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Ryan Burns, Craig M. Dalton & Jim E. Thatcher

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FOCUS: CRITICAL DATA, CRITICAL TECHNOLOGY

Critical Data, Critical Technology in Theory and Practice

Ryan Burns
University of Calgary

Craig M. Dalton
Hofstra University

Jim E. Thatcher
University of Washington Tacoma

Data, its sources, analytics, and potential effects are at the center of recent popular, industry, and scholarly debates about knowledge, policy, identity, and everyday urban life. These debates have taken place across the academy, from geography to digital humanities, data science, media studies, and beyond. Researchers in these and other social science fields are increasingly engaging with new data infrastructures (Batty 2013; Marvin, Luque-Ayala, and McFarlane 2016; Pickren 2016), representational technologies (Hochman 2014), and analytic practices (Poorthuis et al. 2016) as they emerge in private industry (Thatcher 2014), academic research (Crawford and Finn 2014), and government agencies (Taylor and Schroeder 2015). In politics and industry, these related phenomena go by a variety of buzzwords, such as big data and smart cities (Kitchin 2014c, 2016; Datta 2016), that offer tantalizing promises of future social and economic growth and stability (Lohr 2012). In more recent critical investigations, early hubristic claims of the power of these new systems of data extraction, visualization, and analysis, such as Anderson's (2008) now nearly decade-old, infamous claim of the "end of theory," serve as shibboleths by which scholars situate themselves to evaluate actual data practices and effects (Thatcher 2016). Both promises and critiques of this new paradigm of data involve algorithmic analysis of heterogeneous data sets within currently underexamined contexts and social relations (Kitchin 2014a).

This focus issue engages with this new paradigm from a variety of geographical perspectives emphasizing radical politics and broadly critical approaches to data analytics. Engaging data in these ways opens new, promising avenues for thought about and practices that incorporate such data. In this way, the section speaks not only to work in critical data studies but also to larger conversations around the ways in which technology mediates, saturates, and sustains late capitalist modernity (Graham 2005).

Research to date raises more questions than answers about the use, interpretation, and meaning of these new forms of analysis and data as well as their relationship to broader sociopolitical and economic processes (cf. Crampton 2015; Crampton, Roberts, and Poorthuis 2014; Kitchin 2014b). Researchers suggest a series of prompts that indicate an incipient approach to data studies (boyd and Crawford 2012; Barnes 2013; Burns 2015) and call for additional scholarship in the area (Kitchin 2014a; Schroeder 2014). Addressing these questions, the articles in this issue focus on questions such as these: Is a radical politics possible through new data sources and analytics? What assumptions, exclusions, contradictions, and possibilities do data analytics espouse and promote? What epistemological and ontological commitments arise from data-driven science? How have these commitments shaped the knowledges produced by and through the technological systems in question? Building on earlier calls for critical studies of data (Dalton and Thatcher 2014; Dalton, Taylor, and Thatcher 2016), this focus issue explores and evaluates critical approaches to data, analytics, and new spatial technologies in a common forum.

Due to its history of engagement with the spatial constitution of knowledge and power, geography as a field has a unique opportunity to shape the growing dialogues around critical data studies. From technological redlining (Thatcher 2013; Dalton and Thatcher 2015) to humanitarianism and development (Burns forthcoming), to oft-unconsidered gendered nature of spatial information production (Stephens 2013), the spatial component of data influences what can be done and what can be known through it (Kwan 2002; Elwood 2010). In this quickly evolving body of research, scholars treat new data and analytics as partial and incomplete lenses through which we view social processes (boyd and Crawford 2012; Gabrys 2016). Such an approach emphasizes issues around epistemology, ontology, and knowledge production,

as well as the political and economic processes within which data, software, and technology are developed and used. Geographers have a long-running history of thoughtfully engaging with new forms of technology (see, inter alia, Aitken and Michel 1995; Schuurman 2002; Schuurman and Pratt 2002; Alton et al. 2014; Young and Gilmore 2014). We continue in this vein. By bringing to the fore multiple critical theoretical and empirical approaches to data and data analytics, we open a new space for collaboration, discussion, and imagining of radical politics with and against data as it increasingly comes to influence the world.

From qualitative studies and socially constructed scale (Dalton) to an examination of the rise and fall of quantitative methods and related epistemologies in geography (O'Sullivan et al.), from radical pedagogy (Miller) to virtual worlds (Farhadi) to queer politics (Gieseking), these articles constitute a rich and diverse collection. Each has its own political and epistemological commitments, but each is fundamentally concerned with the radical role of data today.∎

Acknowledgment

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RYAN BURNS is Assistant Professor of Geography in the Department of Geography at University of Calgary, AB T2N 1N4, Canada. E-mail: ryan.burns1@ucalgary.ca. His work intersects GIScience and human geography. His work is centered around the social, political, and urban transformations of GIS, big data, Web mapping, software, and related digital spatial phenomena. He contributes to geographers' efforts to understand the ways in which spatial technologies represent people and their knowledge, the technologies' impact on political economies, and the social inequalities sustained by new technologies.

CRAIG M. DALTON is an Assistant Professor of Global Studies and Geography and Program Coordinator for Geographic Information Systems at Hofstra University, Hempstead, NY 11549. E-mail: craig.m.dalton@hofstra.edu. He specializes in questions of power, vision, data, and technology, particularly in terms of maps, GIS, mobile technologies, and data science.

JIM E. THATCHER is an Assistant Professor of Urban Studies at the University of Washington Tacoma, Tacoma, WA 98402. E-mail: jethatch@uw.edu. His research examines the recursive relations among extremely large geospatial data sets, the creation and analysis of those data sets, and society. Often referred to as critical data studies or digital political ecologies, Jim's work has been featured in media outlets including *NPR* and *The Atlantic*.