

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)

Author's reply

The generosity of the contributors, Ryan Burns, Blake Hopkins, Ofurhe Igbinedion, and James Thatcher in the review of my book, *Algorithms of Oppression*, for *Antipode* leaves me renewed about the possibilities of my contribution at a time when it seems the zealous embrace of digital technologies, the internet, and multinational digital media companies hold such import and prominence in the battle over who controls information, media, and knowledge. I've spent so much time writing in the fields of information studies, media studies, and communications where many of us are researching the social, political and economic implications of digital technologies that it was refreshing to experience deep and thoughtful engagement by geography scholars with what is admittedly a nascent field of concern for the social sciences and humanities, broadly. Indeed, as Burns puts it, the book is "situated within the growing interest in the social and political implications of algorithms, a niche field spanning broad interdisciplinary conversations". These conversations are indeed niche, but are rapidly transforming the world. Over the past decade I have watched my early forays into discriminatory algorithms become common sense, because the digital and its many constitutive platforms have contributed to so many visible social ills. For more than a decade, critical scholars have argued that internet companies hold too much power over representation and knowledge, and *Algorithms of Oppression* was greatly influenced by scholars like Wendy Chun, Siva Vaidhyathan, Alex Halavais, Mark Andrejevic, Lisa Nakamura, Lori Kendall, Andre Brock, Dan Schiller and Anna

Everett. At the same time, it was difficult to find a critical mass of digital media scholars writing that the logics of online discrimination were embedded in the algorithmic core, rather than an artefact of crowdsourcing, user experience and interface design, or monopoly control. In a departure from my own graduate studies, it is no longer difficult find four people to serve on a dissertation committee to support these ideas. For this transformation, I am grateful to my colleagues around the world with whom I have been able to discuss and debate these issues, like my collaborator Sarah T. Roberts at UCLA, with whom I've been talking about the politics of technology – from my study of algorithmic effects to her work on commercial content moderation. Critical media and information scholars have driven this work for the past decade, destabilizing the common belief in the alleged neutrality of technologies, and now even engineers and major corporations are talking about things like “data bias” and “data ethics”.

This work must continue, because there must be a counterweight to the computational logics of capitalism, a social justice-oriented counterweight in which we make visible the destructive dimensions of practices and technologies like predictive analytics, digital labor, and surveillance. Without this counterweight, these technologies strip away agency and flatten human experience into crude categories that overdetermine our success or failure on a variety of fronts – some being a matter of life or death in the realms of policing or health care, and all of which are opaque and difficult to study and intervene upon. My hope is that *Algorithms of Oppression* is an entry-point into thinking about public policy, advocacy, and what's at stake for the vulnerable people and communities upon whom so many of these projects are deployed, and whom I characterize as the “data disposable”.

Let me take up Burns's response first, because this review was less about the personal impact of the work, and signalled to me that I still have work to do. I want to revisit the suggestion that algorithms are benign and meaningless “until paired up with databases” (Gillespie 2014). I am not sure these claims are as stable as we once imagined, because search engine algorithms are specifically geared toward engagement and visibility, fundamentally

working the profit imperative of surfacing content that will be “clicked on”. Search results are not just mutually constitutive of the world. The hypersexualization of Black women’s and girls’ bodies – and those of girls of color more broadly – express *a certain* worldview, the worldview of the pornography industry. They have co-opted these identities and the platforms, and the intermediaries and the platform itself. In turn, the search platforms have benefited over time from making sexualized and misrepresentative content hyper-visible. I don’t think that the pornographic worldview holds up as a reliable imaginary; of course, it was an extremely profitable imaginary until it became a political liability. This is where I depart with Burns: the algorithm is not feeding back to the public a mirror of itself – it is only feeding us a slice, a racist and sexist slice. I do not assume that the search algorithm is reflecting fairly, equally, or in the image of those it holds up in distorted ways.

Burns’s review afforded me a moment to reflect upon the typical response many have to Google search results: that they are a matter of feeding back to the public the collective consciousness of the internet – its databases, and its users past search histories, which I tried to refute but may have failed to fully clarify given the response. The tension I try to address in the book is that, as Burns puts it, “one may also contend that search results’ rankings are partially explained by the always-already racialized landscape of internet information, such that drawing out co-occurrences of terms is likely to draw out that extant racism”. In *Algorithms of Oppression*, the real epistemological challenge that I see, drawing from other fields like media studies, is that society’s racism and sexism does not indicate that it is legitimate, healthy, or responsible to see that racism and sexism reproduced and amplified in our media systems. Many believe that the internet and its platforms are reproducing a racist society because there is such a strong belief that the internet is a democratic space, where the majority or fairness prevail. But this overlooks how the tyranny of a majority can pass its pernicious views on to a minoritized group or community, as we have seen repeatedly in social media. In 2019 there is tremendous focus on how social media help spread disinformation and propaganda, but far less attention is

paid to the way search engines function as “fact checkers”, and it is this kind of stability that search enjoys at the moment that social media find eroding. The chapter on Dylann Roof, the white supremacist who murdered nine African Americans in Charleston, SC was an effort to explain in detail how those logics are dangerous, and what’s at stake when disinformation is profitable click-bait for a platform. If the majority govern what we find in a search engine, at best, or the most titillating and outrageous content gets to circulate more because its engaged with the most (i.e. is the most profitable), at worst, we still have an information ecosystem problem that belies any kind of regulatory or public control or intervention.

Not unlike other media industries like film and television, the commercial internet is a controlled environment that is organized like other media industries, but at a different scale and magnitude of influence. We are conditioned to see traditional mass media as unidirectional and orchestrated and ruled by the interests of capital when it comes to the production of social meaning, but we are far less inclined to think of search engines in this way. This is where I depart with Gillespie: search engines are *makers* of reality, not just mirrors of it. Racist and sexist disinformation is profitable until it becomes a financial risk or political liability, but beyond this obvious fact, search results are so trusted and legitimated by the public that there is still a significant amount of work to do. Critical library and information studies scholars are thinking hard about the role of libraries and archives as democratic counterweights to the commercial control over information online, and as we imagine how things could be different, there will be an important role for public technology experiments and projects that are free from the same kind of commercial imperatives that venture capital or private equity requires.

This takes me to a more important part of the generous and thoughtful critique by Burns about methods, and how we come to study algorithms and their effects. On the one hand, I do agree that a lot of work (and confusion) goes into understanding what algorithms are, compounded by the fact that many we use everyday are not transparent because code is inaccessible as a trade secret. Conceptually, understanding what algorithms are, and what they

do, is difficult because the term is flattened (and occasionally made meaningless) by invoking it in a variety of different contexts and nomenclatures across all kinds of scholarly and industry domains. I don't disagree that those of us working in critical information/internet studies, critical code/algorithm studies, or the political economy of the internet are interested in trying to effectively discern what algorithms are, and what they are doing. By extension, this is made difficult because we are not working at the granular level of code, or able to talk to workers who make, manage, or adjudicate algorithms' content, associated datasets, computation instructions, or automated decision-trees. In fact, assumptions of the stability of code are often at the heart of conversations by those interested in disavowing any possible ill-effects of algorithms, because code is "just math", and math cannot be racist. Most of us are not interested in essentializing code to its core mathematical formulations, any more than social scientists and humanists looking at the human experience are interested in reducing humans to cells and mitochondria as the primary unit of analysis.

So, I am wrestling with the competing framings of "the algorithm as code" versus "the algorithm as a power relation" in *Algorithms of Oppression*. For example, in media studies, one might do a close reading of a Beyoncé video and its historical and contemporary meanings. That does not mean that failing to articulate the specific mechanics of industrial film production equipment and its interplay with visual aesthetics prohibits meaning from being apprehended, or that the reading of a visual text is unstable or unreliable as a method because there is insufficient aperture interrogation. So the close reading of media artefact is either less compelling as a method, or it was my editing out of the detailed methods chapters in turning the dissertation into a book, or this dissatisfaction may be a matter of disciplinary approach to the study of contemporary digital life, all of which are legitimate. I recognize that some other computational approach could have been taken to quantifying racism and sexism online, although I am not certain that it would have rendered the project of interrogating the stability and reliability of commercial search more legible. Admittedly, if I did not as clearly communicate this as I had

hoped as I was writing the book from 2012 to 2016, there are many more writing more eloquently now in 2019 who are demonstrating this in their fine work today. I am grateful for the collection of reviews to help me make sense of the strengths and weaknesses of the research so as to improve my work moving forward. This collection of reviews, and this process of writing a response (a first for me), helps me see where I might offer more refinement in future iterations of my work.

Let me turn now to a different set of comments offered by the next three reviewers, which addressed different sets of concerns and possibilities. One line in particular in Thatcher's review stood out to me as evidence of the kind of impact critical information scholars can have across disciplines. I often tell my graduate students that to do interdisciplinary work means that you will be conversant with many fields, but those fields may not be conversant back with you. I have often felt that to do interdisciplinary work is to do three or four (or more) times the work because I need to have deep expertise in many domains. Thatcher's declaration, "I want to urge geographers to think through how we might tie together representation and exploitation in digital systems and playing out across various sociomaterial scales", was a signal that I hope will be taken up, because it could enrich our work and collaborative possibilities. My first publication as a graduate student was in a critical geography journal, *Human Geography*, about the political economy of GIS software companies. Critical race geographers have so much to offer at the intersections of time, space, place, race, gender, and representation, and Thatcher's call for this precise kind of interrogation of digital spaces is one where critical geography might help us all move forward. As the book was going into production in 2016, I wrote "A Future for Intersectional Black Feminist Technology Studies" for the journal *The Scholar & Feminist Online* (Noble 2016), where I was trying to explore these issues of material space and place in global computer hardware supply chains throughout the Black/African diaspora. They are grossly underexamined in the thirst for providing the raw material necessary for the global proliferation of electronics. Not unlike coltan, copper, and other mineral extractions that foment

peril for workers in the Global South, data extractions of hyper-surveilled and datafied individuals and communities in the Global North move through the same electronics, binding us together in complex ways that require further study and intervention. These are akin to the way our thirst for fossil fuels and rubber are tied to our collective peril.

I saved my response to the two reviews from Hawkins and Igbinedion, because I felt so seen and appreciated as a scholar, in a more personal and professional way, based on their comments. I deeply appreciated the ways in which they shared their experiences of being outside the normative frameworks that threaten Black women and queer scholars who face tremendous vulnerability doing critical race and feminist research. It is true that my book has been subject to criticism by those who are unable to reconcile that humans are at the center of technology practices – from visionary designs to electronic waste. However, no matter the desire to center the technology (rather than the humans), the mounting evidence shows that technologies are not simply tools: they are material, they are labor, they are social constructs laden with power. This is not contested in most critical information and STS circles. However, it is also critical information scholars, and feminist, and LGBTQ, and scholars of color who have taken a lot of body blows, so to speak, for trying to make oppression or exploitation visible in a variety of digital technology projects and practices around the world. When I first presented my work as a graduate student at a major conference in 2010, I was the only Black/African American person in the entire conference, so I could relate very much to Hawkins’s experience with trying to queer ideas in the context of scholars who are not ready to engage such. One senior scholar at that conference responded to my work angrily, and during the question and answer period remarked to me: “Maybe Black women just do more porn, because the algorithm can’t be racist.” I like to think that this type of hostility is on the decline as we translate our research findings to the public, and to other disciplines, but I suppose I have taken a good share of heat for daring to challenge the dominant thinking, and it’s been for the better. There are now so many graduate students around the world taking up incredible and innovative research agendas that will

profoundly transform our thinking about the surveillance state, smart cities, behavioral manipulation through the commodification and datafication of everyday life, anti-democratic media manipulation, and the geopolitics of oppression in global information and communication supply chains, to name a few pressing concerns.

There are so many important issues that need to be studied, and I am heartened to see that it's no longer difficult to find thesis and dissertation committee members to train researchers interested in these questions and more. I am grateful that there has been such interest and support for my work, and to *Antipode* for dedicating space to my work. It's the work that is underway now by others, and on the horizon, that will be even more impactful, and we owe a debt to those critical scholars who have given us the frameworks to help make sense of the challenges before us.

References

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