

*Book Review Symposium*

**Safiya Umoja Noble**, *Algorithms of Oppression: How Search Engines Reinforce Racism*, New York: NYU Press, 2018. ISBN: 9781479837243 (paper); ISBN: 9781479849949 (cloth)

I must confess that this review is prefaced by over a year of anticipation, admiration, and respect for Safiya Noble. The book relates to my work with and about queer people at the disciplinary intersections of information studies and geography. I have noticed a paucity of critical scholars in information studies who look at this area, and Noble is a desperately needed breath of fresh air as I develop as a graduate student. Her writings, both scholarly and on social media, provide a perspective necessary to counter the trope that computer science and data science are politically and epistemologically neutral. When this book was first released I noticed that many white men from these disciplines were very skeptical of Noble's work, pointing to the stakes involved in her intervention. Indeed, while scholars of science and technology have long established the situated, power-laden, socially-saturated nature of all digital technologies, such conversations happen largely outside the disciplines proffering the claims to neutrality. We in academia are fortunate to have scholars like Noble who are willing to take risks and push back to be a preeminent voice bringing these understandings to diverse disciplinary audiences through a critical data/algorithm studies lens. The time is ripe for such productive "opening up", given that the emergent critical data studies and critical algorithm studies are transdisciplinary fields of scholarship and knowledge production (Burns et al. 2018).

Coincidentally, *Antipode* mailed Noble's book to me around a month after attending a computer science conference on human-computer interactions and systems design. Such scholarship generally tackles issues related to information organization and storage/retrieval,

interface design, platform usability, and interface innovations. The disciplines are largely technical and instrumentalist in their approaches, yet at this conference I was still shocked by a seeming resistance to considering the human, social, relational, and more-than-representational aspects of systems and their users. This was made worse by the internalized and unrecognized biases among the conference's presenters, who are creating the systems, software, algorithms, and data models. Commonly, the system creators and designers used rather paternalistic rhetoric to describe the end users. I jotted down some comments I heard: "Humans do not know what they want", and, "It doesn't matter what we have to do; we want to get the results which result in the most revenue or impact". This rhetoric considerably overlaps with the lived experiences of people from underrepresented populations like Noble as an African-American woman, and myself, as a queer person. For example, Noble described her experience in 2010 where she used Google to find information on "black girls". This search turned up sexualized results promoting the racist idea that the "black girl" should be understood in the context of pornography, sexual exploitation, and minstrel figures. Unfortunately, I had related experiences with search results while finding information as a youth and young adult: while searching for information on health or social issues, there would commonly be pornographic images of cisgender men. At the time I blamed my own searching skills, but in actuality these results were based on how Google's algorithms are trained to bias queer people searching for information.

Noble implores us to reflect on biases and oppression found in the production of digital-technological systems, adding a new perspective to and directions for further scholarship in digital geographies. Specifically, this book contributes to recent scholarship on queering code and software design, big/little data, and surveillance in smart cities and beyond. Given that Noble is not a geographer, coming instead from an information studies and critical race scholarly background, this volume and her broader research provoke new threads in digital geographies. These threads speak to concerns about racial biases in surveillance practices, datafication for people of colour (and other underrepresented populations), the spatial and political implications

of smart cities, and the consequences of datafying public spaces. To ignore the lessons Noble offers us risks deepening racist geographies and systems of structural inequalities. White supremacist biases within digital systems leads to cities' underrepresented populations being further marginalized from the public sphere and public debates. For example, facial recognition software, which is far less effective for people of colour, is being implemented in public space policing—couched, of course, in discourses of “simplified access” and “safety” in policy circles. Trenchant critiques like Noble’s will help scholarly and policy discourses to be critical of these systems, resisting technology’s systematic bias toward underrepresented populations and hopefully opening up new (physical and discursive) spaces for their everyday lives.

Noble’s book has provoked tremendous response and a growing community of people identifying with her work and, in some situations, unlearning previous assumptions about how algorithms and systems can be biased. As city administrators and policymakers increasingly embed algorithms, software, and data systems into urban spaces under the umbrella of “smart cities”, bodies and populations become datafied via continual public surveillance and dense layers of sensors. This is only one empirical focus to illustrate the ways in which geographers would do well to extend Noble’s work to other socio-technical systems that frame, govern, and produce daily lives and subjectivities. Among many other frames, geographers could work toward the inclusion of underrepresented communities by putting Noble’s work into conversation with “the right to the city” research, feminist research on the public sphere, and visual studies. To think of race as marginal to critical data and critical algorithm studies propagates new forms and modalities of systemic violence and bias.

## Reference

Burns R, Hawkins B, Hoffmann A L, Iliadis A and Thatcher J (2018) Transdisciplinary approaches to critical data studies. *Proceedings of the Association for Information Science and Technology* 55(1):657-660

*Blake Hawkins*  
*Thompson Rivers University*  
*blakewesleyhawkins@gmail.com*