Data Delusions: How Math, Metrics, and Analytics Can Mislead Us

Wednesday Web Jam
June 1, 2022

Faster Glass
imagine better • innovate faster

DATA DELUSIONS

1 **Humans + Data**

2 Flaws & Frames

3 Metric Fixation

- Spotlight Effect
- Numbers = Certainty
- Motivated Reasoning

WHAT IS MOTIVATED REASONING?

Motivated reasoning is thinking through a topic with the aim, conscious or unconscious, of **reaching a particular conclusion.**

WHAT IS MOTIVATED REASONING?

Why You Think You're Right – Even If You're Wrong

Julia Galef \ TEDxTalk

DATA DELUSIONS

1 **Humans + Data**

2 **Flaws & Frames**

3 **Metric Fixation**

Flaw of Averages

LONDON UNDERGROUND USAGE

Average # of Riders per Train (Train-centric)

Average Rider Experience per Trip (Rider-centric)

DATA DELUSIONS

1 Humans + Data

2 Flaws & Frames

3 Metric Fixation

POTENTIAL UNINTENDED CONSEQUENCES

Campbell's Law

"Once a metric has been identified as a primary indicator for success, its ability to accurately measure success tends to be compromised."

Anything that can be measured AND rewarded can be gamed.

HOW METRICS CAN BE GAMED

1 Gaming through selection

2 Improving numbers through omission or distortion of data

3 Cheating, especially when the stakes of what is being measured are high

RESOURCES

THE DATA DETECTIVE

"He's a genius at telling stories that illuminate our world."
—MALCOLM GLADWELL

TEN EASY RULES TO MAKE SENSE OF STATISTICS

TIM HARFORD

Author of the bestseller THE UNDERCOVER ECONOMIST

THE TYRANNY OF METRICS

JERRY Z. MULLER

The Eye Test

"If you're confident that data from the past can always predict the future, you desperately need to read this book."
—Adam Grant, #1 New York Times bestselling author of Think Again

A Case for Human Creativity in the Age of Analytics

Chris Jones