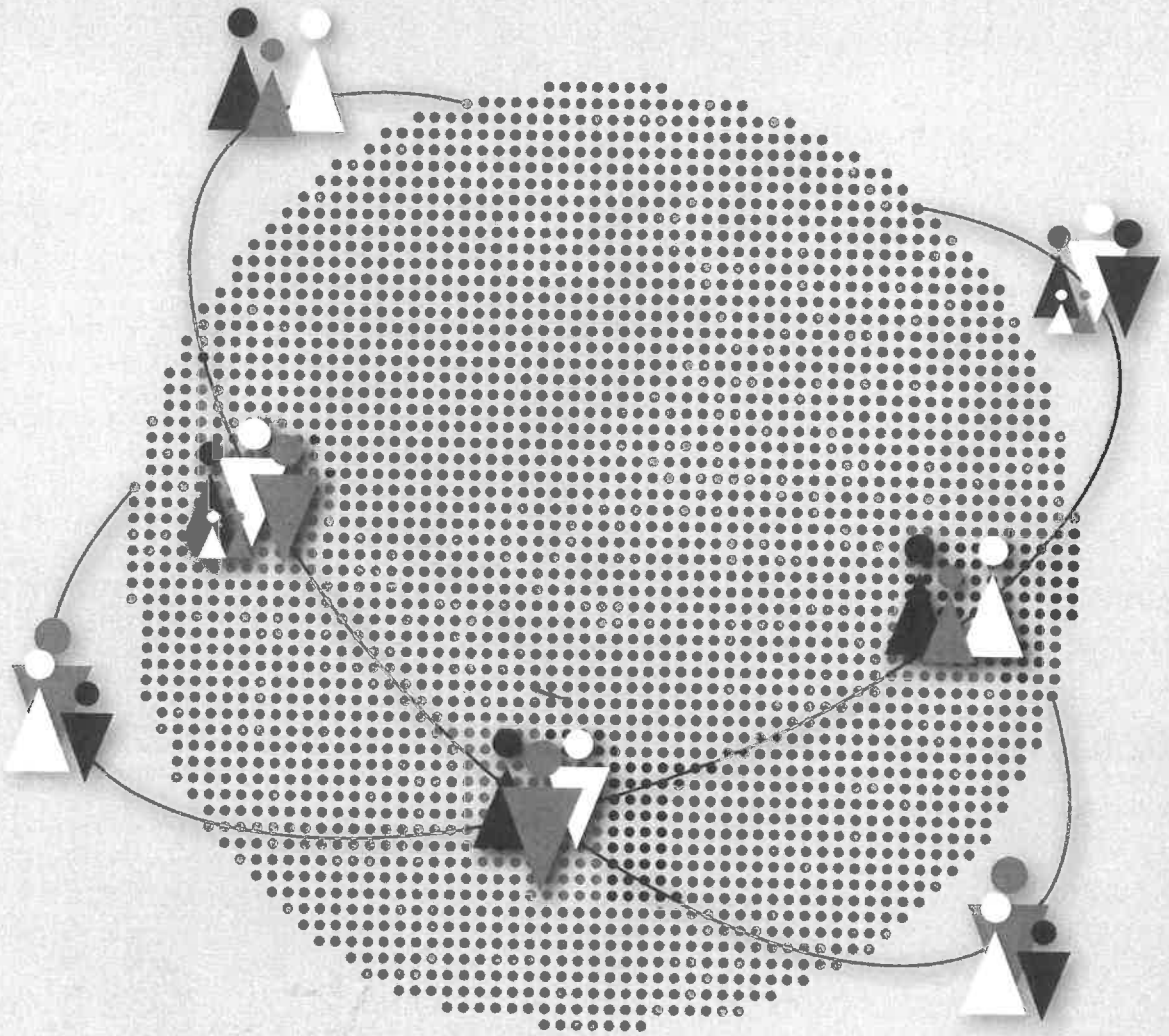

Digital Sociologies

Edited by
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Introduction

Karen Gregory, Tressie McMillan Cottom, and Jessie Daniels

"The digital revolution is far more significant than the invention of writing or even of printing," Douglas Engelbart, an engineer and inventor of the computer mouse, speculated. While Engelbart's claim about the revolution may be up for debate, what is not in dispute is that digital media technologies are changing everyday life, social institutions, and even how we experience our embodied self. The array of digital media technologies, which often get lumped together as "the digital" or "the internet," are playing a central role in the unfolding transformation of society. Digital technologies are reshaping large-scale institutions such as government, finance, and education in ways that are still unfolding, at once embracing more openness and enacting more surveillance. Digital technologies are weaving their way into the quotidian, reconfiguring daily routines. We text "I love you" over morning coffee to someone as close as the next room, post a picture to Instagram in the morning on the way to work, type away at our laptops in the afternoon, and engage with our networks of "friends" and "followers" on platforms like Facebook and Twitter in the evening while we watch *Scandal* on broadcast television. Then, when we want to get away from it all, we explore vacation destinations on TripAdvisor and book a place to stay through Airbnb. With each mediated interaction, we leave a trail of digital debris tracked by a vast surveillance apparatus capable of generating so-called "big data" (Kitchin, 2014). The rise of ubiquitous computing, data generation, and data capture through digital media has ushered in an opportunity for reconceptualizing the working of our understanding of "the social."

The transformations and challenges of digital technologies offer a chance to reinvigorate the sociological imagination. The sociological imagination, as C. Wright Mills described it, is the task of comprehending the ways in which biography and history, the individual and society, intersect (Mills, 1959). The central task of sociologists, understanding this intersection of the individual and society, is being reconfigured just as our everyday lives,

our institutions, and our sense of self is being re-worked in the digital era. A tension exists within this reconfiguration. Digital technologies simultaneously offer liberatory possibilities for destabilizing old hierarchies while at the same time they create mechanisms for retrenching well-established patterns of inequality, stratification, and domination. It is through the recognition of this tension that we have come to see the need for the critical practice of what we now call "digital sociology" (Wynn, 2009; Orton-Johnson and Prior, 2012; Carrigan, 2013; Marres, 2013; Lupton, 2014; Orton-Johnson et al, 2015). Digital sociology provides a lens through which to understand the individual and society after digitization.

Digitization is the process of converting information from analog into discrete units of data that can be more easily moved around, grouped together, and analysed. Moving, remixing, sharing, and circulating information is easier and faster when that information is digitized. Digitization is perhaps easier to understand if we consider what we mean when we use the common phrase "cut and paste." For generations of more senior scholars, "cut and paste" meant to take scissors, cut paper with paragraphs typed on them, rearrange their order, and then glue them to another sheet of paper, in analog fashion. For another generation of scholars who have come of age in a world where the internet has always existed, cut and paste has only ever meant the simple keyboard commands: ctrl+x, ctrl+v. Just as the ctrl+x, ctrl+v commands of cut and paste make it quicker and easier to move text around than typing, scissoring, re-arranging and pasting, other forms of digital activity allow for easier distribution and redistribution of text and all variety of media (Daniels and Thistlethwaite, 2016). While this example may seem trivial, the shift from analog to digital is not. The digitization of information has deep and wide implications for our ways of knowing, studying, and understanding the social world.

Digitization "makes possible new creative ways of imagining and doing sociology" (Marres, 2013). Such new and creative modes of thought and practice are currently happening across different subfields within sociology, which has tended to tuck media work into more established fields of sociological inquiry – such as the sociology of work and labor, the sociology of the family, the sociology of education, or more broadly conceived research in the sociology of race, class, and gender. In that regard, we understand that there will be no singular *digital sociology* methodology, nor a unified agenda. Critical analysis of digital media technology pervades and cuts across multiple subfields within sociology, hence, the plural you will find in the title of this volume, *Digital sociologies*. However, it is our hope that the works collected in this volume will begin to connect sociologists to each other and to a community of practice that will bear fruit in the form of fostering productive conversations between sociological theories and sociological methods that engage with digital media technologies, as well as a reconceptualization of the longstanding polarization of qualitative and quantitative theory and practice.

In practical terms, the examples of digital sociology in this volume are an illustration of "the opportunities which digital tools afford for rethinking sociological craft" (Carrigan, 2013). It is this reflexive practice that makes digital sociology an exciting pursuit, as Orton-Johnson, Prior and Gregory (2015) observe. It offers the opportunity to develop "inventive methods" (Lury and Wakeford, 2012). Digital sociology presents the opportunity to theorize the nature and shape of the social world, as we simultaneously explore and experiment with inventive approaches to craft, theory, and methods.

An (unnamed) history and now a tipping point

Digital sociology is inherently an interdisciplinary practice that draws from a long history of research done in internet studies, information and communication studies, media and cultural studies, the sociology of science and technology, surveillance studies, computer science, digital humanities, and computational social science (Orton-Johnson and Prior, 2013). And it is also a practice that continually reflects on the core concerns of sociology. Many of the social implications of the internet were articulated more than two decades ago by leading sociologists such as Castells, DiMaggio and colleagues, Sassen, Wajcman and Wellman (Wajcman, 1991, 2002; Castells, 1998; DiMaggio et al, 2001; Wellman, 2001; Sassen, 2002). Other sociologists have built digital tools to help us better understand the social world. For example, "Social Explorer," which enables users to dynamically map US Census data over specified time periods (Beveridge et al, 2008), and "NodeXL," which graphically displays people's social networks using data from their social media interactions (Hansen et al, 2010), are but two examples of digital sociology tools. Yet, the field of sociology to this point has no (sub)field of study in which to situate this work. Sociology, as Deborah Lupton observes, has only just begun to take account of the broader implications that the digital raises about the practice of sociology and social research itself (Lupton, 2014). As a discipline, sociology has been less concerned with redefining itself through its understanding of the digital, and has instead been content to cede this terrain to those working in communication, cultural and media studies, internet studies, library and information science, digital humanities, and data journalism. This period of ignoring the digital within sociology is coming to an end, particularly beyond the borders of the US.

Digital sociology is gaining traction as a field in Australia, Canada, and the UK, and to a lesser extent, in the US. As of this writing, the field of digital sociology is experiencing something of a tipping point. In 2013, the first academic book with the title "digital sociology" appeared (Orton-Johnson and Prior, 2013), then another in 2015 (Lupton, 2015). That same year, the editors of this volume organized the first-ever academic conference on digital sociology in New York, which brought together an international group of

scholars from 11 countries. Two of the editors of this volume are leading the formation of sociology degree programs that focus on digital sociologies. At Virginia Commonwealth University, Tressie McMillan Cottom is faculty founder and also teaches a capstone course in critical theories of digital in the Sociology Department's Master of Science degree program. At the University of Edinburgh, Karen Gregory will lead a Master's program entitled "Digital Sociology". Such a program, while housed in a Department of Sociology, will foster interdisciplinary research and draw together work currently being done in science and technology studies, informatics and computer sciences, and the digital humanities. These courses and programs represent some of the ways that sociological inquiry of digital space, place, and problems are being institutionalized.

Throughout the volume we pay homage through citation practices to internet studies, computational social science, digital humanities, critical theory, feminist theory, and a widely interdisciplinary body of scholarship that has engaged the digital for quite some time. We also build on sociology's longstanding interest in technological change as a mechanism for social formation and conflict. This volume extends and builds on this work, opening new forms of inquiry that provide the necessary intellectual exchange for critical knowledge production that includes "not just the architecture of the internet but the social transformations that produce it and are produced by it" (McMillan Cottom, Chapter 14, this volume). These observations about a field in formation raise a set of additional questions: *Why digital sociology? Why digital sociology now?*

Why digital sociology?

Disciplines are "so last century," explains Cathy Davidson (Davidson, 2011). She foresees a future of higher education where disciplinary boundaries matter less and less. In the 21st-century university we are all interdisciplinary, she contends. Davidson is a prescient observer of the landscape of higher education and digital technologies, so she is very likely right about this. Given this trend, it is perhaps folly to set out to form an academic subfield, to, in effect, create a new discipline at a time when disciplines are *so last century*. Or perhaps this is a crucial form of intellectual activism (Collins, 2012). In our view, disciplines are here to stay for the foreseeable future because so much of our labor is organized within disciplinary boundaries. We cannot wait for an unspecified future date when we are beyond disciplines to consider how sociological insights can help us understand the digital world in which we live now. Our work of intellectual activism in forming digital sociology is also meant as an intervention in the broader discipline.

The sociology we were trained in grew out of a theoretical response to the transformations of the Industrial Revolution. If sociology is to continue

to thrive as a field that is relevant to the concerns of the 21st century, it must offer a compelling theoretical understanding of the current revolution in digital media technologies (Castells, 1998; Sassen, 2002; Wajcman, 2002). If sociology expects to attract graduate students and the next generation of scholars, we have to offer some guidance on what sociological theory and research methods might have to offer in a digitally networked era. And, if we expect to engage undergraduate sociology students who have grown up immersed in digital media technologies, we would do well to offer them research that speaks to their lived experience with these technologies. And if we hope to address wider audiences beyond our peers in the academy and the students in our classrooms, we would do well to understand digital technologies (Stein and Daniels, 2017). Sociologists, beyond the desire to share their work with a wider audience, might want to engage with such tools to offer a critical understanding of what is happening in our contemporary, digitally mediated world. If sociologists do not, then those in other fields surely will.

The field of internet studies is well established and generative of a rich body of scholarship (Baym, 1999; Brock, 2005; Consalvo and Ess, 2011; Ess and Dutton, 2013). More than 10 years ago, internet studies had already experienced at least three "eras" (Wellman, 2004). A widely interdisciplinary field, internet studies is focused heavily on "the internet" as a mode of communication and related set of questions along with identity and community (Nakamura, 2002, 2009; Brock, 2005; Burgess and Green, 2013; Weller et al, 2013). In some ways, it may be useful to think of "internet studies" as similar to "area studies" in which scholars from many different disciplines focus on one geographical area. While we draw from this body of work, digital sociology is concerned first with social problems (social inequality, race, gender) and *then* with technology (Wajcman, 2002).

The digital humanities claims most of the research money and sets much of the agenda for how we think about digital media technologies in relation to teaching and digital tools for scholarship (Borgman, 2009; Gold, 2012). The traditional humanities disciplines – literature, philosophy, religion, languages, and musicology – are now often joined with history, linguistics, and semiotics as part of the digital humanities. Social sciences such as anthropology and sociology are sometimes included under the umbrella of digital humanities, as one co-editor heard a preeminent scholar exclaim at a recent talk, "we have a colonizer's view of what is included in the digital humanities – if you're doing digital work, it's digital humanities!" This joking reference suggests some of the quite serious critiques leveled at digital humanities (Koh and Risam, 2013). The cumulative effect of the colonial tendencies of the digital humanities is that it ends up with two primary contributions: the development of new tools, such as those that do the work of data mining digital archives, and the preservation of a predominantly white, male canon of literature (McPherson, 2012; Golumbia and Koh, 2013; Golumbia, 2014). Of course, not all digital humanities projects focus on tools nor valorize the

work of a white male canon, and this is not an epistemological move unique to that field. Sociology has its own history of ignoring scholars of color, such as W.E.B. DuBois, in order to canonize a white male elite (Morris, 2015). Countering such erasure, digital humanities scholar Jessica Marie Johnson creates media (text/audio/visual) and curates archives relating to black history, black futures, and social justice, and does important work that speaks to the potential of digital humanities (Johnson, 2016). Johnson's work is situated within a broader effort among black feminist scholars to counter the erasure of black women from the digitized record and to expand the scope of digital humanities. Our work here takes this as a starting point throughout, most especially in pieces by Gray about the platform Twitch.com (see Part III) and McMillan Cottom about for-profit educational institutions (see Part II). By conceptualizing digital sociology as starting from a black feminist standpoint, rather than bringing it in later to transform extant work, we hope to offer a more fruitful line of inquiry.

In many ways, the early and ardent embrace of the digital by disciplines within the humanities was a response to threats (perceived or actual) to cuts in humanities programs and funding. To look at the funding infrastructure of the Office of Digital Humanities division of the National Endowment for the Humanities (NEH), this was a shrewd, strategic, and successful move on the part of forward-thinking humanities scholars of 20 years ago. The NEH Office of Digital Humanities has funded a project called "W.E.B. DuBois in cyberspace" to digitize and make available all of DuBois' papers (Sternfeld, 2015). This important work of preservation and access is at the heart of digital humanities. Work that opens up knowledge and makes it accessible to scholars anywhere is part of the profound changes affecting what it means to be a scholar today (Daniels and Feagin, 2011; Daniels and Thistlethwaite, 2016). And such tools and open access to knowledge are part of what makes digital sociology possible. But, a reader may ask, is it necessary?

Scholars in already established fields engaged in the study of the internet may fairly critique sociology for being the proverbial "Johnny come lately" to the digital party. Sometimes the late-comer to the party is the one who brings a new bottle of wine, changes the music, and gets people dancing. Our hope is that related fields will see digital sociology as just this kind of late comer, arriving with more libations and a new beat to enliven the digital party. But lateness is relative. From the perspective of internet studies and digital humanities we may be late, but within sociology, we are right on time, because the need for digital sociology is now.

Digital sociology: a field in formation

"I'm a huge fan of sociology," says Patricia Hill Collins. This is perhaps not surprising coming from a former president of the American Sociological Association (ASA). She has her reservations about the field, however:

> At the same time, I think that the field of sociology could do a better job of embracing its existing strengths. Sociology is a border discipline that touches political science, philosophy, some of the natural sciences, anthropology, and literary criticism. Yet sociologists often do not see sociology's interdisciplinary inclinations as a strength. Ironically, as the world itself becomes more interdependent and interconnected, it needs interdisciplinary analyses that can make sense of these relationships. Sociologists are well positioned for interdisciplinary collaboration.... (2013: 107)

It is this inclination toward interdisciplinarity that Collins identifies that gives rise to digital sociology. "Digital sociology is best understood as an interdisciplinary practice," writes Noortje Marres (2013). And this in line with how we think of the work collected here: making a contribution to digital sociology while drawing on an interdisciplinary practice. This collection is a response, in many ways, to Collins' observation that as we become more interdependent and more interconnected, we need an interdisciplinary sociology to make sense of the networked world. A wide array of pressing social issues, and contemporary attempts to address them, make digital sociology necessary. "One Laptop per Child" and "Apps for Good" are just two of the many non-profit organizations that have emerged that seek to use digital technologies to solve intractable social problems. To understand such endeavors and the problems they are trying to address, we need scholars who are trained to understand digital technologies and who have sociological training that is linked to a politics of liberation. This "liberation sociology" takes the perspective of those seeking liberation from oppressive conditions, and is the framework from which we need to understand what it means to be a child that receives "one laptop" from a US-based non-profit or someone who uses an "app for [their own] good" coded by someone else (Feagin et al, 2015). As we conceive it, digital sociology is rooted both in interdisciplinarity and in the politics of liberation. There are also methodological reasons that digital sociology is necessary.

There is a crisis on the horizon in sociological methods. Over the past 40 years sociologists have led the way in methodological innovations, notably the random sample survey and in-depth interviews (Savage and Burrows, 2007). These methods allowed sociologists to claim a distinctive access to understanding the "social," and both have been widely used by sociologists and adopted by scholars in other disciplines. However, these research methods are

less and less useful for understanding the social world and present sociologists with something of a methodological "crisis" (Savage and Burrows, 2007). The diminishing value of these methods means that sociologists can no longer claim any special knowledge about the "social." Part of what makes these methods less compelling is the rise of "big data," which proposes radically different ways of making sense of culture, history, economy, and society. The shift data analytics from "big data" (scraped from the web and social media) is reconfiguring how research is conducted (Kitchin, 2014). It is a paradigm shift that has profound epistemological implications for sociology as a field (Burrows and Savage, 2014; Kitchin, 2014). Our work here, collecting a range of examples of digital sociological methods, is intended to address the pressing need for new methods in sociology that are suited to understanding a networked world. Throughout this volume, scholars grapple with the issues of big data in a variety of ways. For instance, Maddox offers a way to model and analyse data generated in and through an international online community (Part I, Chapter 2). Rosengren and Ottosson consider what big data means when it is collected by employers through workplace surveillance schemes (Part II, Chapter 12). Lupton calls our attention to the way that we actively participate in generating big data through our use of personal tracking devices, and offers a critical analysis of how we begin to think about how this shapes human behavior and society (Part III, Chapter 21). Grinberg offers a thoughtful contemplation about the implications of discourse about big data rendering us all "nude" (Part III, Chapter 26). And Sharma and Brooker use a data-scraping tool to analyse the vast amount of tweets using the hashtag #notracist to help us understand the mechanisms of racism denial (Chapter 29). These contributions are a starting point for a conversation about the challenges that big data presents to sociology as a field.

The work in this volume also presents a wide range of inventive digital sociological methods. Hunt's investigation of transnational feminist activists and Recuber's examination of the digital detritus of suicide notes left online both point to the need for a sociological understanding of "small data," of the intimate spaces people create as part of their everyday life (Part I, Chapters 4 and 7). Several of the pieces in this volume analyse online discussion boards as their primary data source, such as Jamerson's investigation of TripAdvisor comments about Harlem Heritage Tours (Part I, Chapter 8) and Cruz and Kubo's examination of the hate-filled comments about Philippine-born US immigration activist Jose Antonio Vargas (Part III, Chapter 27). Several contributions here combine in-person, face-to-face interviews with some form of digital media technology. For instance, McMillan Cottom interviews African-American women who have encountered for-profit educational institutions, and in some instances, the women she interviewed found her through social media and asked to be interviewed (Part II, Chapter 14). As another example of the innovative *pastiche* of methods in this volume, Wynn investigates geocaching, an outdoor activity played among strangers, using

the internet and Global Positioning System (GPS) data, to share the location of "caches" hidden in public locations. To study this, Wynn interviews a small group of avid geocachers and participates in geocaching himself, which enables him to identify the key issues when mobile technology, leisure, urban spaces, and heightened concerns over terrorism intersect in urban public places (Part II, Chapter 19). These are by no means intended to be a comprehensive catalog of possible methods for digital sociology, but rather a starting point for a field in formation. Of course, sociology graduate students and early career researchers are *already* using digital sociology research methods, but this often pushes (and pulls) them out of the field.

Sociology programs are sending the best and brightest graduates to work in other disciplines. Disciplines such as communications, cultural and media studies, library and information science, and journalism have eagerly stepped in to the void left by sociology to claim many of our top job candidates. When sociology loses top job candidates to other fields, it is likely that they will publish less often in sociology journals, attend fewer of our conferences, and contribute less to knowledge that circulates within sociology. In our view, one of the crucial tasks for digital sociology is transforming the broader discipline of sociology and creating opportunities for early career scholars to stay in sociology. This is part of what Stephen Barnard addresses in his contribution to this volume when he writes about the "vocational potential" of digital sociology (Part II, Chapter 13). Forming a field also generates possibilities for connection, which is crucial for knowledge creation.

Those of us doing digital work within sociology need to connect, collaborate, and create new knowledge with others. The British Sociological Association established a digital sociology section that is growing. In the US, there are scholars within the ASA that do this sort of work, but it is often difficult for them to connect. This is made all the more difficult by the nomenclature. The sections within the ASA devoted to the study of digital media technologies call themselves "CITASA" (communications and information technologies section of the ASA). This section recently merged with one on media sociology, so now the section is called "CITAMS" (communication, information technologies and media). If one were a digital sociologist trying to find other digital sociologists, it is unclear how one might do this given such obtuse naming conventions. Thus, one of the vital functions of this field in formation is to provide an apparatus by which those doing digital sociology might connect with one another.

The moment in which we write in is one in which there are sociologists around the globe who are doing related and relevant work on different aspects of digital media technologies in ways that illuminate the intersection of the individual and society. Yet, without a disciplinary field, we can scarcely find each other's work. Put in terms of the digital media practices of creating metadata, if we effectively "tag" our work as digital sociology, it makes it easier to find the work and to find each other. We offer this volume, and

the collection of works it brings together, as a way to suggest that there is a power in naming the work that we do digital sociology because it enables us to find each other.

The volume

When we were gathering papers for this volume, we wanted to open the peer review process beyond the three co-editors. We asked all the potential contributing authors to participate in the open peer review process. We did this for two reasons. First, we wanted to use the affordances of open, digital scholarship to help us think together about the ideas here. And second, we are persuaded by the growing body of evidence that suggests that traditional peer review is deeply, perhaps irretrievably, flawed (see, for example, Smith, 2006), and the converse, that open peer review is more equitable and generative (see, for example, Morey et al, 2016). To do this, we set up a Wordpress blog and uploaded the initial round of contributing papers. We invited the authors of those papers and potential contributors to the volume to review 1–2 submissions by using the "Comments" field on the Wordpress blog. This process created an opportunity for contributors to read other scholars' work as it was in formation. It also enabled a much more open, horizontal, peer-to-peer conversation and dialogue rather than reinforcing a hierarchy between editors and writers. The comment period lasted for several weeks and was quite lively. It also helped us to clarify our own thinking about which papers we thought belonged in the volume and which ones needed further development. This type of open peer review is increasingly common in other disciplines (see, for example, Lopez et al, 2015), but it is relatively rare in sociology. Given this, we chose a modified version of openness, and made the peer review site only available to those who had submitted pieces and not open to a wide, public audience of readers. We were pleased to find everyone participated in this open peer review process, and in general, reported a positive experience with it. However, one contributor voiced concern about the additional labor required in conducting such a review. This is a legitimate concern that raises some of the key issues we address in this volume, particularly around digital labor. And it is a broader issue. The fact of the uncompensated and unacknowledged labor of peer review is part of an ecosystem of scholarly publishing that many agree is broken (Daniels and Thistlethwaite, 2016). Still, we are convinced that the modestly open peer review process for this volume was a fruitful exercise for us, for the contributors, and certainly to the shape and quality of the volume.

In the volume that follows, we have organized the collected works of digital sociology into three sections: Part I: Digital sociology in everyday life, Part II: Digitized institutions, and Part III: Digital bodies. Karen Gregory introduces Part I with an exploration of the sociological imagination in

the light of digitization. She suggests that the ubiquity of quotidian digital technologies and digital practices in the Western world is prompting a Janus-faced moment for the discipline of sociology – a moment that encourages us not only to look back to writers such as C. Wright Mills, but to understand how emerging terrains of data production, data capture, and data analysis may be fundamentally pressuring taken-for-granted sociological binaries. In Mills, however, Gregory also finds a necessary admonition to attend to the politics of our methods and to contextualize our work as a process of critical thinking – critical thinking in and through digital domains and digital methods. Tressie McMillan Cottom introduces Part II with an exploration of how digital sociologies will have to consider the form and function of institutions. To talk about institutions in sociology is to engage a rich history and debate about what constitutes an institution. There is, of course, the idea of social institutions like economic systems, family, education, and religion. There is also the Weberian concept of institutions as organizations and organizational relationships. Perhaps in the most precise, contemporary sense institutions refer to the formal rules that link individuals and collectivities to macro-social processes. In this volume, we conceived of institutions in their plurality. Contributors consider the political economy of digitization with particular attention to social processes such as identity formation, group boundaries, and social cohesion. We also focus on the three dominant trends in studying institutions: education, work, and culture. In keeping with the volume's interest in groups and inequalities, these chapters practice critical sociology. Critical sociology is concerned with social problems and sociology's promise for addressing them. Contributors use a variety of methods that significantly overlap with those that have become most common among those studying the digital: interviews, surveys, ethnography, and textual analysis. They practice what Lupton has called a hallmark of digital sociology: using digital data for social research (2012). These chapters also develop various aspects of social theory. They consider how technological affordances reconfigure theoretical assumptions about urban ethnographies, privacy, identity, mobility, and stratification.

Jessie Daniels introduces Part III by discussing the way embodiment is implicated in our understanding of digital inequality. While the early days of the internet had many people, from commercial advertisers to esteemed scholars, contemplating how digital technologies might allow us to escape embodiment, few believe this now. As we move into the era of the Internet of Things, the digital realm is no longer a destination, somewhere to go that is separate from us, it is in thing, in us and on our bodies (Howard, 2015; Neff and Nafus, 2016). The pieces included in this section move from a focus

on the hardware of devices and digitally aware clothing to the queerness of Facebook to gendered "mommy blogs" and sexualized search engines to the virulent racism directed toward racialized bodies. Throughout this section, these scholars raise compelling questions about the sociological and political implications of bringing our embodied selves into contact with digital media technologies. Reaching beyond facile binaries that pose dichotomous questions (for example, will these technologies make us free or put us in chains?), the pieces in this section offer nuanced and thoughtfully crafted contributions to the emerging field of digital sociology and what it means for our embodied selves situated as we are within systemic inequality.

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PART I
Digital sociology in everyday life

how to interpret the shifts in identity that accompany it. In other words, they attune bloggers, readers, and "lurkers" to mothering. Van Cleaf calls attention to the ordinary, unending work of motherhood as a way to highlight the ways that digital platforms and technologies move further into our bodies, our intimate lives, or our daily rituals of care. Motherhood, and the digital labor of Mommy blogs, offers a way of understanding the free labor of care work within capitalist societies after the digital turn.

In "#notracist: Exploring racism denial talk on Twitter," Sanjay Sharma and Phillip Brooker make a significant contribution to our understanding of racism expressed online and to digital sociology. As with Lupton's piece at the beginning of this section, Sharma and Brooker take a sociomaterial approach to their investigation. In their chapter, they examine the phenomenon of racism denial on the micro-blogging Twitter platform. Utilizing innovative research methods while simultaneously remaining critically reflexive of those methods, Sharma and Booker set out to offer a unique methodologically motivated study. Their goal here is to develop critical race theory vis-á-vis engaging with the technological affordances of digital media. They accomplish this by empirically analysing a relatively large data set of tweets that used the hashtag *#notracist*. Sharma and Brooker put forward a research process for examining a type of racially charged social media data that is not structured chronologically, but rather by an ambiguous "topicality."

Their findings point to online strategies of racism denial being complex and diverse, such as through the multi-hashtagging practices of "humor" and "truth" in racially charged tweets. Sharma and Brooker take an innovative and reflexive approach to the deployment of visualizations and algorithmic data processes. Rather than fetishize any tool or process, Sharma and Brooker interrogate their own process of *doing* this work as they are doing it. As they note, this kind of reflexive research process is neither "trivial nor irrelevant" to the emerging field of digital sociology. Instead, such reflexivity points the way forward to processes that may make digital sociology an essential part of any social science research.

Each of the authors in this section reaches beyond facile binaries and dichotomous questions to offer chapters with subtle and carefully argued contributions to the emerging field of digital sociology. Together, they expand our understanding of what it means to live in and through embodied selves in a deeply unequal social world.

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21

Personal data practices in the age of lively data

Deborah Lupton

The lives of humans have become increasingly entangled with digital technologies due to the reactive and responsive nature of computer software and the ubiquity of the devices that people carry with them or that sense their activities as they move around in public spaces. Humans have become digital data subjects. In this world of "smart objects" and "smart environments," such as smart clothes, smart cars, smart cities, smart homes, smart schools and smart appliances, digital devices can begin to make decisions for us and generate information about us that we may not access to, and that may be used by third parties: insurance companies, energy companies, educational institutions, workplaces, media corporations, marketers, government agencies, and the like. A digital data knowledge economy has developed, in which digital data have acquired great value, viewed as configuring new forms of knowledge for commercial, managerial, educational, government, and research use.

In this chapter, I discuss the ways in which people engage with the data that are generated from their interactions with online technologies and digital sensing and communication devices. I adopt a sociomaterial approach in discussing personal data practices that acknowledges the entanglements of humans with technologies. From this perspective, both humans and the technologies with which they interact are viewed as agential actors, each influencing the other. The modes of creating and manipulating people's data are invested in such features of software as browsers, search engines, apps, and algorithms. The manner in which people interact with this software is mediated via the opportunities that are offered to them in using devices

such as desktop and laptop computers and mobile and wearable devices (or what are often referred to as the "affordances" of these technologies). These affordances are the outcomes of human decision-making. The people who generate the data and then use it in various ways are also making decisions about their actions within these frameworks. These intersections of humans and non-humans form changing networks of actors (Marres, 2012; Rogers, 2013; Gillespie et al, 2014).

"Digital data assemblages" are the products of these human-technological encounters. They are configurations of discourse, practices, data, human users, and technologies. Digital data assemblages are ephemeral and motile, constantly changing as users' new encounters with digital technologies occur and as different data sets come together and interact and are taken up for a range of purposes by various actors and agencies. Each digital data assemblage represents a unique and specific moment in time – a form of "frozen data" – that then goes on to change again.

The term "big data" is now often used to describe the massive digital data sets that are generated ceaselessly from online interactions and digital devices. The generation and use of digital data involve a range of data practices on the part of individuals and organizations. Personal data practices include collecting information about oneself using self-tracking devices, contributing content on social media sites, and observing other people's interactions on these sites. Such practices are voluntary and consensual. Other personal data practices, however, involve information being collected on behalf of people by other actors. These practices include the surveillance and harvesting of people's device use, online searches and transactions by policing and security agencies, the internet empires and the data mining industry, and the development of tools and software to produce, analyse, represent, and store big data sets. While a distinction is often made between "small" data (personalized, detailed information about individuals) and "big" data (massive digital data sets), the boundaries between both are blurred. As most small data that are produced from people's interactions with digital devices and software are transmitted to cloud computing data archives, they tend to be aggregated with others' small data to become big data.

The term "data practices" describes the ways in which people collect, make sense of, and engage with digital data assemblages, including the types of "data materializations" that are generated. Data materializations are ways of representing digital data so that they may be viewed or even touched and handled: from lists of numbers, words, or terms to graphs, drawings, and other two-dimensional visualizations to 3D printed objects that are fabricated from digital data sets.

Critical digital data studies

Given the current prevalence of digital data surveillance and monitoring of people by both voluntary and involuntary activities, digital data practices and digital data assemblages have become phenomena for critical social and cultural investigations. Writing from the perspective of human-computer interaction studies, Mortier et al (2014) have suggested that a new field of research should be developed: human-data interaction. Instead of focusing on how people interact with their devices or software, human-data interaction examines the interpretations that people give to the data that these technologies generate. As outlined by Mortier et al, human-data interaction research should include researching the different forms of interaction that people may have, including their granting of access to their personal data by other actors and agencies, the ways in which people understand data, such as information about how their data are accessed by others, the inferences that may be drawn from personal data or large aggregated data sets, and the consequences of actions in making data available to others, the feedback mechanisms by which data can influence future actions or decisions, and the different actors that interact when data are generated and used.

These are all important questions. However, there are further, broader-reaching issues that also require attention. At a more critical and social level of inquiry, a body of literature in the humanities and social sciences has begun to emerge in response to digital data (see, for example, boyd and Crawford, 2012; Lyon and Bauman, 2013; Andrejevic, 2014; Kitchin, 2014; van Dijck, 2014; Boellstorff and Maurer, 2015; Clough et al, 2015; Lupton, 2016a). This research focuses on such elements as how digital data are generated and how they circulate and are purposed and repurposed, and the sociocultural and political aspects of the data practices of publics and professionals who work with digital data. From this perspective, digital data is a phenomenon that involves power relations, including struggles over ownership of or access to data sets, the meanings and interpretations that should be attributed to big data, the ways in which digital surveillance is conducted, and the exacerbation of socioeconomic disadvantage by the inferences and assumptions that are generated by big data algorithms. Digital data are viewed as highly relative, located in time, space and specific social and cultural contexts. They can only ever tell a certain narrative, and as such they offer a limited perspective. There are many other ways of telling stories using different forms of knowledges. Digital data are also partial: only some phenomena are singled out and recorded and labeled as "data," while others are ignored (see Lupton, 2015a).

Digital data may be characterized as "lively" in a number of ways (Lupton, 2016a). First, these data are about life itself. Second, they are dynamic, with their own social lives. They are constantly being configured and reconfigured as people interact with online technologies, and are circulated and repurposed by a multitude of different actors and agencies. Third, these data are a key part

of the global knowledge economy, contributing to commercial, managerial, government, and research enterprises ("livelihoods"). And finally, these data have become an influential part of everyday lives, affecting beliefs and behaviors and increasingly, people's life chances via the assumptions and inferences that are developed from algorithmic analytics.Indeed, in extending the metaphor of lively data, I have drawn on the work of Haraway (2003) to argue that the digital data assemblage may be conceptualized as a companion species to the humans with which it co-evolves (Lupton, 2016b). Haraway uses the term "companion species" to describe the relationships that the human species has not only with other animal species, but also with technologies. The companion species trope recognizes the inevitability of our relationship with our digital data assemblages and the importance of learning to live together and to learn from each other. It suggests both the vitality of these assemblages and also the possibility of developing a productive relationship, recognizing our mutual dependency.

The vitality of digital data has significant implications for people's data practices. People are confronted with attempting to gain some purchase on information about themselves which is not only continually generated, but is also used by other actors and agencies in ways of which they may not be fully aware. They are also dealing with the ways in which their data are announced to themselves, such as the push notifications, "nudges" for taking action, and targeted advertising that they receive when using apps and online platforms. The commodification, motility, dynamism, and "pushiness" of digital data are aspects that are particularly characteristic of the contemporary digital data economy compared with earlier forms of collecting and using knowledges about people.

The ways in which digital data can be used for monitoring and surveillance of users are also important elements that have been addressed by some writers. The use of big data sets in surveillance activities, or what is referred to as "dataveillance" (van Dijck, 2014), has become a controversial topic. Since mid-2013 a number of highly publicized scandals concerning the monitoring of people's personal digital data have received public attention. Whistle-blower Edward Snowden's revelations about national security agencies' digital surveillance of their citizens, the Facebook and OkCupid experiments on their members, and the hacking of nude celebrity photos on iCloud and adult dating sites, for example, have publicized the ways in which people's personal (and sometimes very intimate) data may be accessed and used, often without their knowledge or consent. As the monitoring of individuals' bodies, energy use, work productivity, moods, social relationships, purchasing habits, driving practices, and so on becomes more routinized and widespread, options for avoiding becoming the subject of dataveillance are limited.

It is important to acknowledge that many forms of dataveillance are self-imposed or consensual, engaged in as part of everyday interactions with other users on social media sites, for example, or as part of personal efforts

to achieve self-knowledge or self-optimization by self-tracking using digital devices. Mobile digital technologies such as the camera and audio-recording functions in smartphones and wearable self-tracking devices that are able to easily collect information about people's body functions, habits, and behaviors, and the social media platforms that facilitate the uploading and sharing of images and details about oneself and others have contributed to the practices of what has been referred to as "social surveillance" (Marwick, 2012), "participatory surveillance" (Albrechtslund and Lauritsen, 2013), or "reflexive self-monitoring" (Lupton, 2016a). These forms of watching involve the practices of sharing information about oneself with others, inviting their reactions and comments, often as part of friendships or in developing other social relationships, as well as commenting on other people or sharing information one has gathered about them (including images and audio data). They are very different forms of dataveillance from the imposed, covert, or disciplinary modes that are represented by CCTV cameras, police-worn body cameras, or the secret surveillance of online interactions by national security agencies. Nonetheless, the personal information that is generated from these modes are still part of the flows and circulations of the wider digital data economy, and as such, are subjected to potential repurposing by other actors and agencies.

Critical digital data scholars have begun to draw attention to the possible ways in which digital data sets may be used to make assumptions and inferences about individuals or social groups. Some commentators have discussed the commercialization of digital data and critiqued the ways in which people's personal data may be used for the financial benefit of others (Andrejevic, 2013, 2014; Center for Media Justice, 2013; Crawford, 2014; Lupton, 2014b, 2016a; Andrejevic and Burdon, 2015). The implications for social justice and civil rights have also been identified. Predictive algorithms that draw on personal digital data are now used in many social and economic domains to construct scores that are used to determine whether individuals should be provided with access to special offers, goods, and services, or whether they pose risks such as the possibility of engaging in criminal acts or terrorism.

Concerns have been consequently raised by privacy and ethics organizations and legal scholars about invasions of personal privacy incurred by big data practices (Polonetsky and Tene, 2013; World Privacy Forum, 2013; Crawford and Schultz, 2014; Executive Office of the President, 2014; Nuffield Council on Bioethics, 2015). For example, the predictions that are made by big data analytics can result in predictive privacy harms, in which people may be discriminated against simply because they are categorized within certain social groups based on their data. This can affect people's access to healthcare, credit, insurance, social security, educational institutions, and employment options, and render them vulnerable to unfair targeting by policing and security agencies (Crawford and Schultz, 2014; Rosenblat et al, 2014).

People may experience technical difficulties in gathering digital data, visualizing it or seeing ways of making data work for them, or they may be denied access to their own data. The affordances of the digital technologies structure the norms and expectations against which people are expected to measure their behaviors and biometrics, and limit the type of information that they collect, emphasizing some while ignoring others (Nafus, 2013; Lupton, 2014a, 2015b, 2016a). People are given access to only some of the digital data that they generate, with the vast majority unavailable to them because they are in the possession of internet companies (Nafus, 2013; Andrejevic, 2014).

In these sociomaterial conditions, how are personal digital data assemblages conceptualized? What choices do people make around collecting, interpreting, and sharing their data? How do people give meaning to their data, and how are data incorporated into everyday lives, notions of selfhood, and embodiment? I address some aspects of these questions in the remainder of this chapter. As well as referring to others' research, I draw on some of the findings from my own current projects to illustrate some points.[1] I have grouped the discussion under three themes: data valences; data communities; and data ambivalences and suspicions.

Data valences

As research by Fiore-Gartland and Neff (2015) found, different social groups give different meanings to digital data. They focused on health- and medical-related data in their research, using interviews, observations, and participation in the communities of technology designers, medical practitioners, advocates, and patients. Their research found that members of these different groups conceptualized the same digital data sets very differently, influenced by the particular social relationships and expectations within these contexts. The data are interpreted and used differently as a result: they possess different value and, in effect, become different data. Fiore-Gartland and Neff use the term "data valences" to encapsulate these shifting and contextual forms and uses of data. Healthcare workers, for example, tend to represent health and medical data in terms of actionable information for managing patients and their conditions, while self-trackers who collect data on themselves represent this information as narratives about the self.

Research on people who use digital devices for self-tracking aspects of their lives has demonstrated the emotional responses that such data practices may involve as part of the meaning and value that people give to their personal data. Ruckenstein and Pantzar's research (Ruckenstein, 2014; Pantzar and Ruckenstein, 2015) with Finns using a digital heart rate monitor found that their participants gained a great deal of pleasure from noticing how their physical activities contributed to a "good" data reading. These researchers also found that certain quotidian activities, including housework, gained new

value for the participants because of their input into improved physical activity metrics as measured by the devices. Their participants enjoyed reviewing the visualizations of their personal data. When their attention was drawn to certain parts of their bodies (such as their heart, as represented by heart rate data), they began to focus more on these parts than others. The digital data that were generated from these sensors therefore came to change the ways in which these people thought about their bodies and their everyday activities. The metrics that these data generated were invested with personal significance, because they were about their own bodies. The data visualizations were viewed as more credible and accurate by the participants than the "subjective" assessments of their bodily sensations. A new kind of value was therefore given to some everyday activities and interactions and to the parts of their bodies on which these devices gathered data.

People who engage in reflexive self-monitoring of their bodily functions and activities often make reference to these devices' ability to see inside the body, uncovering "hidden" dimensions that they would otherwise be unable to perceive through their senses (Lupton, 2016a). This discourse suggests that humans require the assistance of machines to extend their capabilities and provide accuracy and enhanced interpretation and memory of information. This was evident in participants' accounts of using fitness tracking devices and software in my project with Glen Fuller. For example, one male cyclist who used self-tracking devices to monitor his rides noted the following:

> Well, like, you've got all these perceptions about how hard you're riding. What I've found is that those perceptions don't necessarily match up with what your heart rate is doing. You think they do, that's the thing. Before you have something like this, you think, 'Oh yeah, I can work out how hard I'm riding. I don't need something like that to tell me.' But the reality is actually quite different. So in a way, that's really sort of work out how to ride a bit better and harder and know when I can push myself more and that sort of thing, and when I might be a bit tired and struggling and those sorts of things, which you don't pick up on too much.

This man's words underline the ways in which digital data on people's bodies and behaviors are often conceptualized as more truthful than the perceptions that they receive from their senses. He observes that his self-tracked data can "tell" him how hard he is riding, how high his heart rate is, and how tired his is, while his bodily sensations may be misleading. He is willing to trust the numbers, which appear to offer greater accuracy.

My project addressing the use of digital media by pregnant women and the mothers of young children found that the use of digital media to provide information during pregnancy and in the early years of parenting was very common. For example, in the survey I conducted of women who were

either pregnant or who had given birth in the past three years (Lupton and Pedersen, 2015), 73 percent of the respondents said that they had used at least one pregnancy app, with the majority of these respondents using between two and four apps, and using them daily or several times a week. Almost all of the women who used these apps said that they found them useful or helpful. The apps were used mostly for seeking information about fetal development and changes in their bodies related to pregnancy.

My public understandings of big data study with Mike Michael (Lupton and Michael, 2015; Michael and Lupton, 2015) also revealed a willingness on the part of the participants to exploit the possibilities of digital devices to engage in reflexive self-monitoring or the monitoring of others. For example, one of the tasks we set the focus group participants involved asking them in pairs to design data-gathering devices: one that they could use to collect any kind of data about themselves, and one for collecting data on another person (we called these "personal data machines"). Their designs demonstrated the participants' realization of the potential of digital devices to participate in ever-more intimate forms of monitoring of oneself or others that may allow others to gain greater insights into the participants' lives. One pair designed a dream-recording app that would allow them to remember their dreams the next day. They went on to describe how this could be linked to a dating app, so that prospective couples could share each other's dreams and perhaps work out how compatible they were. Another pair discussed a data machine that could monitor the social interactions of people's partners, so that the user could determine if too great a level of attention was being paid by their (possibly cheating) partners to other people. Devices that were able to closely monitor users' bodily functions were a popular choice, such as one that involved analysing the user's sweat to determine whether they were eating a nutritious diet. Devices for keeping a watchful digital eye on one's children were also frequently suggested, including features that could let parents know the location of their children, record their biometrics, and check that they were doing their homework.

My research on digitized pregnancy and parenting also revealed the desire of people to generate detailed information about themselves or intimate others. Several women were positive about using a device that tracked their infant's body metrics. The members of one focus group talked about how they would like to use such a wearable device for their infant that would convey data to their smartphone. They also suggested that they would like to use a self-tracking app during their pregnancy that would track their fetus's development, and send this information to their partner or parents so that they could also see how the fetus was developing. The participants in this research wanted digital devices such as apps and websites to be customized and tailored to their personal details: the stage of gestation they had reached in pregnancy, for example, or the age of their children or where they lived.

Data communities

Many apps and social media platforms encourage people to engage in sharing practices of their personal information as part of their engagement with these technologies. The notion that people can become closer, learn from, and even motivate and support each other by exchanging personal details is reproduced in a range of apps and platforms, from Facebook to specialized patient support platforms such as PatientsLikeMe to fitness self-tracking apps such as Strava and RunKeeper. Users are encouraged to reveal intimate details of their lives to other users as part of developing social bonds, networks, and communities. In this discourse of sharing, personal data are represented as contributing to collective knowledge stores (Lupton, 2016a).

Research has demonstrated that the pleasure of sharing personal data are inherent to the motivations of people who use social media sites such as Facebook, Instagram, and YouTube to upload photographs or videos of themselves or status updates discussing details of their lives (van Dijck, 2013; de Casino and Brooks, 2015). People who engage in self-tracking also frequently allude to the value that they gain from sharing their information with others and feeling part of a community of people engaged in similar pursuits (Barta and Neff, 2015; Lupton, 2016a). The interviewees in our fitness self-tracking study discussed the satisfaction they received from comparing the metrics from rides or runs and noting improvements, and competing with or receiving support and encouragement from other users. Several commented that they also enjoyed uploading information about their sporting pursuits to social media platforms such as Facebook, recounting the number of kilometers of their rides or runs, the time taken, or providing photographic images from the route for their friends or followers to admire. Their use of their personal data, therefore, was often performative, representing their accomplishments and exploits to others. The numbers that their devices generated allowed them to monitor, record, and display their accomplishments easily and in ways that allowed for ready comparisons.

Women who are pregnant or in the early years of motherhood are frequent users of online sites that facilitate the sharing of personal information. It has become common for pregnant women or mothers of young children to upload details of the development of the fetus or child on social media platforms or support websites, and to share ultrasound images or images of the child following their birth (Ammari et al, 2015). This personal data practice was discussed by some of the participants in my project on digitized pregnancy and parenting, as was the use of support forums on pregnancy or parenting apps, or websites or Facebook groups as a means of discussing their experiences of pregnancy and parenting. For these women, and those quoted in other research on women's use of such digital media (for a review of these studies, see Doty and Dworkin, 2014), practices of sharing information about their pregnancy, parenting experiences, and children are valuable means of

representing themselves as "good mothers," feeling part of a community, dealing with feelings of isolation, and sourcing information from others in the same situation. The women in my focus groups, for example, discussed how they had gained answers to questions or concerns they had about their pregnancy or their children by asking questions on online forums or social media platforms or viewing other users' interactions. Sharing information in these contexts becomes a communal data practice, in which people's personal details become part of a crowdsourced body of knowledge that is available to other users of the sites.

Data ambivalences and suspicions

Several recent studies have suggested that the highly publicized controversies concerning dataveillance and data breaches have begun to influence people's attitudes to the ways in which digital data are routinely collected on them and used by second and third parties. Two Pew reports outlining the findings of surveys about Americans' attitudes to data privacy (Pew Research Center, 2014; Madden and Rainie, 2015) found that the respondents were aware of many aspects related to how their privacy was being challenged, and of data security breaches, including national security agencies' dataveillance of citizens and how their personal information is used by commercial companies. The first report (Pew Research Center, 2014) found that nearly all of the respondents were aware of Snowden's documents and what they revealed about the surveillance of citizens. They felt that their privacy was under threat by such surveillance and that conducted by commercial internet organizations. Nearly all of the respondents agreed that people had lost control over how their personal information is collected and used by companies. The second Pew report (Madden and Rainie, 2015) noted a significant element of personal data insecurity that had begun to affect people's attitudes towards dataveillance and data privacy. Very few respondents felt they had much control over the types of data that are collected on them and how these data are used. They expressed strong views about the importance of preserving personal data privacy and security, but had little confidence that internet companies or government agencies would achieve this. Few people in either survey said that they had taken steps to avoid dataveillance, however, suggesting a lack of knowledge on their part about how to do this.

Australian (Andrejevic, 2014) and British research (Kennedy et al, 2015) has also found that people express powerlessness in the face of the authority of the internet empires to collect, own, and harvest their personal information. This sense of powerlessness is exacerbated by socioeconomic disadvantage. Another study used participant observation and participatory action research with Americans from socially marginalized and disadvantaged backgrounds (Gangadharan, 2015). It revealed that such individuals frequently only have

access to "privacy-poor, surveillance-rich" public broadband. For most c them, privacy of their personal data was viewed as a luxury rather than a righ because they had few options to protect their data and lacked the digital literac skills to know how to do so. They expressed little concern about commerci or national security dataveillance of the type revealed by Snowden's documen but a high level of worry about government dataveillance. Such people ofte have a history of experiencing surveillance from government agencies, mostl stemming from their interactions with social welfare systems. Particularl when they are applying to or maintaining their eligibility in welfare program online, they are forced to relinquish intimate details. They are therefore a risk of further marginalization, exclusion, and exploitation from the effect of dataveillance when they are using this type of internet access.

My own Australian research on public understandings of big data identifie a somewhat diffuse but quite extensive understanding on the part of th participants of the ways in which data may be gathered about them and th uses to which these data may be put. We found that the participants in ou focus groups tended to veer between recognizing the value of both persona data and the big aggregated data sets that their own data may be part of particularly for their own convenience, and expressing concern or suspicio about how these data may be used by others. It was evident that althoug many participants were aware of these issues, they were rather uncertain abou the specific details of how their personal data became part of big data sets and for what this information was used. For example, for a female participant the knowledge that "some people out there know as much about you as yo know about yourself" was "scary." She observed that "there is a lot goin on that we don't know" in terms of how other actors are accessing people' personal data. However, a male participant noted that it "depends on who got the data." Providing the example of a person with severe depression, h commented that if others knew this information, then they might be able t provide emotional support or useful services. On the other hand, there ar actors or agencies that might use this information to discriminate against a person with depression, such as potential employers.

Despite such suspicions, a remarkable degree of trust is also often evidence in people's use of digital technologies that collect their personal information. My research on how women use digital technologies for pregnancy an parenting found that despite the very high use of pregnancy apps, ver few users had sought to check where the app developers had obtained th information that they presented in the app. Nor were the women who ha used pregnancy apps concerned about how their personal information ma have been used by the developers of the apps. The focus group discussion that were conducted as part of this project revealed a similar lack of interes or knowledge among the participants in the ways in which their persona information were being used by second or third parties. Very few of thes women were beginning to think seriously about the implications of creatin

an online presence for their children by posting images or comments about them on social media sites.

Discussion

Critical research into data practices, some of which I have reviewed here, has begun to suggest certain elements of the ways in which people are engaging with and interpreting their lively digital data assemblages. These include ideas about the importance of personal data for acquiring new or more detailed knowledge about oneself, the ways in which the data generated by digital devices focus attention on some aspects of the body and the self to the exclusion of others, and the emotional dimensions of digital data practices. People appear to enjoy the perceived benefits of entering personal details about themselves or intimate others to customize and personalize apps and other software to respond to their activities, social relationships and bodily functions, and using technologies that are able to monitor their own lives or others' lives in great detail.

The affordances of digital technologies for generating, storing, and manipulating personal data are valued. The quantification that many digital data assemblages adopt and promote is often considered a more neutral and accurate form of information. People often enjoy finding meaning in their personal data and applying their insights to their lives, or being the target of personalized push notifications that deliver useful information to them. They also see benefits in being able to share their personal data with others and in being able to access other people's data. These responses suggest a willingness to position oneself and others as data subjects.

On the other hand, resistances or blockages to data subjectification are also apparent. Seeking to interpret and make use of personal digital data is experienced as confusing or frustrating for some people. While collecting or using one's personal data may involve various modes of pleasure, comfort, satisfaction, playfulness, or performances of selfhood, confronting or interpreting personal data may also be experienced as disappointing, frustrating, limiting, or invasive of the user's privacy. Sometimes people feel as if they lack control over the reams of personal data that are generated about them, even those that they voluntarily produce in self-tracking efforts or by creating content for social media platforms. The data may reveal elements about the self that individuals would rather not know, or remind them of events that they would rather forget. Data practices may begin to overtake over aspects of life to the detriment of other experiences and ways of knowing. It may be difficult to make sense of data or see how various forms of data relate to each other.

The data that are available for people's use may be viewed as limited, inadequate, or as too revealing of private details. As personal digital data enter into the digital data economy, the practices of social or participatory

surveillance or reflexive self-monitoring may be transformed into opportunities for more coercive, covert, or commercial dataveillance on the part of other actors and agencies. It is evident that questions of how to negotiate data privacy and security issues are beginning to be confronted by people. However, my own research and that of others suggest that they still seem mostly unaware of exactly what happens to their personal information once it is transmitted to cloud archives, or how to go about protecting their data from unwanted use or surveillance.

While most people appear to be generally accepting of or resigned to the use of their personal information by commercial bodies to target them for advertising, many still seem blind to the implications of entrusting their personal data to the developers of the devices and software that they use, including how their data may be used for profile, or for making inferences and predictions about them that may affect their life chances. While people may be aware of the more invasive or overt forms of dataveillance to which they are subjected (such as targeted marketing and advertising or CCTV cameras), there is less recognition of the more diffuse, complex, or covert technologies for monitoring, accessing, and repurposing their personal data by second and third parties.

Researching personal data practices is still a nascent field of research, particularly from a sociological perspective. Further enquiries into this topic could explore such aspects as: What are the differences in data practices that emerge between different social groups and institutions? How do other contexts shape data meanings and practices (spatial location, culture, history)? What are the power relations that support or restrict data practices?

Note

1 One Sydney-based project, with Mike Michael, investigated public understandings of big data. In late 2014 we ran six focus groups (with a total of 48 participants), in which the participants were asked to engage in various tasks together, and then to discuss the implications emerging from the tasks. The second project, with Glen Fuller, involved a series of one-to-one in-depth interviews in 2014–15 with seven people living in Canberra who were keen users of fitness tracking software and devices. The third project focused on digital technologies used by pregnant women and mothers of young children. It had two parts: four focus groups in Sydney (with a total of 36 women) and a survey that was completed by a representative sample of 410 women around Australia. Both were conducted in 2015.

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22

"They're just too urban": Black gamers streaming on Twitch

Kishonna L. Gray

They're just too urban. I mean, if they would just be more normal, like regular gamers, then they could probably get more followers. But no one wants to hear all that. We can't relate. (message posted on a Twitch forum)

Marginalized gamers are often simultaneously active participants within gaming as well as savage critics of the hegemonic cultures in which they exist, resisting many oppressive and hostile realities within games, among gamers, and in gaming culture in general. One area in which they resist hegemonic Whiteness and masculinity specifically is through Twitch, a live streaming platform featuring players and actual gaming content. Black gamers specifically empower themselves by continuing to Twitch in the midst of so much racism and harassment by other gamers viewing and posting content while they stream. In one of the most well known quotes from Michel Foucault (1971: 96), he claims that "Where there is power, there is resistance." And as Lila Abu-Lughod (1990: 42) observes, "Where there is resistance, there is power." The mere act of existing, engaging, and producing within this hegemonic culture can be situated within the field of cultural production. While unpacking this claim, this chapter situates their actions within a framework of Black cyberfeminism as Black masculinity is punished and marginalized within Twitch as a segment of gaming culture, and this is made apparent through public comments about Black Twitchers in online forums.