PAPERS WE LOVE - DENVER

Behavioral economics & bias in software design.

– *or* –

Stupid Human Tricks
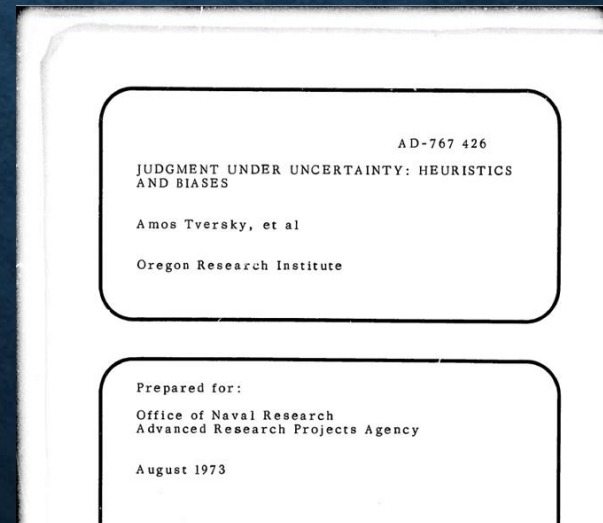
Tracy Altman // 25-Jan-2018

JUDGMENT UNDER UNCERTAINTY
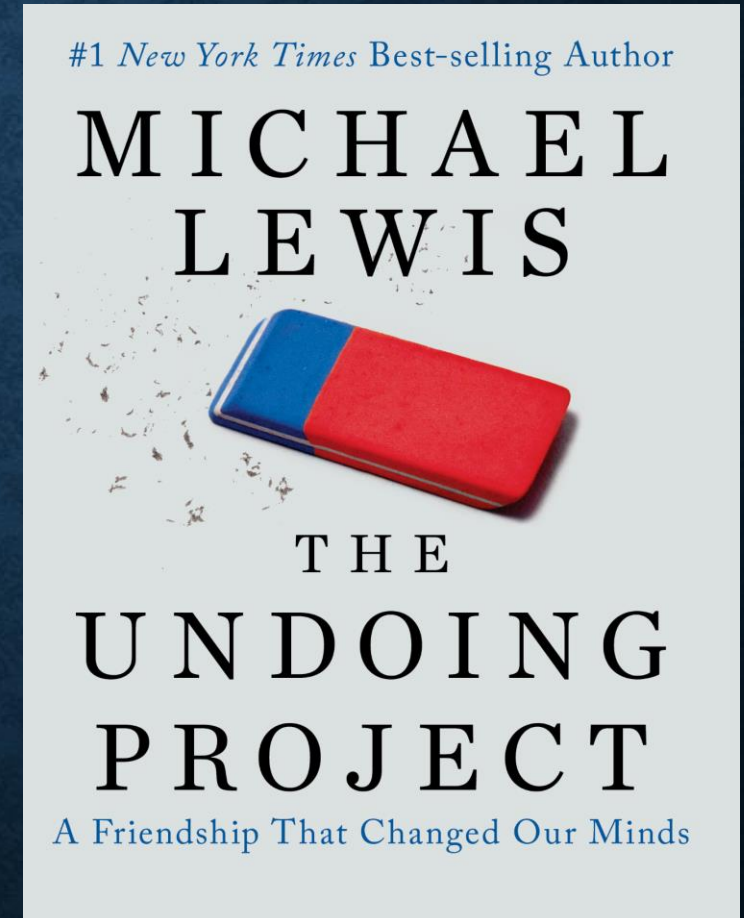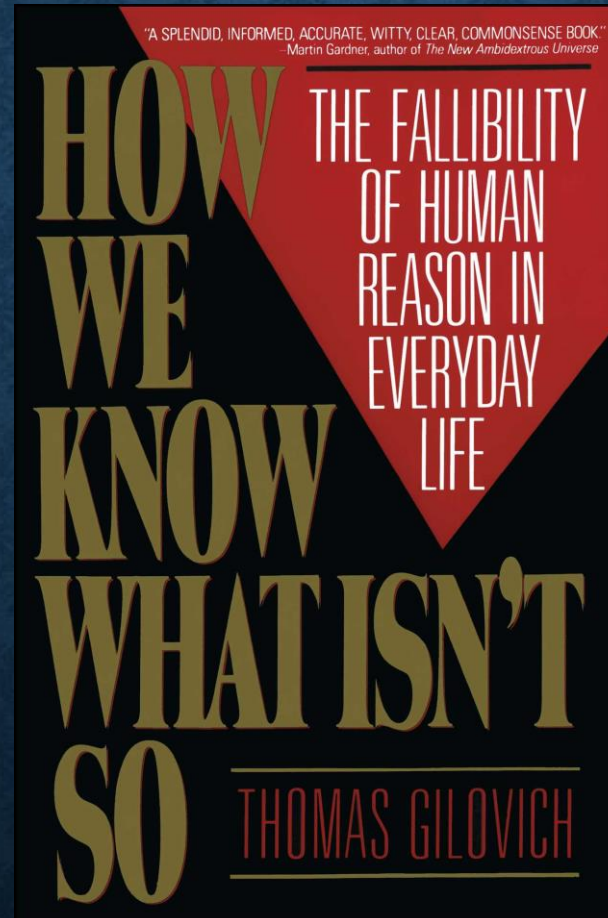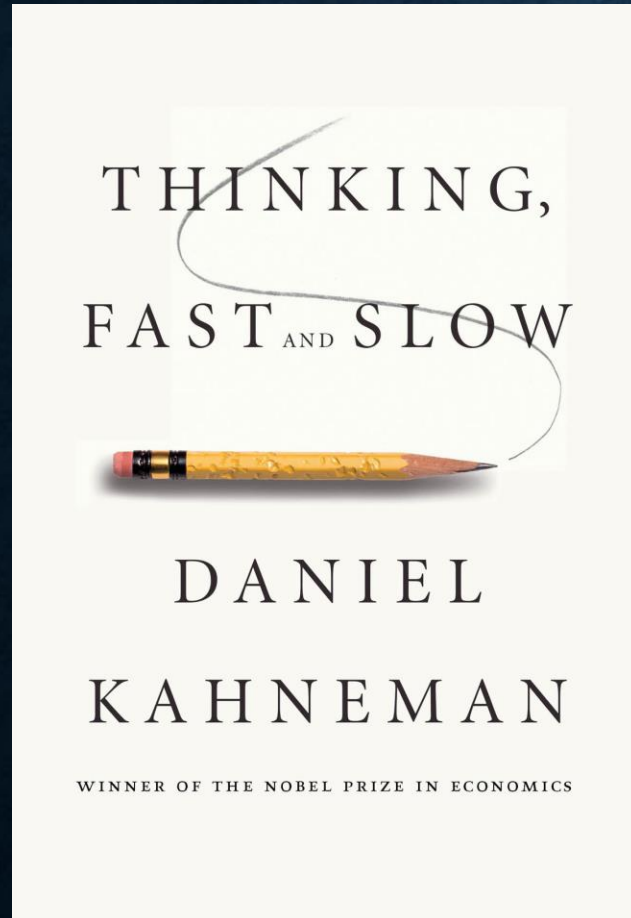
Heuristics and Biases

Amos Tversky & Daniel Kahneman

Science, V185 N4157 (27-Sept-1974), pp 1124-1131

MUST READS

THINKING, FAST AND SLOW

DANIEL KAHNEMAN

WINNER OF THE NOBEL PRIZE IN ECONOMICS

"A SPLENDID, INFORMED, ACCURATE, WITTY, CLEAR, COMMONSENSE BOOK."
—Martin Gardner, author of *The New Ambidextrous Universe*

HOW WE KNOW WHAT ISN'T SO

THE FALLIBILITY OF HUMAN REASON IN EVERYDAY LIFE

THOMAS GILOVICH

#1 *New York Times* Best-selling Author

MICHAEL LEWIS

THE UNDOING PROJECT

A Friendship That Changed Our Minds

WHY DO I LOVE THIS PAPER?

3 HEURISTICS FOR JUDGING PROBABILITIES

Representativeness

Availability

Adjustment and Anchoring

REPRESENTATIVENESS

Judgment based on whether something or someone represents a particular stereotype or category.

What is the probability that:

- Object/person A belongs to class B?
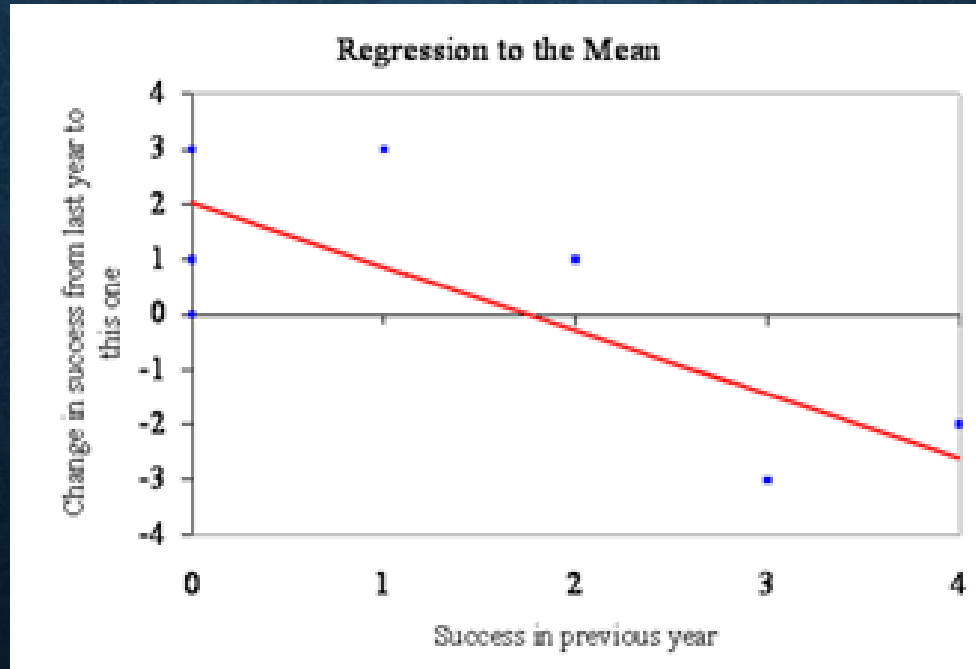
- Event A originates from process B?

PRIOR PROBABILITY

Bias: Overlooking prior probability, an important source of evidence.

If U.S. has 4,000,000 farmers and 150,000 librarians → Steve is ?

REGRESSION TO MEAN

Bias: Offering causal explanations where none exist, overlooking regression to mean

AVAILABILITY

Judging the probability of an event by how quickly/easily examples come to mind.

Good news & bad news: Instances of large classes are recalled better/faster than instances of less frequent ones.

ADJUSTMENT & ANCHORING

Using a target number as a starting point (the **anchor)**, and **adjusting** it until an acceptable value is reached.

1 x 2 x 3 x 4 x 5 x 6 x 7 x 8 = ?

8 x 7 x 6 x 5 x 4 x 3 x 2 x 1 = ?

IMPLICATIONS FOR SW DESIGN

Understanding the end user: What do they want? What do you want? (Choice architecture, nudge)

Understanding your data: Can't boil the ocean, but how to avoid biases?

Understanding your own biases when selecting markets, product features

CONTRIBUTIONS TO DECISION SCIENCE

- Understanding "good" decisions vs. "good" outcomes.

- Debiasing decisions to improve quality.

- Recognizing loss aversion (losing hurts 2.25X more than winning feels good). Influences fintech design (robo investing, etc).

AMOS TVERSKY (1937-96) DANIEL KAHNEMAN (1934 -)

LINKS

- https://www.jstor.org/stable/1738360?seq=1#page_scan_tab_contents

- https://www.vanityfair.com/news/2016/11/decision-science-daniel-kahneman-amos-tversky

- https://www.newyorker.com/books/page-turner/the-two-friends-who-changed-how-we-think-about-how-we-think

- https://www.amazon.com/How-Know-What-Isnt-Fallibility/dp/0029117062/

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