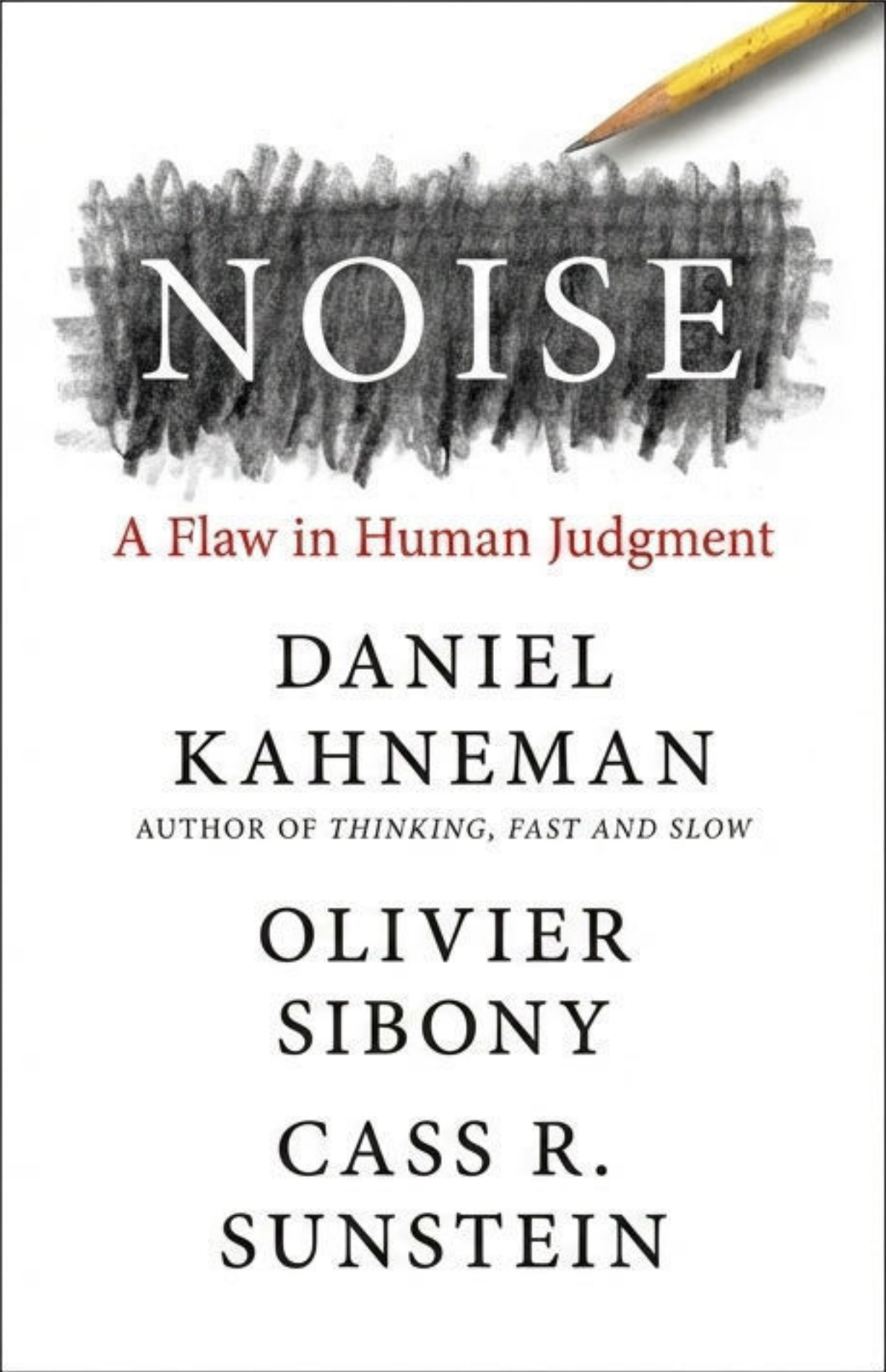




NOISE

A Flaw in Human Judgment

DANIEL
KAHNEMAN

AUTHOR OF *THINKING, FAST AND SLOW*

OLIVIER
SIBONY

CASS R.
SUNSTEIN

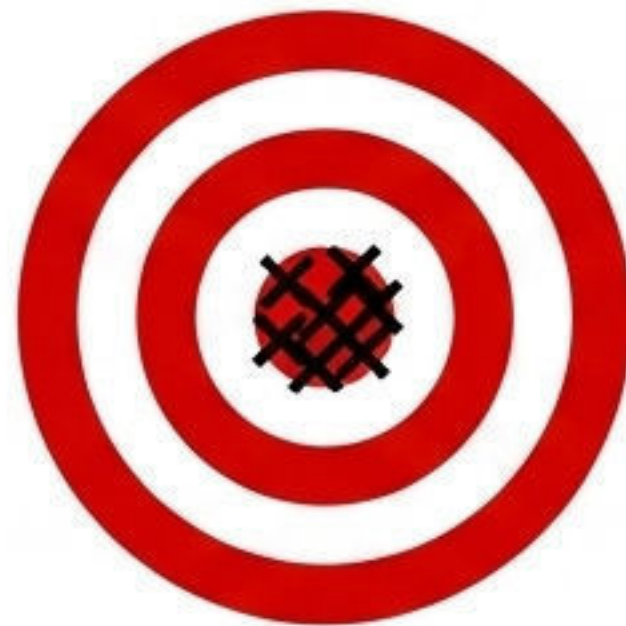
Noise: A Flaw in Human Judgement

Daniel Kahneman, Olivier Sibony,
Cass Sunstein

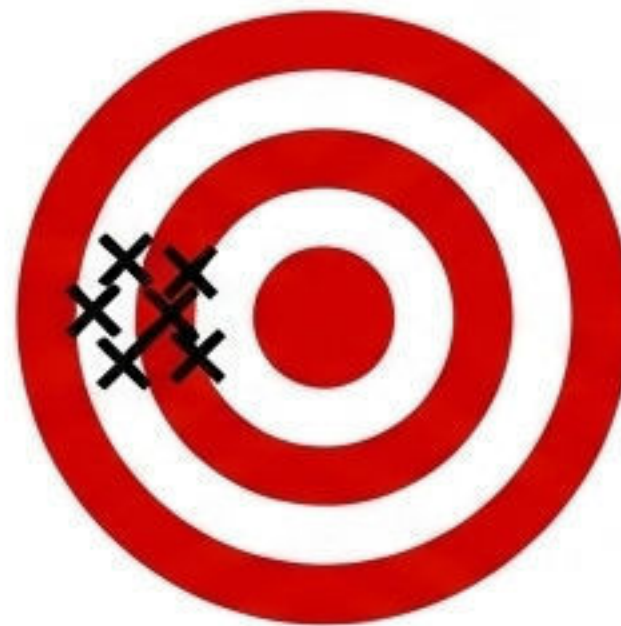
A comprehensive summary and practical solutions for managers and leaders

Based on the *New York Times* bestseller

Two types of error: Bias vs. Noise

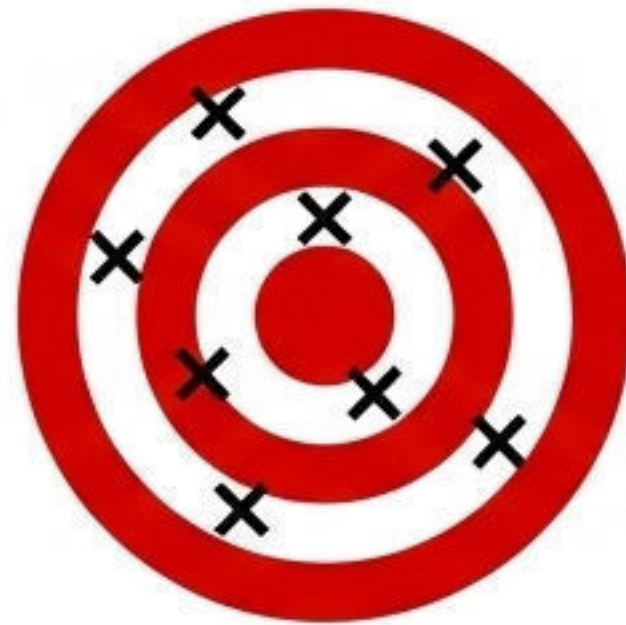


Team A



Team B

Bias: Systematic deviation.
All errors are in the same
direction.



Team C



Team D

Noise: Random scatter.
Judgements are spread out
without order.

"Noise is an invisible enemy." If you look at the back of the target, you cannot see bias, but noise is completely obvious.

Noise is everywhere



Business: Noise in Underwriting

In evaluating the same case, managers expected a 10% difference.

Reality? 55% difference!



Justice: Asylum Roulette

In one court, a judge grants asylum to **5%** of applicants, while another judge grants it to **88%** of them.

The fate of the accused should not depend on luck and a lottery.

System noise is much greater than you think and incurs billion-dollar costs.

Your mind is not a precise measuring instrument

Occasion Noise

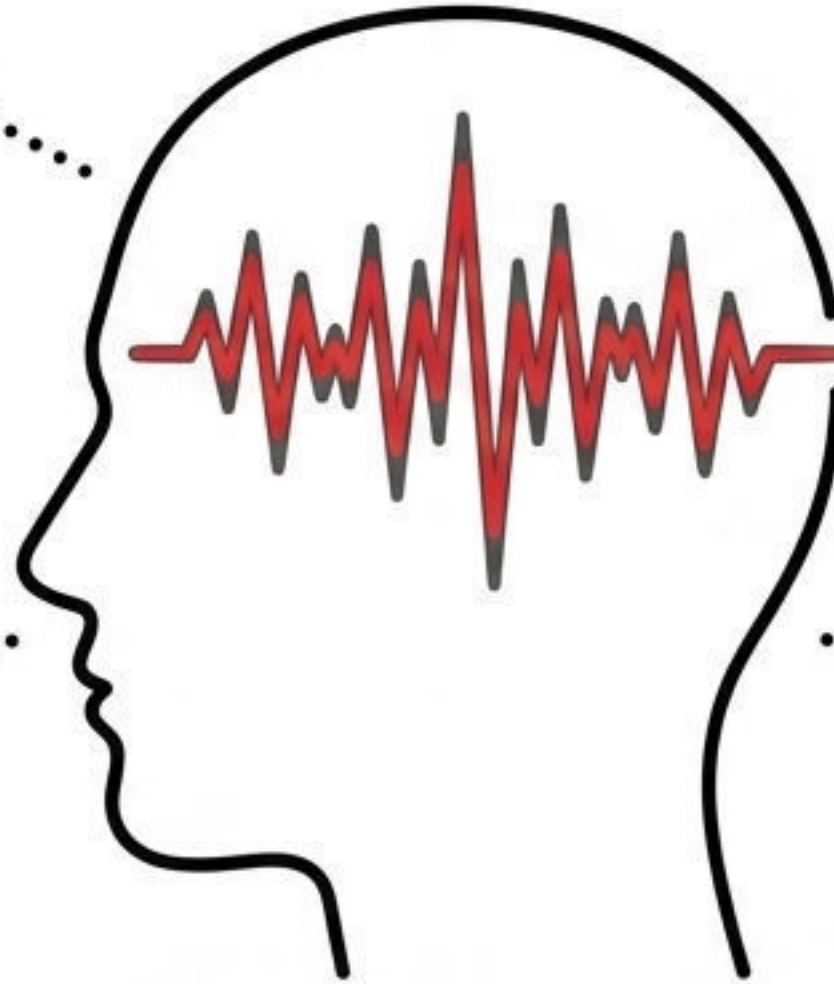
Weather: University admissions differ on cloudy days compared to sunny days.



Time: Doctors prescribe more antibiotics in the final hours of the day.

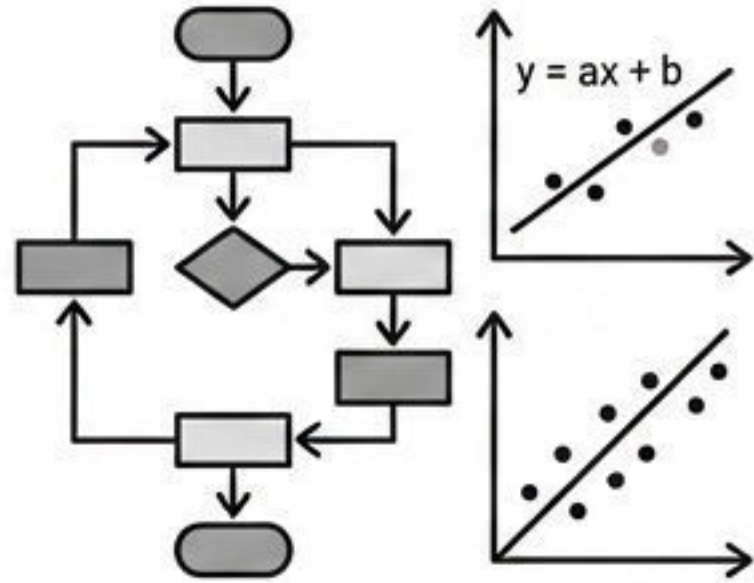


Emotions: Judges hand down stricter sentences after the local football team loses.



"Noise isn't just between people; your disagreement is with yourself."

Why do human judgements fail?



Model / Algorithm (Noise-free)

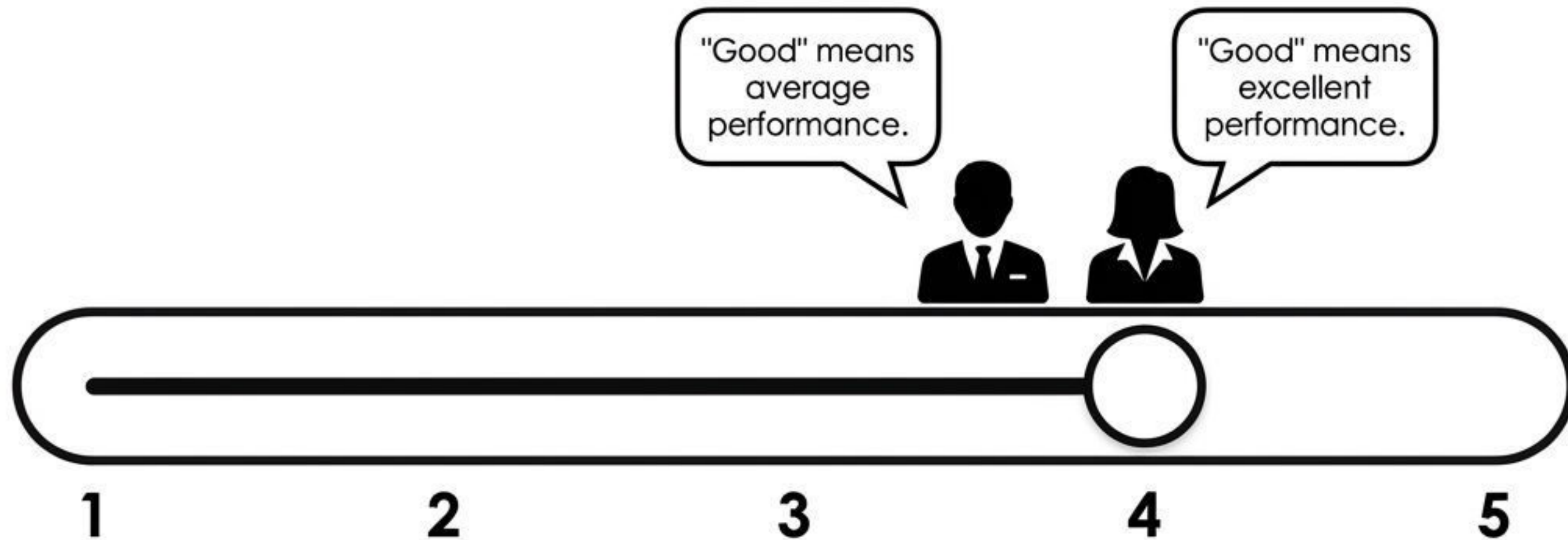
VS



Human (Noisy)

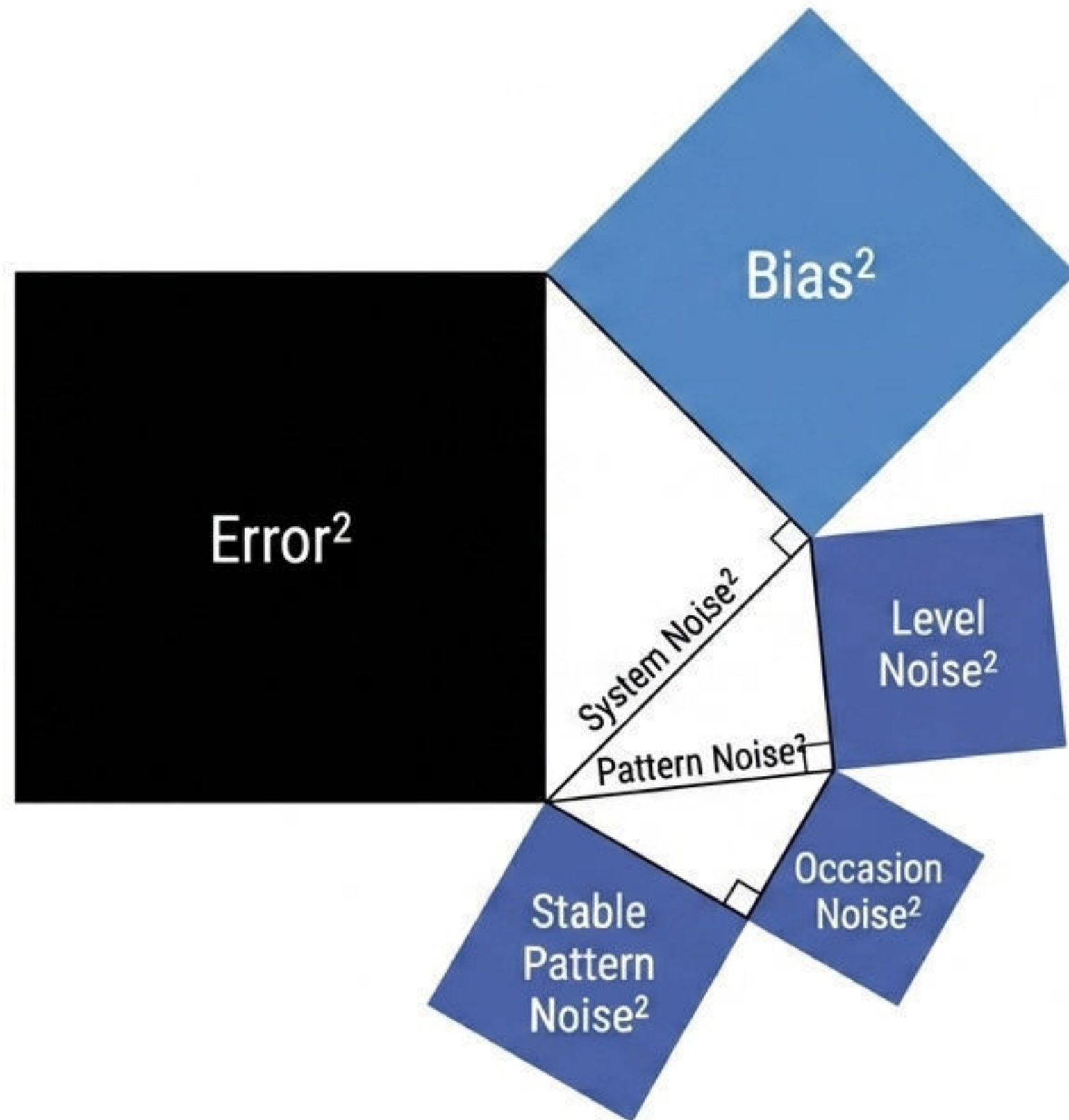
- Algorithms and simple linear rules are **more accurate** than experts in prediction. •
- Humans have **"noise"**, but models do not. Models give the exact same response to the exact same input. •
- Objective Ignorance:** Humans try to guess the unpredictable future, but models accept limitations. •

Psychology of Noise: Matching Operation



- **Problem:** We are good at sensing quality, but bad at converting it to a number.
- **Matching Operation:** Using ambiguous scales (like 1 to 5) is the main source of noise.

Mathematical Autopsy of Error



Level Noise: Some are strict and some are lenient.

Pattern Noise: The largest source of error. The unique interaction of each person with a specific case.

Pattern noise is usually the largest component of error, but is ignored.

The Solution: Decision Hygiene

Definition of Decision Hygiene:

Like washing hands, decision hygiene doesn't know which germ (error) it kills, but it prevents all of them.

The goal is noise reduction, even without knowing exactly which judgement is wrong.

Step One: Noise Audit.

Ask several experts to judge a single case to determine the exact level of disagreement.



Strategy 1: Guidelines and Shared Scales

Indicator	0 Points	1 Point	2 Points
Heart Rate	 Absent	 Slow/irregular heart (<100 bpm)	 >100 bpm
Breathing	 Absent	 Slow/irregular	 Good/crying
Skin Colour	 Blue/pale all over	 Body pink/extremities blue	 Completely pink

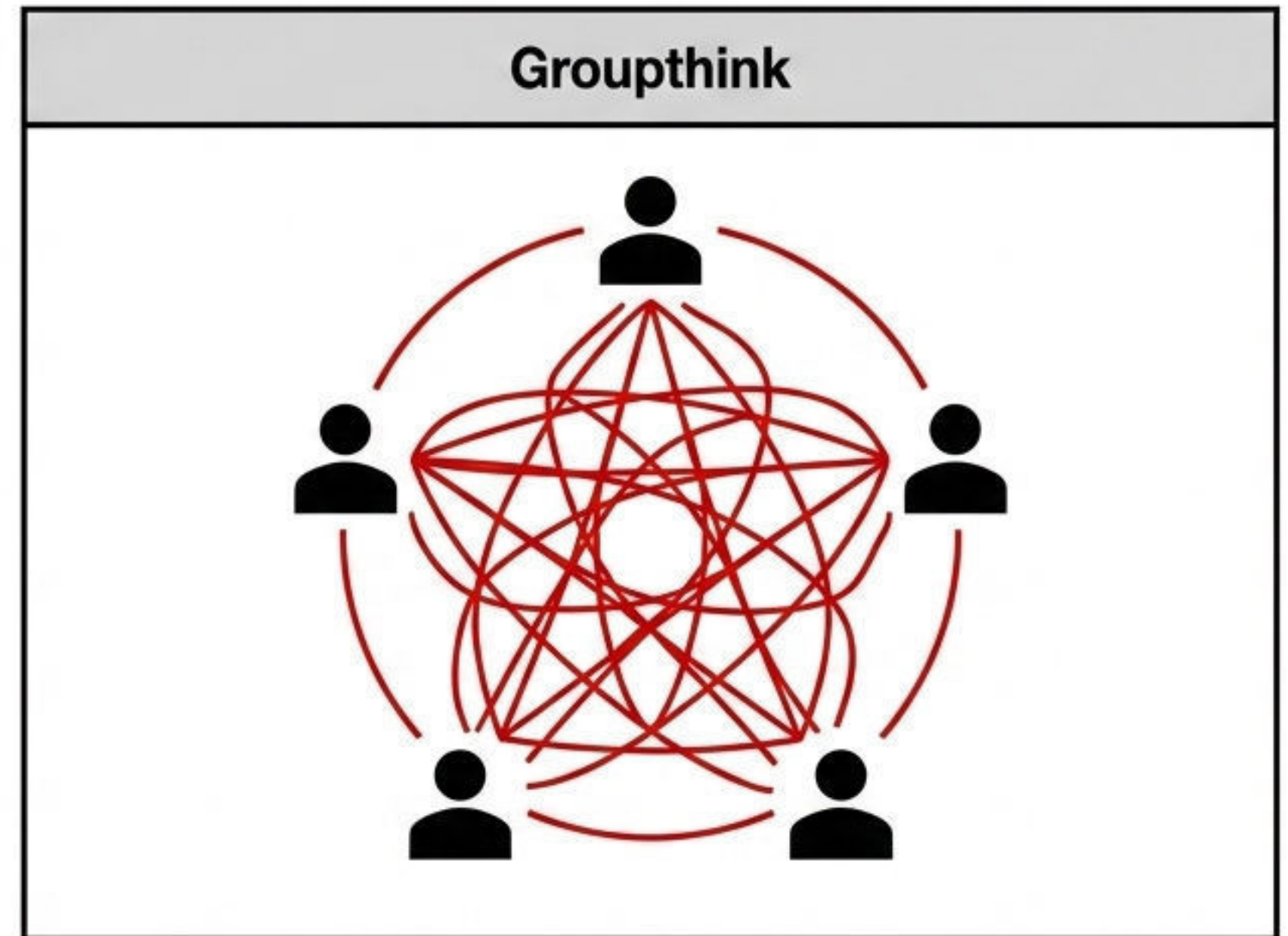
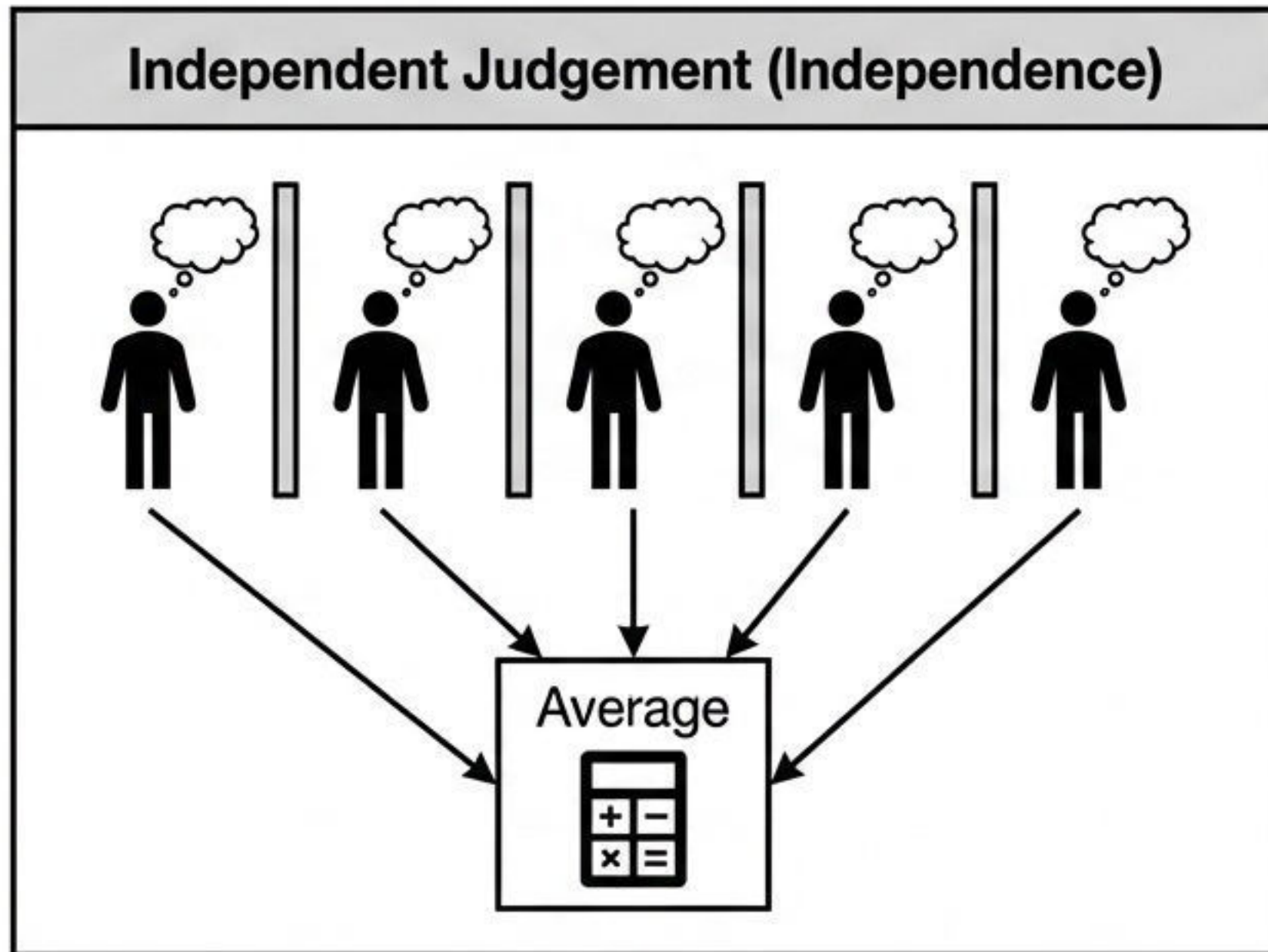
The Apgar Effect: Before this system, newborn assessment was "noisy". By converting qualitative judgement to quantitative scores (0, 1, 2), noise was eliminated and babies' lives were saved.

Replace general judgements with precise indicators.
Instead of asking "Is this employee good?", ask specific, ranked questions.

Strategy 2: Aggregating Judgements

Golden Rule: Independence. Individuals must think independently.
If they talk to each other before voting, noise is amplified.

Practical Method: Estimate-Talk-Estimate.



Strategy 3: Information Sequencing



Analysis of evidence
without context



Receiving case
information



Final judgement

- **Forensic Science Example:** Experts should not see suspect information before analysing the fingerprint.
- **Goal:** Preventing confirmation bias and information cascade.
- **Note:** Document your judgement before being influenced by others' opinions.

Strategy 4: Mediating Assessments Protocol (MAP)

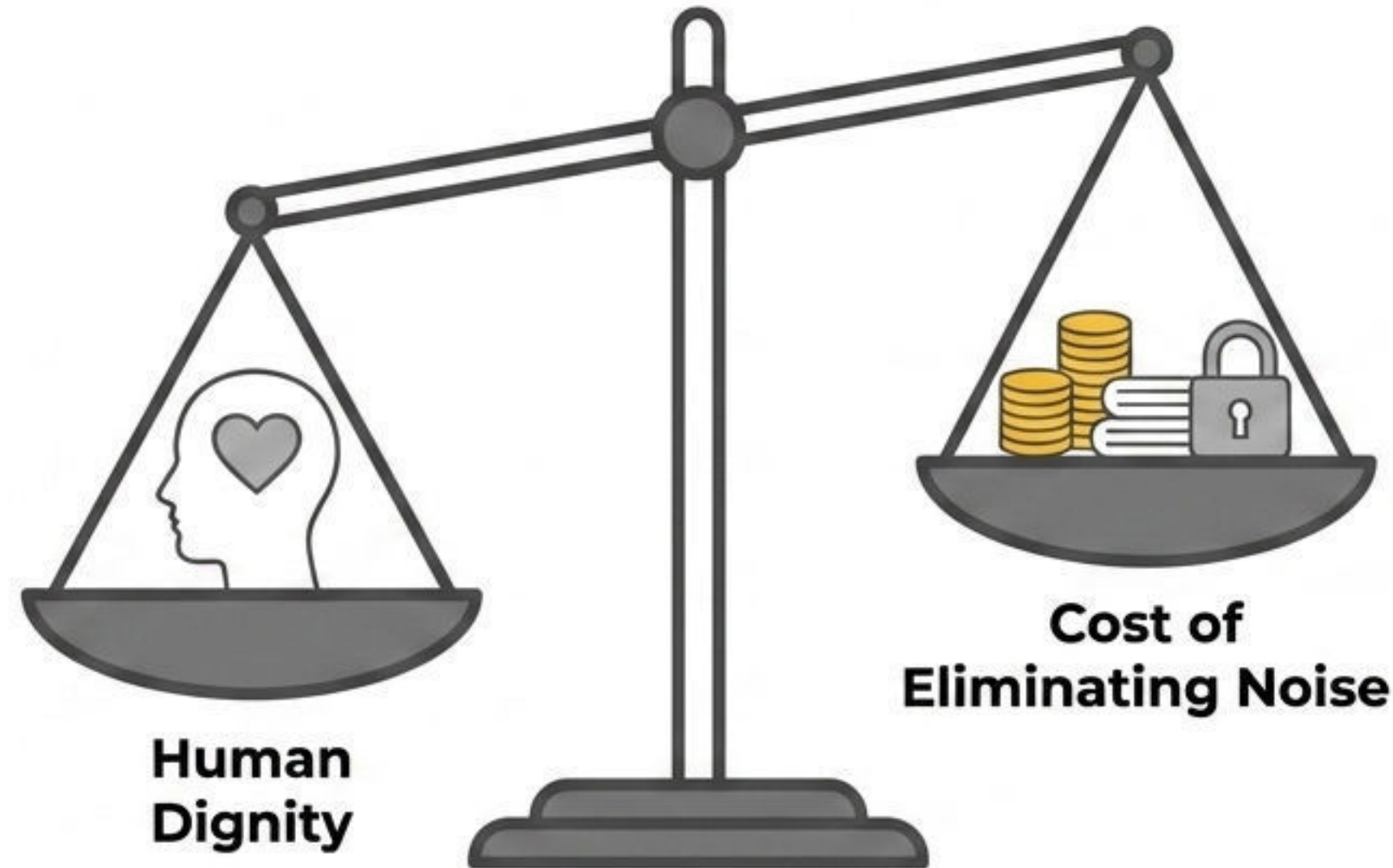
	Candidate 1	Candidate 2	Candidate 3
Technical Skill	4/5	3/5	4/5
Work Experience	5/5	4/5	5/5
Character and Culture	2/5	3/5	2/5
Holistic Judgement	4/5	3/5	4/5

Structure kills noise.

MAP steps for complex decisions (like hiring):

1. Define the required traits.
2. Score each trait separately and independently.
3. Delay the overall judgement until the end of the process.

Is noise always bad?

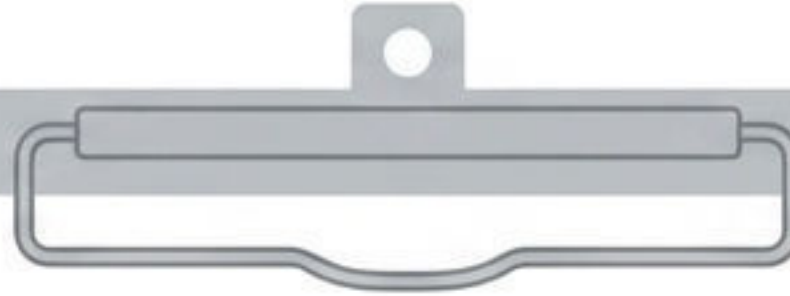


The goal is not “Zero Noise”, but **“Optimal Noise”**.

However, current noise levels in organisations are **much higher than optimal**.

The **Algorithm Paradox**: We forgive human errors, but find algorithmic errors **unacceptable**.

Noise Reduction Checklist for Managers



- ☐ **Noise Audit:** Have you measured the level of disagreement in your team?
- ☐ **Algorithms:** Can you replace human judgement with a simple rule?
- ☐ **Aggregation:** Do team members think independently or mimic each other?
- ☐ **Guidelines:** Are your assessment scales clear and shared?
- ☐ **Using MAP:** Break down large decisions into smaller, independent components.
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**Towards a world
with less noise**



**"Wherever there is judgement, there is
noise—and more of it than you think."**

Taking noise seriously is the only way to restore fairness and productivity to organisations.