

Weapons of Math Destruction

Weapons of Math Destruction is a 2016 American book about the societal impact of algorithms, written by Cathy O'Neil. It explores how some big data algorithms are increasingly used in ways that reinforce preexisting inequality. It was longlisted for the 2016 National Book Award for Nonfiction,^{[1][2][3]} and won the Euler Book Prize.

Overview

O'Neil, a mathematician, analyses how the use of big data and algorithms in a variety of fields, including insurance, advertising, education, and policing, can lead to decisions that harm the poor, reinforce racism, and amplify inequality. According to National Book Foundation:^[1]

Most troubling, they reinforce discrimination: If a poor student can't get a loan because a lending model deems him too risky (by virtue of his zip code), he's then cut off from the kind of education that could pull him out of poverty, and a vicious spiral ensues. Models are propping up the lucky and punishing the downtrodden, creating a "toxic cocktail for democracy."

She posits that these problematic mathematical tools share three key features: they are opaque, unregulated and difficult to contest, and at the same time scalable, thereby amplifying any inherent biases to affect increasingly larger populations.

Reception

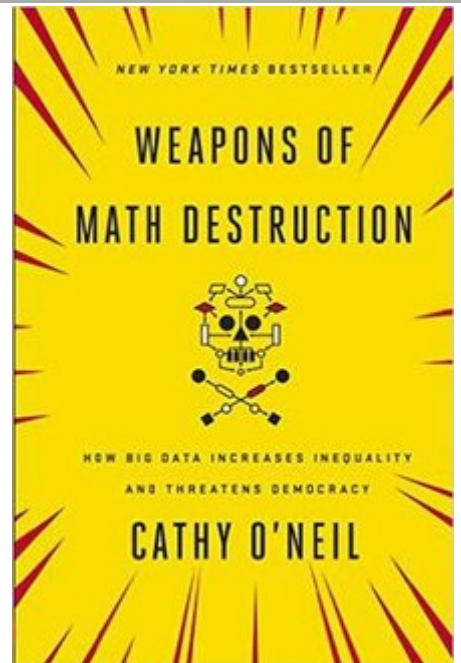
The book received widespread praise for elucidating the consequences of reliance on big data models for structuring socioeconomic resources. Clay Shirky from The New York Times Book Review said "O'Neil does a masterly job explaining the pervasiveness and risks of the algorithms that regulate our lives," while pointing out that "the section on solutions is weaker than the illustration of the problem."^[4] Kirkus Reviews praised the book for being "an unusually lucid and readable" discussion of a technical subject.^[5]

In 2019, the book won the Euler Book Prize of the Mathematical Association of America.^[6]

References

- 2016 National Book Award Longlist, Nonfiction* (http://nationalbook.org/nba2016_nf_oneil-weapons-of-math-destruction.html), National Book Foundation

Weapons of Math Destruction



Author	Cathy O'Neil
Country	United States
Language	English
Subject	Mathematics, race, ethnicity
Genre	Non-fiction
Publisher	Crown Books
Publication date	2016
Awards	Euler Book Prize
ISBN	0553418815

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 4. Shirky, Clay (October 3, 2016), "Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy" (<https://www.nytimes.com/2016/10/09/books/review/weapons-of-math-destruction-cathy-oneil-and-more.html>), *The New York Times Book Review*
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