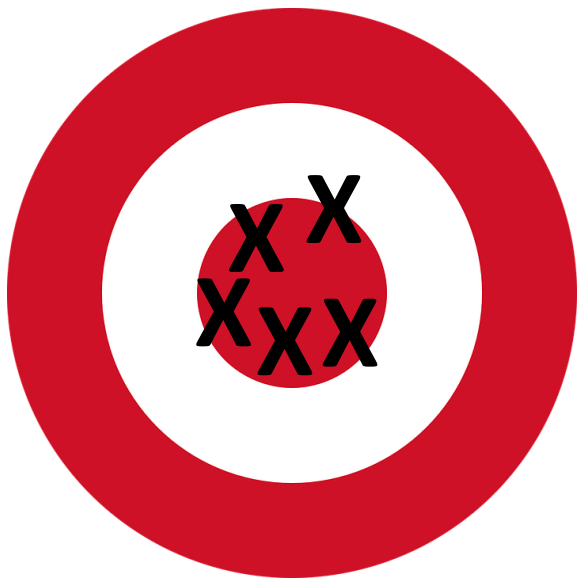# *Noise: A Flaw in Human Judgment*

Daniel Kahneman

Olivier Sibony
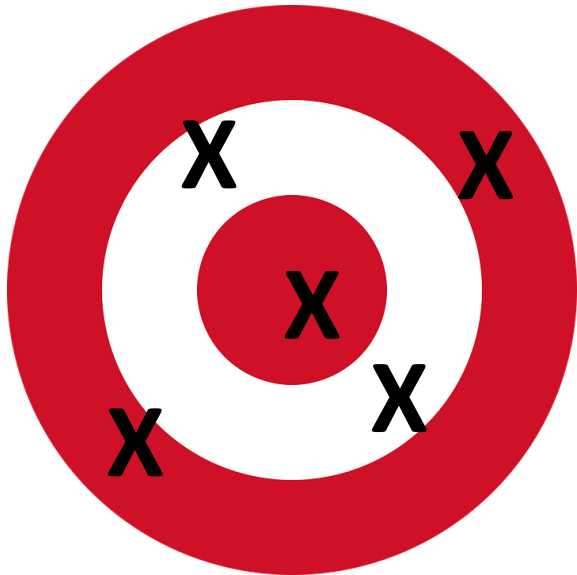
Cass R. Sunstein
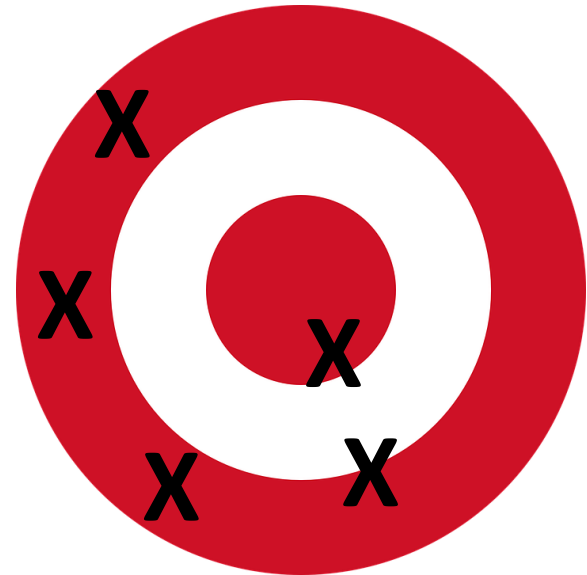
Team A

Team B

Team C

Team D

X X
X
X X X

**Team A**

X
X X
X X

**Team B**

X          X

X

X

X

X          X

**Team C**

X

X

X

X X

**Team D**

# Noise Audit

- Open your phone's stopwatch app and practice counting ten seconds.
- Now, with your eyes closed, count several times, hitting the lap button each time you believe ten seconds have elapsed.

You're answers weren't perfect but **noisy** – slightly above or below the 10-second mark.

If they were consistently wrong in one direction, they were **biased** (a different form of error).

# Main Ideas

- The difference between noise and bias
- The main cause of noise
- How to recognize noise and overcome it
- How to improve our judgments
- How to prevent errors that can be caused by judgments

# Definitions

- **Noise** is unwanted variability in judgment that can cause economic loss, errors and injustice.

- **Judgment** is a conclusion that can be summarized in a word or phrase. Judgment is the result of our deliberations.

- *Wherever there is judgment, there is noise – and probably more than you think.*
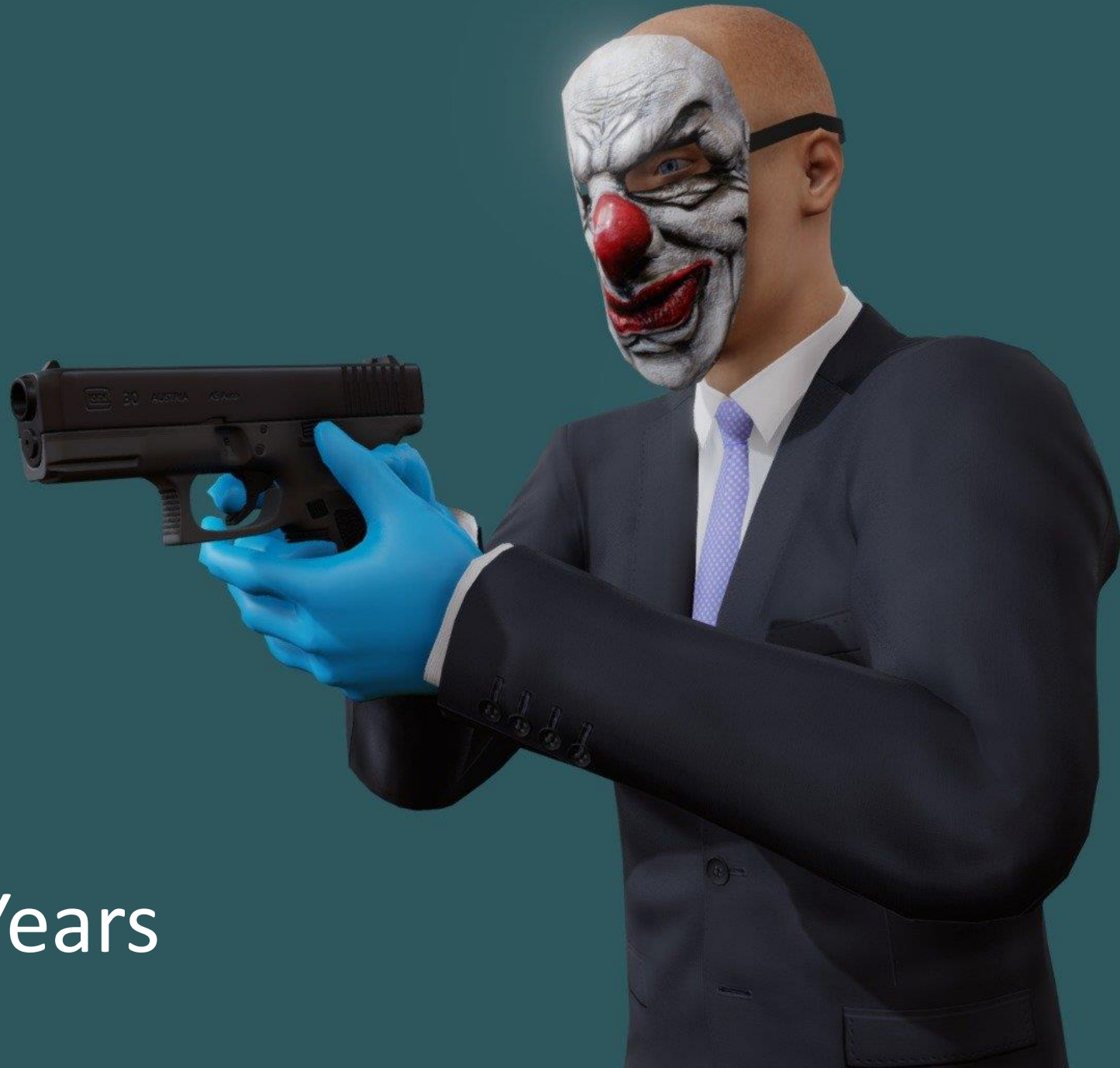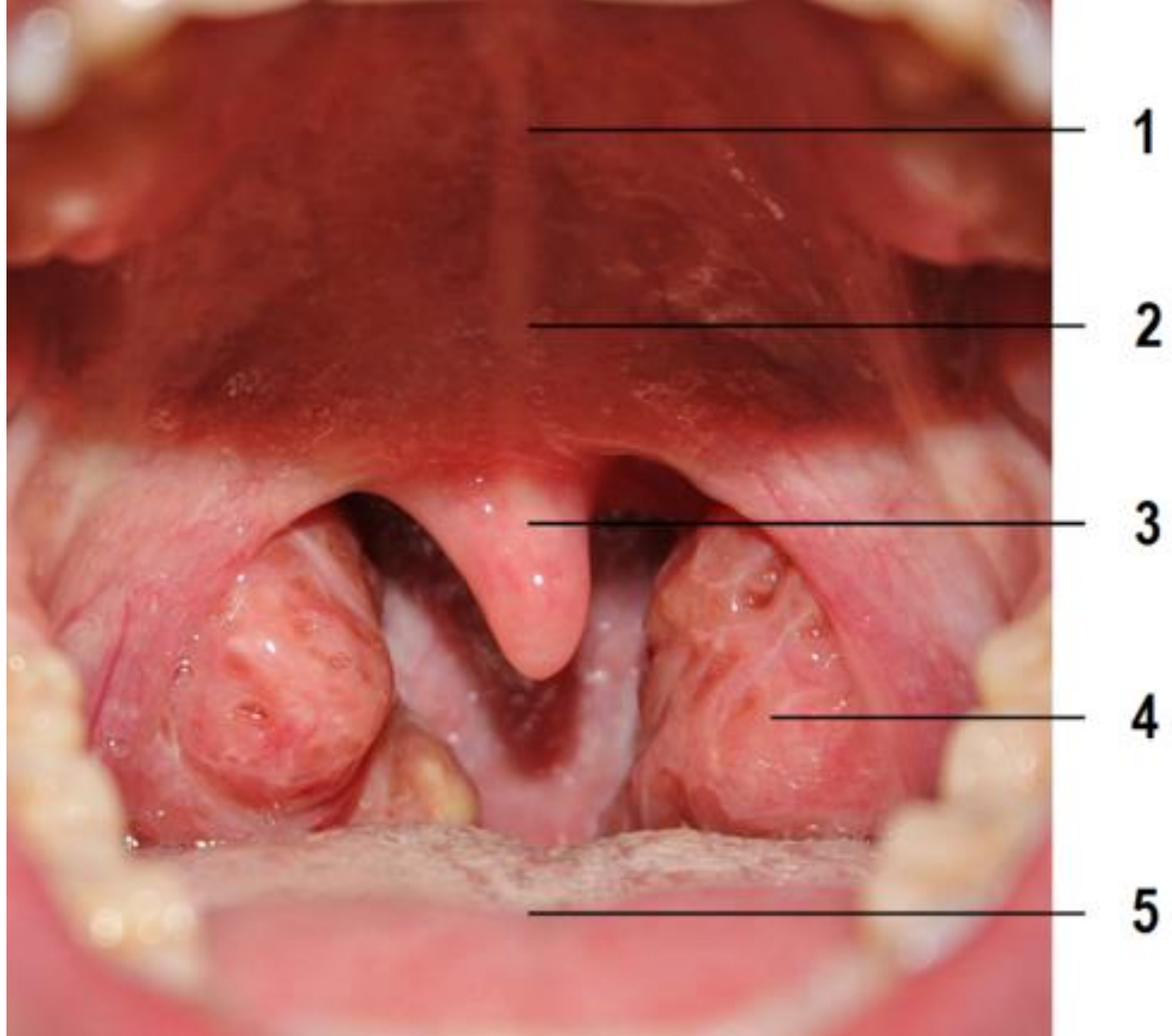
5 to 25 Years
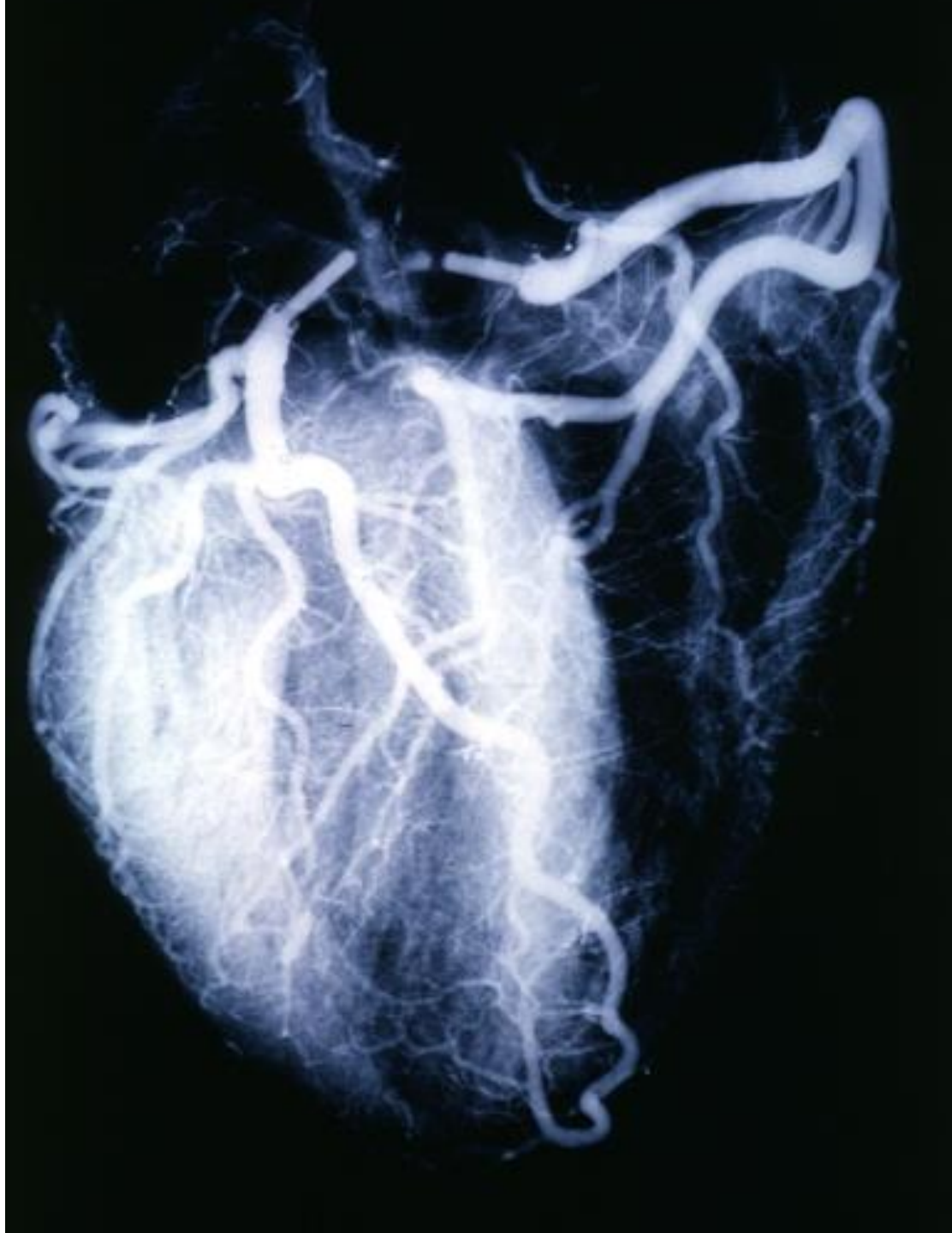
5%-88%

20% vs. 75%

**False positive 1%-64%**

Wine experts tasting the same samples for a second time scored <1 in 5 identically

4 out of 5 fingerprint examiners changed their original identification when presented with contextual information *that should not have been a factor in matching prints.*

22 physicians disagreed with themselves 63-92% of the time

# Wisdom of Crowds Effect

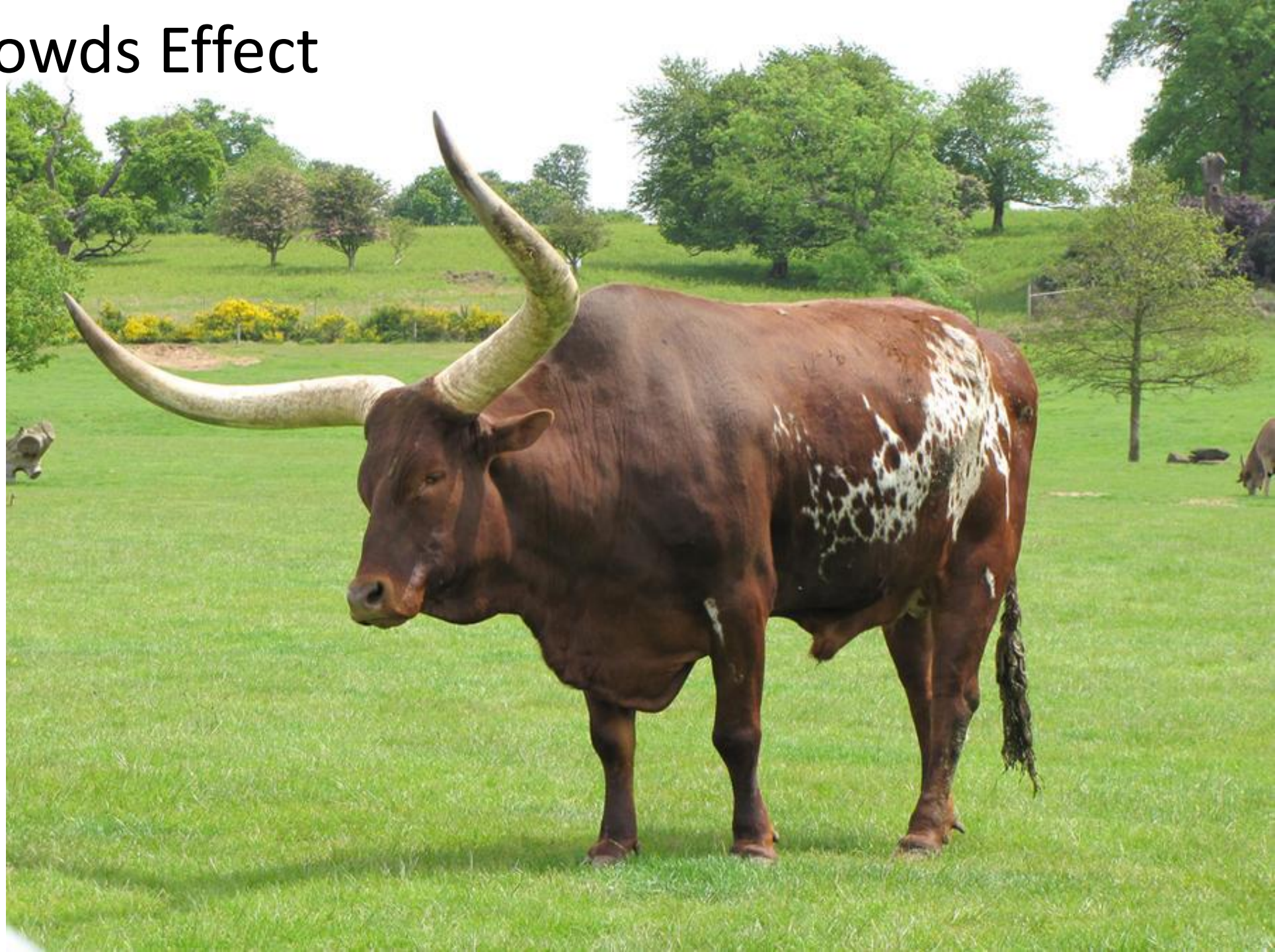787 villagers
Mean 1,200#
Median 1,207#
Actual 1,198#

**Independence in judgments is a prerequisite**

Vul & Pashler

# Sources of Noise

- Mood: Changes *how* you think
  - Bullshit receptivity (mood on gullibility)
- Fatigue
- Weather (judicial sentences, stock market performance, college admissions officers – Clouds make nerds look good)
- Sequence (gambler's fallacy)
- Previous performance

# Excessive Coherence

Intelligent, Persistent

Intelligent, Persistent, Cunning, Unprincipled

Unprincipled, Cunning, Persistent, Intelligent

# How Groups Amplify Noise

- Group polarization: statistical juries vs. deliberating juries.

- Whomever speaks first can influence and change everyone's choice.

*"Ideas about politics and economics are a lot like movie stars. If people think that other people like them, such ideas can go far."*

# Models or Humans?

- Mechanical adherence to a simple rule can substantially improve judgment of difficult problems.
- Intuition? The predictions we make on our intuition often end up being wrong.
- The further into the future . . . the more mistakes we make.

# Better Judges for Better Judgments

- Experienced, intelligent, open-minded to learning new information.

- Able to explain their judgments confidently.

- High general mental ability tests (GMA)

- Even though people trust more in leaders who show confidence and consistency about their decisions, if the goal is to reduce errors, it is better for leaders and other employees to remain receptive to rebuttals to reflect if the process they're engaging in is correct.
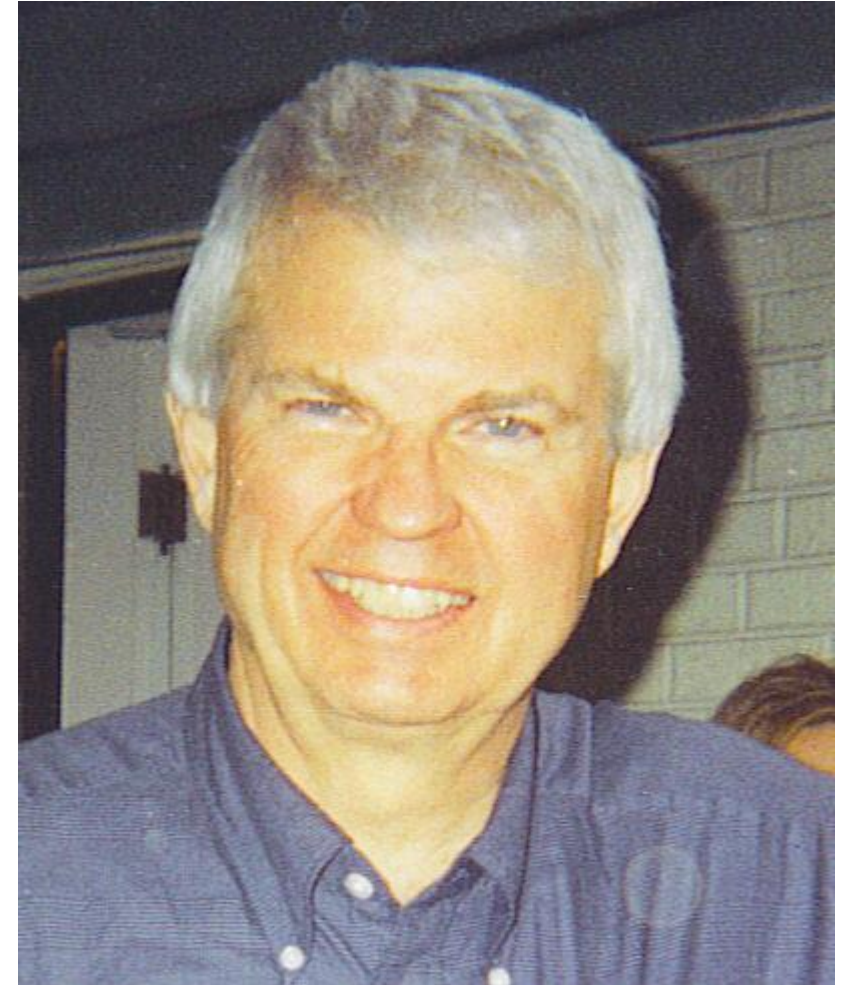
# Decision Hygiene

- The goal of judgment is accuracy, not individual expression. Use appropriate algorithms, which eliminates noise

- Think statistically, and take the outside view of the case.

- Structure judgments into several independent tasks.

- Resist premature intuitions

- Obtain independent judgments from multiple judges, then consider aggregating those judgments.

- Favor relative judgments and relative scales.

*"Using intuition and judgment is fun; following process is not."*

# Decision Hygiene: Sequencing Information

- Judges should always document each step of their judgments. Each phase of the process, each considered alternative must be documented so there is a foundation to defend a judgment.

- Decisions must undergo a second review made by another responsible person AND that second person must not be aware of the judgment made by the first person.

- Estimate the average of both judgments to reach a final decision.

- *It has been proven that the arithmetic mean between judgments guarantees noise reduction.*

# Recommendations:

- [https://en.wikipedia.org/wiki/List_of_cognitive_biases](https://en.wikipedia.org/wiki/List_of_cognitive_biases)
- *Talking to Strangers* by Malcolm Gladwell
- *Everything Is Obvious* by Duncan Watts
- *Nudge* by Richard Thaler & Cass Sunstein
- *\*Thinking, Fast and Slow* by Daniel Kahneman
- *The Happiness Hypothesis* by Jonathan Haidt
- *Insight* by Tasha Eurich
- *Influence* by Robert Cialdini

A big thank you to PocketBook4You