

Noble, S. U. *Algorithms of Oppression: How Search Engines Reinforce Racism*.
New York, New York: NYU Press. 2018. pp. 256. \$28.00 (paperback)
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This book was written by Dr. Safiya Umoja Noble in 2018. I had the privilege of reading the author's previous relevant work, "Searching for Black Girls: Old Traditions in New Media," published in 2012. Both the author's paper and the book are about the power of algorithms: in particular, how digital decisions maintain and reinforce oppressive social relationships. I read this book in two languages; Korean and English. Although this book review is focused on the English version, I found out that the title and some of the contents in the Korean version fixated on the gender issues. The Korean publisher changed the Korean title to *How Google Discriminates Women* along with the cover that includes a woman with a fair complexion, shown in Figure 1. These changes seem to indicate the publisher's attempt to reflect the more prevalent social issues in South Korea—sexism and gender discrimination—whereas the English title emphasizes racism.



Figure 1. *Book cover copy. How Google Discriminates Women*, by Safiya Umoja Noble (2019).

This book is useful to examine how Google reflects our underlying desire, need, interest, and bias and how racial and gender identities are constructed and characterized on Google search through several experiments. However, it is important to note that the book is more like a jumping-off point to visualize part of

the negative side effects of using machine learning techniques as decision-making tools. Dr. Noble tries to address problems of racial and gender biases embedded in the results of search engines particularly from a Black feminist perspective. For example, a Google search for “Black girls” retrieved a higher proportion of pornographic and racist images on the first page of the search, compared with “White girls.”

This book uses critical race theory to understand how our perceptions of race and gender have been shaped and transformed by the media over time. Noble examines Google search results retrieved by the keywords relating to racial and gender identity to understand how the search results are managed in this commercial search engine. The author examines a few distinct cases of algorithmic oppression that are centered around mainstream ideals on the web. The author is an expert at designing research projects using effective methodologies for their studies. According to Dr. Noble, such misrepresentations of marginalized groups on the web follow the systemic negative representation in traditional media depictions.

Along with Black feminist theory, the author uses content analysis and critical discourse analysis with the racial and gender-related keywords including Black women and girls. The critical discourse analysis is carefully designed to analyze the way these keywords establish and reinforce underlying social power dominance and inequality with the sociopolitical context. Dr. Noble’s main argument is that there are a lack of objectivity and missing social contexts that need to be considered in digital media. Further, these biases can cause harm to marginalized individuals, such as women and people of color, by representing them in stereotypical or pornographic ways. Search results of Google tend to reflect the values, norms, intentions, and biases of its interested parties (e.g., employees and investors) and users while showing both commercial and public interests.

According to Benthall and Haynes (2019) who study racial categories in machine learning, racial identity is more than “a personal subjective quality.” Rather, it can be “a social or political category that affects inherent social differentiation in systemic patterns of social inequality” (p. 289). Dr. Noble is also trying to point out that one’s identity is not only constructed by each individual, but also by social categorization—how society defines them. For these reasons, knowledge made by these platforms may play a part in further alienating marginalized groups during the process of labeling and stereotyping individuals. Therefore, in commercial digital media platforms, lack of corporate social responsibility can be problematic, especially for those who are marginalized or excluded from mainstream classes, such as Black people.

We must continue to study the implications of engagement with commercial entities such as Google and what makes them so desirable to consumers, as

their use is not without consequences of increased surveillance and privacy invasions and participation in hidden labor practices. (Noble, 2019, pp. 34–35)

The Internet is a place to get everyday information that is already collected, selected, made, or edited by someone. Noble argues that people must keep asking themselves what it means to be closely connected with these platforms. The book questions whether Google is dependable when it comes to unbiased search results and whether they are neutral for profiling, such as racism and sexism. This book directs our attention to the values that are prioritized in the commercial search engine and urges us to raise awareness in inherent racist and sexist biases in information retrieval systems.

I sincerely enjoyed reading this book, and I agreed with many parts of it. Dr. Noble vividly illustrated her unique point of view with a number of examples. It was obvious that the author had spent a significant amount of time gathering resources in order to support their argument. As the author mentioned at the end of the book, more intellectual work will be conducted by machine learning systems and these benefits of the technology should be shared equally with all of society. To accomplish it, machines must be designed to meet human values, goals, and ethical standards, because whether people intend to reflect their desire, interest, and bias or not, machines will reflect these factors. People need to ask themselves what ultimate values, goals, and ethical standards they should teach to the machines.

References

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