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## BOOK REVIEW

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Mark Kritzman, Senior Editor

### **WEAPONS OF MATH DESTRUCTION: HOW BIG DATA INCREASES INEQUALITY AND THREATENS DEMOCRACY**

*Cathy O’Neil*  
(Reviewed by  
*Savannah Smith*)

Cathy O’Neil’s latest book is a fiery, straightforward jab at the algorithms on which our world relies. O’Neil has cheekily dubbed these damaging systems “Weapons of Math Destruction,” and the reader can only presume that this book is her counter-terrorism measure. The outcome is inconclusive, but what is abundantly obvious is that her message is more important than ever.

Her point is, essentially, that these algorithms are important but incomplete, and they can be incredibly damaging. O’Neil’s examples of algorithmic failure touch all aspects of our culture,

including recidivism modeling, scheduling software, wellness programs, and the ever-illusive algorithms used by social media websites. Weapons of Math Destruction, or WMDs, are defined by three core elements: opacity, scale, and damage. O’Neil sneaks in another defining quality later, stating “the model itself contributes to a toxic cycle and helps to sustain it.” Of course, we can muse about the good or bad intentions of these models when they were first implemented. The bulk of this book reads as a fist pounding against a table, passionately emphasizing the damage being done while also somewhat exhausting the rest of the room.

Chapter 10, “The Targeted Citizen” is probably more relevant now than when it was first written. O’Neil unpacks the impact of social media, consumer marketing, and political campaigns.

She reveals a few rather disturbing examples of consumers (citizens) being influenced by data targeting, and the ways that bad-faith actors can take advantage of algorithms to spread disinformation. This chapter also left me curious, wondering how good-faith actors could leverage the math to positively impact a community. For instance, in her words: “In a mayoral race, a microtargeting campaign might tag certain voters for angry messages about unaffordable rents. But if the candidate knows these voters are angry about rent, how about using the same technology to identify the ones who will most benefit from affordable housing and then help them find it?” One can only hope that is not wishful thinking.

In the years since this book was first published, O’Neil has been proven largely right. We are becoming more informed about

the influences driving these algorithms, whether it be racial bias, political interest, or financial capital. What we perhaps aren't more informed about is how to fight these systems, or how to make the systems better.

O'Neil addresses this issue in her conclusion, which might be more impactful coming from a podium than read to oneself on public transportation. O'Neil calls for lawyers, philosophers, engineers, data scientists, and

citizens to pay attention and demand that systems hold algorithms accountable. A more realistic first step, perhaps, is reading this book.