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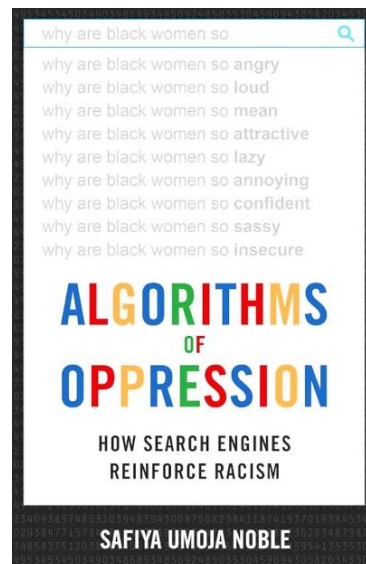
Noble, S. U. (2018). *Algorithms of oppression: How search engines reinforce racism*. New York University Press.

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Any book on technology suffers as innovation continues to march quickly forward. What was once cutting-edge soon becomes dull and mundane as new products render current technologies obsolete. Safiya Umoja Noble acknowledges such by writing, “Inevitably, a book written about algorithms or Google in the twenty-first century is out of date immediately upon printing” (p. 10). *Algorithms of Oppression* is an examination of the harmful practices from the past on race and gender that have shaped the digital systems we rely on in modern society. It is not a review of current technology trends but rather an autopsy of past practices upon which our modern cyberstructure is built. As emerging tools move toward the prevalent use of artificial intelligence and the invasive practice of massive data collection, Noble warns the reader what the world could be like unfettered.



To understand the implications of Noble’s warning, we must first understand the role of algorithms in our lives. Many may not fully understand how these mysterious mathematical black boxes operate or how their cyclic processes digest user data to determine what content is delivered back to users. Whether searching for a resource or allowing push notifications from social media, we are bombarded with the results of algorithms. Did you ever enjoy a movie recommended by your streaming company? Thank an algorithm. Have you ever purchased an ingredient online only to have a new recipe recommended? Thank an algorithm. While these examples are mundane, *Algorithms of Oppression* showcases the potential dangers of automation and profiling if bias is left unchecked.

Noble examines internet search behavior through the lens of the Black Feminist method and epistemology to propose the concept of Digital Redlining. The term “redlining” is based on racist policies by the Federal Housing Administration in the 1930s used to intentionally segregate communities of African-Americans and other people of color with literal red lines drawn on maps of neighborhoods (Gross, 2017).

[Also, banks and mortgage companies drew red lines on maps to mark off areas where loans would be risky to make.] The effects of these discriminatory policies from the 1930s can still be felt today with redlining's connections to the current school funding crisis, higher rates of pollution, and severe maternal morbidity rates (Lathan, 2023). Colored ink marks etched into city maps and documents have been replaced with data and equations to continue the legacy of exploitation. *Algorithms of Oppression* warns the reader to consider how technology, and more specifically, commercialized search engines, might continue to promote bigotry and prejudice, whether intentionally or not, through propagating racial and gender stereotypes. Digital Redlining exists due to traditional media past practices of negative images of African American females. The internet has only continued replicating these stereotypes, such as Google Search results of “unprofessional hairstyles for work,” predominantly returning images of African American women with natural hair (p. 55). Noble also highlights other whitewashing of search results, such as “doctor” or “nurse” featuring gendered stereotypes of only white males and females. Most shocking was the significant number of obscene materials results on what seems like simple search terms. When searching for the phrase “Asian girls” or “Latina girls,” Google displayed pornography websites as the most recommended results.

Google is not solely to blame. Responsibility should be shared equally with the user for our naivety in seeing search engines as merely passive, neutral tools. *Algorithms of Oppression* warns the readers to see search results as examples of their values (p. 89). Over the years, school curricula often superficially address the impact of algorithms under the umbrella of media literacy in upper grades English/Language Arts courses. Students frequently naively trust search engines uncritically, as if they were delivered by the smiling faces of the school's library staff. These tools are often viewed as benign due to being offered as free and open to all, conveying a sense of equity and inclusion. Algorithmic literacy is more than simply recognizing misinformation or fake news; it is about instilling a deeper awareness of featured or recommended content demanding the user to question why this information was delivered. Search is not a neutral process; search is driven by market forces and paid advertisement. Noble asks, “Is this the best information and for whom?” in a world of ad words and monetized search terms (p. 5).

While shining a light on many of the dark corners of technology use, the book also provides a path to redemption. Noble reframes the definition of the digital divide, which currently focuses primarily on devices and broadband access. When considering those impacted by the digital divide, she advocates moving past simple hardware and questioning the legacy that these sciences and technologies have built. What is the point of hardware policies if Black, Indigenous, and People of Color (BIPOC) see negative stereotypes through Google's gatekeeper control over internet searches (pp. 34, 86)? How do we have meaningful discussions about providing hardware to those in need when it profits technology corporations even more, leading to an increasing gap in the power structure of race and gender (pp. 160–161)? Until we address the colorblind character and pervasive Whiteness in the Google search engine, we cannot address real social change.

As educators alternately embrace and fear the changes artificial intelligence will have on our education system, *Algorithms of Oppression* is more relevant than ever.

Noble's views on digital redlining invite the reader to consider the role of the algorithm in our AI world. Artificial intelligence is built on a foundation of machine learning using algorithms and metadata. Unlike traditional algorithms, AI is often trained on sets of information that will forever be hidden from the user. Oppression is a feature, not a bug, as engineers convey that disparity no longer exists through a color-blind lens (p. 168). These AI applications may not be specifically designed to be oppressive. Nonetheless, they may use limited training data and omit underrepresented groups (Hardesty, 2018).

As the demand for AI tools booms, companies often license rather than create training data sets, which even further veil the metadata from oversight. While we may never know the source material used to train these algorithms, it is crucial to instill a sense of skepticism about who provided the data and biases result due to the omission of data not used. New policies, such as the EU AI Act (European Parliament, n.d.) and Blueprint for an AI Bill of Rights (U.S. Government, 2023), are beginning to frame algorithms and artificial intelligence as potential threats to human rights. With the current wave of strongly anti-regulatory leadership in the United States, *Algorithms of Oppression* is a necessary primer to safeguard us from the potential threat of an unregulated cyberspace.

References

- European Parliament. (n.d.). *EU AI Act: First regulation on artificial intelligence*.
<https://www.europarl.europa.eu/topics/en/article/20230601STO93804/eu-ai-act-first-regulation-on-artificial-intelligence>
- Gross, T. (2017, May 3). *A "forgotten history" of how the U.S. government segregated America*. NPR. <https://www.npr.org/2017/05/03/526655831/a-forgotten-history-of-how-the-u-s-government-segregated-america>
- Hardesty, L. (2018, February 11). *Study finds gender and skin-type bias in commercial artificial-intelligence systems*. Massachusetts Institute of Technology. <https://news.mit.edu/2018/study-finds-gender-skin-type-bias-artificial-intelligence-systems-0212>
- Lathan, N. (2023, September 29). *50 years after being outlawed, redlining still drives neighborhood health inequities*. Berkeley Public Health. <https://publichealth.berkeley.edu/news-media/research-highlights/50-years-after-being-outlawed-redlining-still-drives-neighborhood-health-inequities>
- The United States Government. (2023, November 22). *Blueprint for an AI bill of rights*. The White House. <https://www.whitehouse.gov/ostp/ai-bill-of-rights/>

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