic interests (Kitchin 2014). There are certainly concerns that these novel tools will make and remake unjust futures and do so with greater potency. But while many have viewed the burgeoning enthusiasm around the possibilities of big data with skepticism, there exists a greater lot of researchers, corporations, technologists, and other technology users and data workers who encourage and normalize the potentiality of big data. Such stakeholders have lent a legitimacy to this burgeoning movement, as exhibited by the increasing number of formal data positions and identities (such as the data scientist, the data janitor, the chief data officer, the data journalist, official city data teams, and so on); in fact, a current project of this urban data team is to expand the formal position titles and training tracks within the bureaucracy to “modernize the workforce,” encompassing more of such roles and skills.

Context: Everyday Data Work

The data workers in our study sit in the mayor’s office in one of the largest cities in the United States, with a population of well over one million and a city government that employs about 40,000 people. Established in 2013—when many cities around the world were beginning to “open” data—this team is responsible for managing data assets and related technologies within and beyond city hall, for making data visualizations and data dashboarding tools available to departments and citizens, and, most expressly, for motivating the city to be open and interoperable with their data practices for the making of data-driven decisions. This latter charge involves encouraging different departments, initiatives, and teams to work across otherwise siloed operations in order to utilize each other’s data, as well as other sources of public (county) and private data (via data warehousing services and tech companies). The aim here is to optimize data operations and engender a level of transparency whereby departments and citizens alike know how (and what) the city is performing.

The team itself is comprised of a small but diversely skilled set of data enthusiasts who collect, clean, analyze, visualize, package, and promote data assets, techniques, and tools; much of this work occurs behind the face of a given initiative (e.g. recently the team cleaned, visualized, and trained a group of city staff working on domestic violence awareness and prevention). The professional and educational
backgrounds of these individuals run the gamut, spanning from software engineering and business analytics, to public policy and communications; together these skillsets forge the necessary work of accumulating, organizing, and communicating the city’s data. Whether it is a focus on equity, transparency, or environmental sustainability, each team member is invested in data-driven governance as a means to enhance the quality of life for city staff and the citizens they work for, to make the city more “livable” for all.

The data with which they work are generated from a range of government functions, including city services (e.g. tracking speed and distribution of graffiti cleanup or waste management), urban planning (e.g. measuring traffic, tracking affordable housing stock or the quality of paved lane-miles and sidewalks), and economic development (e.g. understanding local business needs, or the landscape of employment opportunities in the growing tech industry). In the best cases, this means that data from numeric tables in static spreadsheets will be moved to a system (via sensing or scraping) that automatically collects and updates standardized data currently, whereby the data sources have defined “owners” and all necessary metadata, and in some cases universal IDs (categories that work across all operations in the city).

Opening and activating new streams of data, then—especially all-encompassing, continuously accumulating data—requires a lot of organizing. Organizing toward transparency can be a challenge in a bureaucratic institution for a variety of reasons, not least of which is the fact that making governing processes transparent creates new accountabilities that departments may not yet have the bandwidth to address. While there was indeed an executive mandate to open data and become both more open and more data driven, there is little direction on how this should work in practice, or how to define success. Thus, there is much uncertainty surrounding the open data movement at the sites of actual instantiation, especially with regard to authority, accountability, and even the very definition of data work.

Uncertainty, Bureaucracy, and a Tempered Approach

A bureaucratic setting may not be the first that comes to mind when looking for examples of data (or any form of) activism or radical thinking. However, through leveraging contingency and ambiguity in day-to-day workflows, and by embodying the position of the “tempered radical” within those areas whereby a given bureaucratic staff member maintains both an authentic activist self as well as a professional position self, opportunities to exercise activist aims arise.

In The Bureaucratic Phenomenon, Michael Crozier (1964) outlines a theory of power and uncertainty, particularly the important role of the latter in enabling agency as well as stabilizing conflict (if one is to bend rules or exploit uncertainty, it is important that organizational homeostasis remains a possibility). Crozier offers a broad study of a French monopoly where automation is not able to fully rationalize work or action, and he characterizes the ways in which there remain undefinable, human-dependent actions within an organizational system. These un-rationalized moments create a wellspring of wiggle room against authority.

Crozier finds that “even those with the least amount of status in an organization” will push “to the extreme their initial advantage—their control over the last source of uncertainty remaining in a completely routinized organizational system” (Crozier 1964, 154). The reason uncertainty becomes important is because it removes predictability. Where behavior is determined, it will be obvious and anticipated. With full rationalization, there would be little need for interpersonal negotiation, leaving no room for bargaining or ingratiating, no room to expand or push upon the boundaries of roles or duties. Crozier argues that in a completely determined and predictable bureaucracy, power relationships could not develop because staff would exist in a context where no one person’s actions would have any potential to impact the behavior of another’s.

In being a sanctioned office of the mayor, this data team certainly owns some leverage for making data demands of other departments. However, there are many ideological and infrastructural constraints to fostering engagement and
transparency through open data. Due in part to this being both a newer office, concept, and indeed a new organizational function, there is considerable uncertainty as to what these data projects produce, or how they should be structured. The data team attempts to take advantage of this lack of determinacy in defining their roles in relation to data as a means of procuring it from less than willing departments, (those who, perhaps, do not see the value in increasing their workload to clean and “open” their data, or do not have the capacity to do so, nor the capacity to address what the data might reveal). However, these departmental operations are already rather opaque, and departments are likewise able to contest or expand upon the areas of uncertainty in turn, offering up reasons of bandwidth, capability, political, or infrastructural complications that prevent them from submitting to the data team’s requests. While many leverage this uncertainty against open data advocacy (in the very form of resistance against authority Crozier hints at), ambiguity can be operationalized in favor of activist-leaning goals with the new tools of big data.

Although full rationalization and prediction is often the goal of big data, it is still a novel and unfolding practice, especially in these civic spaces, and the data team can and does define the meaning and structure of this data work, iteratively and collectively, in a variety of creative manners, to expand their own domain of authority. This may translate into a series of more informal programs, meetings, and trainings to build mutual understanding in micro-moments and discussions over time, or it may mean sacrificing the visibility of their own work in order to build bridges and partnerships on matters that they care about. The concept of the “tempered radical” becomes important here, which is a theoretical and feminist position of productive ambivalence (Meyerson and Scully 1995).

Exploiting Uncertainty: Data Activism as Tempered Radicalism

Milan and van der Velden (2016, 7) note that “[m]any contentious actions in data activism are performed at the individual level: think, for example, of engaging in programming or inserting data into a spreadsheet.” Bureaucratic employees similarly—especially in zones of uncertainty—have the agency to exploit ambiguity in their discrete, daily work practices and “perform activism at the individual level” even in the rote aspects of data work. The concept of the “tempered radical” becomes important here, which is a theoretical and feminist position of productive ambivalence (Meyerson and Scully 1995).

Tempered radicals are individuals, often located in a professional organization, “who identify with and are committed to their organizations, and are also committed to a cause, community, or ideology that is fundamentally different from, and
possibly at odds with the dominant culture of their organization” (Meyerson and Scully 1995, 585). Frequently, these are people whose work focuses on aspects of organizational change or evolution. While this mode of boundary-pushing and change is situated in the domain of organization science, their concept is in conversation with both feminist and activist inquiry. Here the authors seek to expand the frame of “being radical” most commonly featured in literature, and move toward a “collaborative division of labor among activists” which will help to buffer against what they term “the counterproductive tendency [...] to judge who is being the best and most true advocate for change.”

Adhering to radical ideals, while working professionally in a bureaucracy of slow and opaque data practices, is one such example. Importantly, the tempered radical is a position of purposeful ambivalence, and it is a challenging role to occupy as it requires holding multiple intensities. The authors of the concept state that:

individuals can remain ambivalent and quite clear about their attachments and identities. In contrast to compromise, ambivalence involves pure expression of both sides of a dualism; compromise seeks a middle ground which may lose the flavor of both sides (Meyerson and Scully 1995, 588).

Far from the typically negative connotations of the word ambivalence, Meyerson and Scully show both the challenges and the constructive nature of maintaining a dualism. Simply by existing in an organization while not fitting into the organization’s overarching, hegemonic structures gives rise to owning ambivalence; this certainly holds true for the data activist enlisted in bureaucratic processes, but may also characterize anyone working through or with data who maintains skepticism about its promises. Alongside the ambivalence exists a complimentary embracing of uncertainty, or an embracing of the inability to completely control. While this may fly in the face of what using data-driven practices hope to achieve, the pragmatic response to precariousness can be used productively in the spaces of big data administering.

**Strategies of the Tempered Radical**

Meyerson and Scully describe four important strategies of effecting, affecting, and surviving via the role of tempered radical. The first strategy employs Karl Weick’s concept of *small wins* whereby the tempered radical can undertake smaller or trial projects to encourage larger moments of change, and test or expand existing and entrenched cultural boundaries (Weick 1984). Local boundary-pushing schemes can build, creating future opportunities and ultimately turning into larger projects over time. As does the human body in reaction to something perceived as invasive, so too does the organization when faced with dangerously different and potentially destabilizing ideas. A small wins approach helps to avoid any such reaction while still effecting real change.

The second strategy may seem reductive, but it is that of essentially being true to oneself, or what the authors call *authentic action*. Specifically, they refer to being oneself continuously and spontaneously. Being true to oneself when one does not neatly fit into predetermined parameters of organizational culture creates opportunities, through exposure, for new ways of doing things by providing examples of alternative modes. The third strategy is that of *language styles*, or speaking or being fluent in multiple languages (i.e. the languages of each facet of the ambivalent self, or the language of each space the tempered radical inhabits). The important work of this language strategy involves communicating a collage of these languages (i.e. knitting the radical or activist language together with that of the urban bureaucrat so as to be legible to both domains) instead of employing only one language across domains, or only the local language. Strategically leveraging language styles allows for discourse deconstruction, where the tempered radical can dismantle hegemonic ideas and assumptions in either domain to “make room for alternative conceptions of organizing and management” (Meyerson and Scully 1995, 597). Lastly, owing to the cumbersome nature of juggling these dualities, a final and important tempered radical approach involves actively garnering support. The authors cite an *affiliations* strategy—particularly maintaining affiliations outside of the organization for emotional, ideological, and informational support—as a means to express rather than suppress emotions and ideas, and avoid burnout.
With this in mind, then, we explore productive ambivalence in everyday data work to understand how uncertainty is leveraged to push activist ideals in a bureaucratic setting. We ask: how might civil servants leverage zones of uncertainty in daily data work to push personal or “radical” agendas using these strategies? How do orientations towards “data” in particular allow them to present a view on new organizational opportunities within “legacy” organizational frameworks? Our ethnographic work begins to provide us with a view of how these concerns figure in the work of the data team.

Civic Data Organizing

The constellation of the aforementioned big data enthusiasms—alongside streams of private sector support, civic-minded investment, and a growing political interest in the administrating potentiality of big data—has engendered formal data teams in urban governance across the globe. On taking office, the mayor of the city of our study sought to lead the way for these global smart cities to certify that the city uses data to solve problems and promote innovation, as stated in the open data mandate. The city thus institutionalized data work in an official mayoral data team (a common configuration for these official data teams), which has been the site of our inquiry.

Despite the data team’s institutionalization, the onus is on the scrappy data team to define what data-driven governance looks like by encouraging personnel in the more than forty departments to switch over from legacy systems and make their work “transparent.” Many share the excitement of potential and possibility through data, but enthusiasm is dampened by tensions surrounding the previously opaque becoming open to scrutiny; once a performance issue is identified, it must be addressed lest it be subject to media attention or citizens’ demands. What “tempered radical” strategies might be enacted by the data team staff members to encourage this leap of faith into data-driven governance? How can they provide public access to the city’s data assets and the more activist ideals of civic participation, justice, and equity?

Small Wins

As Crozier explains, being in a position where one does not have full authority to direct occupational efforts engenders a situation where “each group fights to preserve and enlarge the area upon which it has some discretion” (Crozier 1964, 156). This is certainly true of the tempered radical caught in the crossfire of opposing definitions of data work and civic responsibility. Where the data team makes attempts to define and fortify their open data program throughout the city, other departments are likewise doing the same (i.e. holding onto their old and opaque ways, or even coopting and claiming new forms of data work as their dominion). Nevertheless, the streamlining and opening of city data is precisely the type of organizing work that will allow for other forms of data activism to take place: data resources can be used to advocate for various community needs where, for instance, one is able to see the landscape and distribution of city services. Of course, revealing that one neighborhood is not receiving timely sanitation or security services, for instance, is the sort of visibility that some city departments may be keen to avoid.

Meyerson and Scully (1995) show how the tempered radical strategy of obtaining small wins (instead of, say, a top-down overhaul of civic data work) can be used as trials to “test the boundaries of an organization’s capacity for change.” The city data team members employ such incremental moves to “test the boundaries” of a given department’s ability and willingness to partner in the open data paradigm. A recent instance of this boundary-testing at our field site involved the need to release (via a mandate and pressure from citizen and media data requests), and the desire to automate (so as to avoid manually uploading data every month), the city’s safety data. One data staff member in particular, whom we refer to here as “Dina” (a pseudonym), dedicated herself to procuring this data so as to allow it to, in her words, “speak” about crime patterns across the city with the hope of fostering both discourse and action. Dina met with the data-owners—the city’s police department data team—in person in a series of more casual office visits, coffees, and lunches to explain aims and intentions, and to learn what she could do to facilitate the process. She offered up extra time to jump-start the project with hands-on
training, and encouraged regular problem-solving check-ins throughout (a process which later became institutionalized across the city).

The experimental nature of small wins helps to “uncover resources, information, allies, sources of resistance, and additional opportunities for change” (Meyerson and Scully 1995, 595). Rather than insisting the data be fully and immediately released per the top-down mandate, Dina labored continuously to ease concerns, educate, and enhance overall capacities, eradicating at first the infrastructural barriers and later the ideological ones. In the course of these nudging efforts, she also came to learn that prior resistance was enacted for a constellation of less-obvious reasons, namely, legitimate concerns surrounding citizen privacy, technical and personnel bandwidth, and the complicated nature in which data are gathered and stored in the field. This process, then, garnered unlikely allies within the police department itself, data workers who align with her ideals despite the appearance of opposition; these new allies in turn are able to leverage their domain expertise to create space for opening data within broader systems of actual departmental resistance.

Weick suggests that “small wins reduce large problems to a manageable size. Big, unwieldy problems produce anxiety, which limits people’s capacities to think and act creatively” (Meyerson and Scully 1995, 595). Through persistent, smaller projects of familiarization, narrativization, accommodation, and automation, Dina was able to secure the release of the contentious data (contentious as the data points to marginalized neighborhoods with fixed or increasing crime while other neighborhoods are experiencing a decline), paving the way for other highly-desired but potentially problematic datasets to follow suit. This day-to-day organizing work is certainly not part of the city’s open mandate, nor is it the way many other data workers have interpreted what it means to be data-driven; this labor often is invisible and goes unrewarded. However, small wins such as these are a crucial foundation for other efforts of data journalism, data activism, and even internal advocacy, that aims to use the city’s data for political action. For example, owing in particular to the scale and granularity of new forms of data, advocates can discern whether the city is indeed becoming safer for all.

**Authentic Action and Language Styles**

Dina achieved a cultural shift by “acting in a way that was simply authentic” (Meyerson and Scully 1995, 596). Her earnest interest, in both the release of safety data and in being supportive to those who owned the data, demonstrated an alternative interpretation of the mayor’s open data directive (collective vs. authoritative), and city work writ large which tends to be guarded and competitive. Rolled into the small wins strategy are two other tempered radical approaches: **authentic action** and **language styles**. In the conversations regarding safety data, Dina was able to leverage the language of the mandate to open data, and also define the data work as a service and as mutually useful, by couching it in both bureaucratic and progressive frameworks. Her authenticity was perceived and appreciated by others, and even allowed her to forge new partnerships for the open data efforts to come.

However, Dina later stated that she wishes that all of these laborious negotiations (e.g. constant follow-ups, couching transparency in terms of automated workflow efficiency, or framing what the data reveals in a more palatable light) were not necessary; she wishes the data could instead “speak for itself.” This individual considers herself a data activist. She works in the data team less than full time so as to perform other forms of data work in her spare time to achieve activist pursuits. When engaging with the various audiences, she is able to stitch together bureaucratic languages with the vernacular of activists, data scientists, and tech evangelists. She finds that holding these multiple identities and maintaining ambivalence is useful, that “there’s value being both an insider and an outsider.”

Currently, she believes that a lot of the more legible data activism is occurring outside of official offices, but she finds the organizing work done within the data team to be very important for achieving activist pursuits. When asked what work, if any, is done to ensure external data activists are able to leverage the work done inside city hall, she stated:

“You don’t have to do that much, all you need to do is to put the data out there. Like a lot of people say it [the work that needs to be done to
promote social change] is not just open data, like you can’t just do that on its own, but what I’m finding is that you can, as long as you have a data dictionary and that there’s enough data where it’s interesting, people immediately do something with it.”

Multiple Languages and External Affiliations

Meyerson and Scully discuss the importance of external affiliations for tempered radicals (with “people who represent both sides of their identity”), not only to strategize and accumulate useful information, but also for maintaining the ability to remain “fluent in multiple languages.” In another recent instance, the data team’s membership fluency allowed them to take special advantage of an event in the informal civic data-hacking sphere to affect change inside the institution. The advent of new information-processing tools, and broader data literacy in everyday users, has engendered new data cultures such as those located in the volunteer-based civic tech community. Civic data hacking, one such example, “can be framed as a form of data activism and advocacy: requesting, digesting, contributing to, modeling, and contesting data” (Shrock 2016, 4). Many cities utilize such civic tech groups and efforts to enhance the function of their city, or to address social concerns and injustices more directly. In fact, once off the clock, the city employees themselves may also participate in such endeavors to build bridges or exercise their own interests.

One such informal civic data group recently organized around a controversial topic—that of racial discrimination in police procedures—using the “Veil of Darkness” hypothesis. The Veil of Darkness hypothesis “asserts that police are less likely to know the race of a motorist before making a [traffic violation] stop after dark than they are during daylight” (Grogger 2006, 878). Thus, if there is indeed a pattern of racial discrimination, the pattern of traffic stops will differ during the daytime from those conducted at night, where the race of the driver is (supposedly) less readily visible. On the event’s online description, however, the organizer remarked that this more contentious open dataset was recently made inaccessible (password-protected), and those attending the event would now need to collect the data from the organizer who had already downloaded it. This otherwise exceptional caveat within the event description quickly traveled to city hall.

Employing “multiple languages” (activist language surrounding concerns about racial profiling, together with the language of data science and inclusive of bureaucratic undertones), the team was able “to speak to multiple constituencies” (Meyerson and Scully 1995, 590) about this issue, and leverage the novelty of the situation for their benefit. In the context of this city’s open data efforts, all departments retain control of the datasets they share. That the local civic tech community (and, thus, citizens) noticed and publicized the locking of a particular department’s data became cause for general concern, but there was much uncertainty with regard to what the occasion meant or how it should be dealt with. The data team converted this event into a lever for imploring transparency objectives. They leveraged uncertainty here by highlighting this open data breach to remind stakeholders that these assets (and especially their withdrawal) have the capacity to garner positive or negative citizen and media attention. Thus, the event became an opportunity to apply pressure on appropriate parties to (re)release data, not only in the vein of the open data mandate, but as a means to serve their constituents’ needs and interests. In this sense, the data team was able to use the more familiar language of civil service to encourage the opening of data.

Leveraging external networks like the civic tech community as such exemplifies the affiliations strategy, where those holding dual modes garner the necessary support (emotional, professional, and otherwise) from like-minded peers to buttress against “difficult emotions” and the possibility of burnout (Meyerson and Scully 1995). Members of the data team connect with formal and informal networks that seek to use data for social good to extend their bandwidth, but also to attain support within and outside of the walls of city hall. In a recent interview, Dina reflected on leveraging such a network: civic volunteers (often data scientists or technologists) in the city. She remarked that there appeared to be a boost in interest from citizens (especially those in the civic tech domain), stating that there are: “just a lot of people looking to help the city” via socially-minded data projects. She
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Leah Horgan and Paul Dourish

credited the increased interest to the current political climate; many see this liberal sanctuary city as “a pocket of hope in the nation.”

Local concerns, then, play out against a broader backdrop. The current US presidential administration’s value system is markedly different to predecessors, with differing data policies and demands, notably with regard to immigration and citizenship. The support and enthusiasm shown by citizens and other city data teams helps the team remember why their values are important, providing emotional, technical, and ideological support to buffer against the fatigue incurred from the lack of internal support or recognition, especially at a time of nation-wide consternation.

Tempered Data Organizers

Organizing in the era of big data—and especially big and open data—allows new forms of activism to be layered on top of such efforts. There is a copious amount of work that goes into standardizing and contextualizing data (with meta data, data dictionaries, attributed ownership available for questioning datasets, and so on), as there is with “making it interesting.” Members of the data team believe that this work of making data relevant is their most challenging charge, as it involves procuring vast amounts of interoperable data across city functions and over years before anyone will be able to derive useful meanings from these data resources. In desiring the data to “speak for itself,” the data team is referring to its opposite: the invisible and tedious labor entailed in training, standardization, and meaning-making with data. Tempering data projects with useful interpretations, quality control, and capacity building, allows the data to travel with more ease, making it more accessible and less likely to engender resistance.

Milan and van der Velden discuss how data activism is “polyfunctional” because “it can be read through diverse disciplinary lenses, and can be domesticated to investigate different dynamics and relations, between and within people, information, technology, and the state/industry complex.” Allowing the data to speak for itself does not mean that the data team believes data are wholly objective. Instead, they believe the data are tools to reveal patterns which might help various city workers, civic technologists, non-profits, and data activists speak to matters of concern which might not otherwise be legible.

Although exhausting, organizing from the inside allows for invaluable insight into how and why decisions are made; this has the effect of productively humanizing the opposition, allowing space to introduce activist ideals that may indeed only be impeded by structural ones. By leveraging insider knowledge and strategically pushing zones of uncertainty to engender change, along with being their authentic selves, using variegated language styles, and leveraging external networks, tempered data activists can normalize the exposure and scrutiny involved in releasing massive streams of data to the public, push their own social justice ideals into every day open data work, and allow others outside of centers of power to advocate using these resources.

Conclusion

Open data initiatives in urban governance have been advocated by many in and outside of city government. Values embedded in these programs attract those with more radical ideals about transparency, technology, and civic participation into bureaucracies. However, there are practical realities, and even contradictions, in carrying out such an agenda in the vein of more traditional forms of civic work. We have turned to Crozier’s discussion of the productive uses of uncertainty, and to Meyerson and Scully’s concept of tempered radicalism, to find conceptual resources to account for the practical work of a municipal government data team involved not just in making data work for the city and its citizens, but also charged with figuring out what that might even mean.

Of course, it is easy, particularly for those more actively and visibly radical, to criticize a tempered approach for not going far enough, for not doing all that is possible with data assets, or to accuse those within positions of power of not advocating social change. The authors of the tempered radical concept also take up these concerns, explaining that while judgements of conservativism and hypocrisy abound,
the ambivalent position of the tempered radical can play a role in a larger movement outside of themselves and outside of their organizations. They conclude that “the labor of resistance may be divided among those who push for change from the inside, from the outside, and from the margin, each effort being essential to the others and to an overall movement of change” (Meyerson and Scully 1995, 598). Perhaps the world of the tempered data activist in a bureaucratic context can only go so far as that of the data organizer, working tirelessly to systematize institutional data practices to make as much data as accessible as possible, and to normalize ideas of data transparency (whatever that may mean). This role or duty aims to produce a framework and resources for others who own more radical or visibly activist positions, or more fully dedicate their time to activist causes (such as organizations that explicitly work to do so, or data and civic technologists who have more resources at hand in conjunction with less entrenched hierarchies to answer to). Thus, in the broader context of the work that data (and non-data) activists must perform, the work of a tempered radical in this domain, or an activist-as-organizer, is only one, though important, node in the larger data activism assemblage.

The tempered data activist will face additional skepticism—coming from outside the big data movement—as to how well data capture any meaningful truths or experiences of urban citizens, particularly the experiences of those most in need of services and social change. As we noted at the outset, big data itself can only go so far, and it is important to consider what conversations spoken through the language of data might restrict or preclude. In considering tempered radicalism, Meyerson and Scully deliberate on the role of language and its tendency to circumscribe. The authors reveal in one interview that “the power of language was located not in the ability to communicate technically, but rather in its capacity to rule out other forms of talk, thought, and identity.” What possibilities do the current expressions of data assets, technology, and the still unfolding practices of data activism rule out?

Tempered radicals have the advantage of being “outsiders within,” and although this position entails a lot of unaccounted for and uncredited labor, of both a technical and emotional nature, they are also positions of power (fringe identities operating in more traditional power structures are less predictable, and as Crozier shows, there is power in unpredictability). Although she speaks to a more challenging and entrenched position on the margin, bell hooks holds that ambivalent identities offer “the possibility of a radical perspective from which to see and create, to imagine alternative new worlds” (Meyerson and Scully 1995, 589; hooks 1984). The very nature of holding such an identity allows for a vantage point not afforded those well within the margins, though maintaining this ambivalent post certainly has its challenges. What practices—located in everyday negotiations—might foster appreciation and collaboration in and outside of the margin? How can we encourage and better appreciate those embodying these exhausting roles to stick with the discomfort of ambivalence? Given the uncertainty surrounding the possibilities of new data technologies and their application, and their emphasis on vastness and speed, it is crucial to examine the more micro moments of potential as a means to indeed “imagine alternative new worlds,” and to do so incrementally, and collectively.

References


**Biographies**

**Leah Horgan**
Leah Horgan is a designer, ethnographer, and Ph.D. student in Informatics at the University of California, Irvine, where her dissertation research focuses on data practices in urban governance.

**Paul Dourish**
Paul Dourish is Chancellor’s Professor of Informatics and Associate Dean for Research in the Donald Bren School of Information and Computer Sciences at the University of California, Irvine. His research interests lie largely in digital media, science studies, and software studies, with a particular focus on human-computer interaction.

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