

## Data Cultures, Culture as Data – Special Issue of Cultural Analytics

Amelia Acker and Tanya Clement

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Data have become pervasive in research in the humanities and the social sciences. New areas, objects, and situations for study have developed; and new methods for working with data are shepherded by new epistemologies and (potential) paradigm shifts. But data didn't just happen to us. We have happened to data. In every field, scholars are drawing boundaries between data and humans as if making meaning with data is innocent work. But these boundaries are never innocent. Questions are emerging about the relationships of culture to data—urgent questions that focus on the codification (or code-ification) of social and cultural bias and the erosion of human agency, subjectivity, and identity.

For this special issue of *Cultural Analytics* we invited submissions to respond to these concerns as they relate to the proximity and distance between the creation of data and its collection; the nature of data as object or content; modes and contexts of data circulation, dissemination and preservation; histories and imaginary data futures; data expertise; data and technological progressivism; the cultivation and standardization of data; and the cultures, communities, and consciousness of data production. The contributions we received ranged in type from research or theory articles to data reviews and opinion pieces responding to the theme of "data cultures". Each contribution asks questions we should all be asking: What is

the role we play in the data cultures/culture as data we form around sociomaterial practices? How can we better understand how these practices effect, and affect, the materialization of subjects, objects, and the relations between them? How can we engage our data culture(s) in practical, critical, and generative ways? As Karen Barad writes, “We are responsible for the world in which we live not because it is an arbitrary construction of our choosing, but because it is sedimented out of particular practices that we have a role in shaping.”<sup>1</sup> Ultimately, our contributors are focused on this central concern: where is our agency in the responsibility of shaping data cultures? What role can scholarship play in better understanding our culture as data?

## What is a data culture?

According to information philosophers, “data are relata.” That is, all data are related, indexical, built up, organized, named, understood in relationship to other data, things, phenomena, or human processes in the world. But as the following contributions show, data is often characterized as a natural resource out in the wild to be discovered and sourced, with all the requisite taming of nature, including the frontierism metaphors of cowboys, lumberjacks, and gold rush miners. For most formal definitions of information, information cannot be without data.<sup>2</sup> In fact, for some information scientists, there can be no data-less information.<sup>3</sup> The problem with defining information with data related to other data illustrates the difficulty that scholars have in apprehending the concept of data itself, in its apparent ubiquity and seeming ahistorical nature. But we know that data is not just given, it is taken up by people and given forms, standards, names, putting it into relationships with cultural practices.<sup>4</sup> Data is not nature, waiting to be tamed; it is always already a cultural product.<sup>5</sup>

<sup>1</sup>“Getting Real: Technoscientific Practices and the Materialization of Reality,” *differences: A Journal of Feminist Cultural Studies*, June 22, 1998, 102.

<sup>2</sup>Luciano Floridi, “Semantic Conceptions of Information,” in *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, Spring 2017 (Metaphysics Research Lab, Stanford University, 2017).

<sup>3</sup>Donald O. Case, *Looking for Information: A Survey of Research on Information Seeking, Needs, and Behavior: 4th Edition*, ed. Lisa M. Given, 4th New edition edition (Bingley, UK: Emerald Group Publishing Limited, 2016).

<sup>4</sup>Johanna Drucker, “Humanities Approaches to Graphical Display,” *Digital Humanities Quarterly*005, no. 1 (March 10, 2011); Geoffrey C. Bowker et al., “Raw Data” Is an Oxymoron, ed. Lisa Gitelman (Cambridge, Massachusetts ; London, England: The MIT Press, 2013).

<sup>5</sup>Sherry B. Ortner, “Is Female to Male as Nature Is to Culture?,” *Feminist Studies* 1, no. 2 (1972): 5-31, <https://doi.org/10.2307/3177638>.

Yet, shouldn't we distinguish between data and 'data culture'? In their critical study on mobile dating and hook-up apps, Albury et al. define data cultures through four lenses: cultures of production; the cultivation of data; datafication; and cultures of use.<sup>6</sup> Here we propose a fifth avenue for scholars researching critical and empirical aspects of the impact of data infrastructures—as collections of data. While many efforts at critical data studies have begun with the historical significance, origins and stabilization of the definition of data (or how it becomes data), works in this special issue instead focus on data cultures or cultures as data, with a particular focus on the becoming of cultures of data. Understanding data cultures as underwritten by collections of data (as *relata*) means understanding data cultures as phenomenon shaped by ideas about the cultivation and production of data that reflect epistemologies about, for example, ordering, classification, and standards. Like an underpainting, data is an initial layer, a starting point against which the authors look at the cultures that have been painted in the background of data collecting and collections. Seeing collections of data as they shape and are shaped by human life, perspectives, and experience, these authors provide alternative histories as well as possible futures for the cultures that develop in these sociotechnical landscapes.

Always a part of culture, data's contemporary position is undeniable. We are in a new "era of data" with sensor networks and 5<sup>th</sup> generation mobile networks, as personal computing devices and internet saturation become tighter and tighter in our homes, institutions, and public spaces. Now we are all data subjects as collections of data assemblages have become broader in reach and precision.<sup>7</sup> Data about ourselves—our selves—are collected, organized, archived and preserved for use and reuse in our daily lives. While 'big data' and algorithmic technologies continue to be the central focus of social sciences,<sup>8</sup> feminist Science and Technology Studies,<sup>9</sup> and digital media research,<sup>10</sup> the epistemic impact of data cultures

<sup>6</sup>Kath Albury et al., "Data Cultures of Mobile Dating and Hook-up Apps: Emerging Issues for Critical Social Science Research," *Big Data & Society* 4, no. 2 (December 1, 2017): 2, <https://doi.org/10.1177/2053951717720950>.

<sup>7</sup>Rob Kitchin and Tracey Lauriault, "Towards Critical Data Studies: Charting and Unpacking Data Assemblages and Their Work," SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, July 30, 2014).

<sup>8</sup>Christine L. Borgman, *Big Data, Little Data, No Data: Scholarship in the Networked World* (Cambridge, Massachusetts: The MIT Press, 2015); Borgman.

<sup>9</sup>Elizabeth Losh, "Selfies| Feminism Reads Big Data: 'Social Physics,' Atomism, and Selfiecity," *International Journal of Communication* 9, no. 0 (May 15, 2015): 13; Koen Leurs, "Feminist Data Studies: Using Digital Methods for Ethical, Reflexive and Situated Socio-Cultural Research," *Feminist Review* 115, no. 1 (March 1, 2017): 130-54, <https://doi.org/10.1057/s41305-017-0043-1>; Rosemary Lucy Hill, Helen Kennedy, and Ysabel Gerrard, "Visualizing Junk: Big Data Visualizations and the Need for Feminist Data Studies," *Journal of Communication Inquiry* 40, no. 4 (October 1, 2016): 331-50, <https://doi.org/10.1177/0196859916666041>.

<sup>10</sup>Jose van Dijck, "Datafication, Dataism and Dataveillance: Big Data between Scientific Paradigm

as data collections remains understudied and under-theorized.

The history and development of how we became data subjects in cultures of data are just now beginning to be told by historians and sociologists.<sup>11</sup> Like many of the pieces include in this special issue, this literature begins to interpret the meaning and impact of data collections, datafication and cultivation as a legitimizing tactic of expertise, professionalism, or technological proficiency or civic participation. Many of these cultures of expertise are built upon data collections and data sets built with data infrastructures from the contemporary moment and the recent past, revealing legacy errors and what counts as worthy of counting.

This special issue of *Cultural Analytics* confronts the emergence of data cultures through data collections, how they are addressed, investigated, analyzed, and interpreted. In particular each piece takes different approaches on questions of what can be called data, relied upon as data, and the new kinds of cultural analysis that can be applied to public, private, and historical data collections, both digital and analog. The contributions include articles, opinion pieces, and critical data reviews that interpret data and assess datafication and the making of data culture and cultures of data. Pieces in this special issue draw on a wide range of areas of study and expertise including information science, media studies, STS, libraries and archives. Collections of data are defining and defined by cultures —ranging from systems of trust,<sup>12</sup> relationships to information communication technologies and self representation,<sup>13</sup> even what it means to authentically participate in public discourse or be human.<sup>14</sup> All of the pieces articulate data cultures and the impact of datafication on our lives, but some central themes for better understanding data cultures have emerged across all the pieces including a closer look at the social and institutional infrastructures of data practices, data agency.

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and Ideology,” *Surveillance & Society* 12, no. 2 (May 9, 2014): 197-208, <https://doi.org/10.24908/ss.v12i2.4776>; danah boyd and Kate Crawford, “Six Provocations for Big Data,” *SSRN ELIBRARY*, September 21, 2011; Bernie Hogan, “The Presentation of Self in the Age of Social Media: Distinguishing Performances and Exhibitions Online,” *Bulletin of Science, Technology & Society* 30, no. 6 (December 1, 2010): 377-86, <https://doi.org/10.1177/0270467610385893>.

<sup>11</sup> For example, see recent special issues themes such as data shadows, political histories of technoscience, and the history of data: Sabina Leonelli, Brian Rappert, and Gail Davies, “Data Shadows: Knowledge, Openness, and Absence,” *Science, Technology, & Human Values* 42, no. 2 (March 1, 2017): 191-202, <https://doi.org/10.1177/0162243916687039>; “Political Histories of Technoscience | Radical History Review,” accessed January 31, 2019; Soraya de Chadarevian and Theodore M. Porter, “Introduction: Scrutinizing the Data World,” *HIST STUD NAT SCI* 48, no. 5 (November 1, 2018): 549-56, <https://doi.org/10.1525/hsns.2018.48.5.549>.

<sup>12</sup> Helen Nissenbaum, “Contextual Integrity Up and Down the Data Food Chain,” *Theoretical Inquiries in Law* 20, no. 1 (January 23, 2019).

<sup>13</sup> Lee Humphreys, *The Qualified Self: Social Media and the Accounting of Everyday Life*, 2018.

<sup>14</sup> van Dijck, “Datafication, Dataism and Dataveillance”; José van Dijck, Thomas Poell, and Martijn de Waal, *The Platform Society: Public Values in a Connective World* (Oxford University Press, 2018).

and alternate imaginaries of data histories.

## The Social and Institutional Infrastructures of Data Practices

Many of the pieces included in this special issue discuss the social structures and institutions being built around data reduction and production or the ability to identify and reduce the analog world to points of data for measurement, analysis, dissemination, and preservation. Despite the incommensurability and the resistance to quantification, even the most banal things are rendered as data through data practices that include collecting and measuring uploads and downloads, attitudes or degrees of attentions (“likes”), and tone on public, online forums; pan-handling and vagrancy; and the presence of objects and buildings such as public art works and art centers. In her study of feminist data futures and the quantification of care, Amelia Abreu has written about how data work is so common in domestic life:

it is a working practice - perhaps even a common art. Everyday data consumption is, I would argue, the most common and largest proportional working data relationship in existence. Like caring, cooking and cleaning, the task of managing data is something you'll see at work in every household. It starts with money and food, the most banal avenues for data-working.<sup>15</sup>

Likewise, our contributors theorize about what's at stake for those things that cannot be quantified, measured, standardized and captured about human life (such as gender identity or kinship), but they are also deeply concerned with what can be rendered as visible data work and what remains as invisible labor.

Critical studies of data culture and their infrastructures reveal that some data ontologies render some phenomena visible while making other forms of human experience invisible.<sup>16</sup> Increasingly, in efforts to “datify” everyday human behaviors from menstruating to learning how to read, we experience the seams and limits of those ontologies. Indeed, many experiences of datafication bring to the fore what it means to be an authentic human, when those elisions are located,

<sup>15</sup>“Quantify Everything: A Dream of a Feminist Data Future by Amelia Abreu | Model View Culture,” Model View Culture, February 14, 2014.

<sup>16</sup>Geoffrey C. Bowker and Susan Leigh Star, *Sorting Things Out: Classification and Its Consequences*, 1st ed. (The MIT Press, 1999).

revealed, and don't fit in the contributions included here, we see new methods of critique, reflection, and authenticity in the glitch that resists datafication. As all kinds of behavior become datafied in support of data collections to support institutions (in markets, decisions, public good, or posterity) we see the solidification and enrollment of authority through efforts of collection. The efforts of collection perform a sleight of hand. That is, we recognize the institutionalization of public data as it becomes known, read, and put in context, but in comparison, how private data is secured, (almost assuredly) sold to data brokers and possibly eventually leaked is obscured. Our contributors combat this deception by demonstrating critical methods that analyze and interpret the power of data collecting contexts and the trend towards a segmentation of cultures that ignore outliers and group individuals.

## Data Agency

If there is one new thing to our 'era of data' and its collections, it is the unprecedented access and the expectation to access to public data, research data, historical and scholarly data. While the limitations to access to these data collections may be lower, the stakes are higher for critical scholars of data because of the interpolation and collectivization of data subjects into collections that tend to group culture into clean buckets and segments of interest. Creators' agency over data that has been created, collected, and managed is thus central to understanding the datafication of culture. Indeed, calls for agency over our individual data footprints and practices of collection exist, but more methods for understanding how individuals are interpolated through sociomaterial practices of data collection as subjects are still needed.<sup>17</sup> Our contributors ask: How can we better understand how these practices effect, and affect, the materialization of subjects, objects, and the relations between them? How can we engage our data culture(s) in practical, critical, and generative ways? Opinion pieces discuss the power of asserting and attributing agency within collecting pasts, presents, and futures. As such, these articles are situated in the space that the journal wishes to impact, particularly new research methods, voices, and topics.

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<sup>17</sup>Helen Kennedy, Thomas Poell, and Jose van Dijck, "Data and Agency," *Big Data & Society* 2, no. 2 (December 1, 2015): 2053951715621569, <https://doi.org/10.1177/2053951715621569>.

## Alternate Data Histories and Future Imaginaries

“Mathematically, visually, and narratively,” Donna Haraway writes, “it matters which figures figure figures, which systems systematize systems.”<sup>18</sup> Haraway reminds us to focus on process because it matters what matters and how it matters. This focus on process is not new to histories about Digital Humanities. Indeed, a concern with the process of knowledge production is an essential aspect of originary stories in DH including those surrounding Father Busa and his index of St. Thomas Aquinas, an oft-touted “first” DH project. Detailing one of Busa’s early presentations to a crowd of IBM employees, religious leaders, and humanities academics, Steven Jones describes a presentation that was less about the product of an analysis of Aquinas and more about the analysis itself:

The emphasis on repeated testing, hand-drawn flow charts, experimental punching and handling of punch cards, on the spot, as part of the process, and indeed on discovering and demonstrating the precise nature of the materiality of the technology involved at every turn - in all of these ways, rather than just as a focus on classical texts, the demo of 1952 established certain practices of humanities computing for the half century to follow, practices that have become even more important for today’s digital humanities.<sup>19</sup>

We cite this quote extensively to show that the work of everyday work, the banal nature of what we do to make what matters, is the matter at hand here too. The pieces in this issue are describing the history of the seemingly banal work done to select, curate, process, disseminate, and preserve data collections for the same reason we cite the history of great men (and women): to see from whence we’ve come, to foresee where we are going, and to consider where we could have gone and why we did not arrive just there.

At the same time, analyzing process entails trying to pinpoint a moving target or taking a cup of water from a stream. We take that sample and we can say something about it and its point in time, but how do we attest for the movement? How do we distinguish between the shape of water moving across time and space and the shape of the cup in which we hold it? The present is the only line we can draw between history and the future. Less about the object of data than the process of data, these pieces included here are concerned with present cultures of data that have pasts and portend futures. They are concerned with discovering and uncovering assumptions about data that cultures of discourse use to obfuscate the work

<sup>18</sup>“Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin,” *Environmental Humanities* 6, no. 1 (May 1, 2015): 160, <https://doi.org/10.1215/22011919-3615934>.

<sup>19</sup>Roberto Busa, S. J., and the Emergence of Humanities Computing: *The Priest and the Punched Cards* (Routledge, 2016), 96, <https://doi.org/10.4324/9781315643618>.

of data, and they are concerned with how these obfuscations alter the potentialities of different futures and imaginaries. These authors tell us what matters now may or may not matter in the future, but they are also asking, quite pointedly, who's to say? That is, what of our own agency in that future? Karen Barad notes that once we understand that "the world and its possibilities for becoming are remade in each meeting," then we are to ask: "How then shall we understand our role in helping constitute who and what come to matter?" These authors, in their attempt to better understand data in time and over time, are just a few ways to understand the process of what matters, but their inquiries serve as a collective call to come in: the water is swift and sure but there are endless entry points along the bank.

## Conclusion

This issue imagines different, alternate, and complementary futures not only for data and the study of data but for the *Journal of Cultural Analytics*. The authors who have submitted to this special issue all work with and think about data and they have arrived here from disciplines (History, Information Studies, Science and Technology Studies, Communication and Media Studies) and work places (government and the libraries) that have not often been represented in the journal thus far. Our intention with this special issue is to facilitate the crossing of the boundaries of the data cultures that have been presented here. With this special issue, we are staking some claims for the imagined data landscape that this issue portends, where the interrogation of metaphors and cultural imaginaries are important; where the processes for normalizing, transforming, and naming data are at the forefront of investigations; where institutions built on reductive or simplistic assumptions about data are under scrutiny; where new methods that break down these metaphors, processes, and collections contexts lead to new theories.