

ACTION BIAS

and the Two Most Dangerous
Words in Cybersecurity



SPEAKERS



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*17 years of cybersecurity research
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Wants to help the humans



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Academic and behavioral economist

*Studies and writes on irrationality in
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OVERVIEW

- Traditional cybersecurity goals
- Cognitive bias
- Action bias in cybersecurity
- Countermeasures

TRADITIONAL CYBERSECURITY GOALS

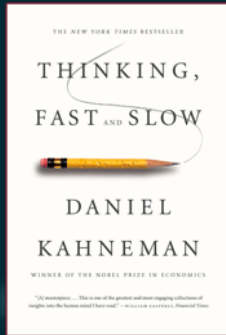


HUMAN REACTIONS to CRISIS



COGNITIVE BIAS

HEURISTICS & BIASES



System 1: fast / automatic

System 2: slow / deliberate

THE VARIETY OF COGNITIVE BIASES

Action bias

Input bias

Hindsight bias

Endowment effect

Confirmation bias

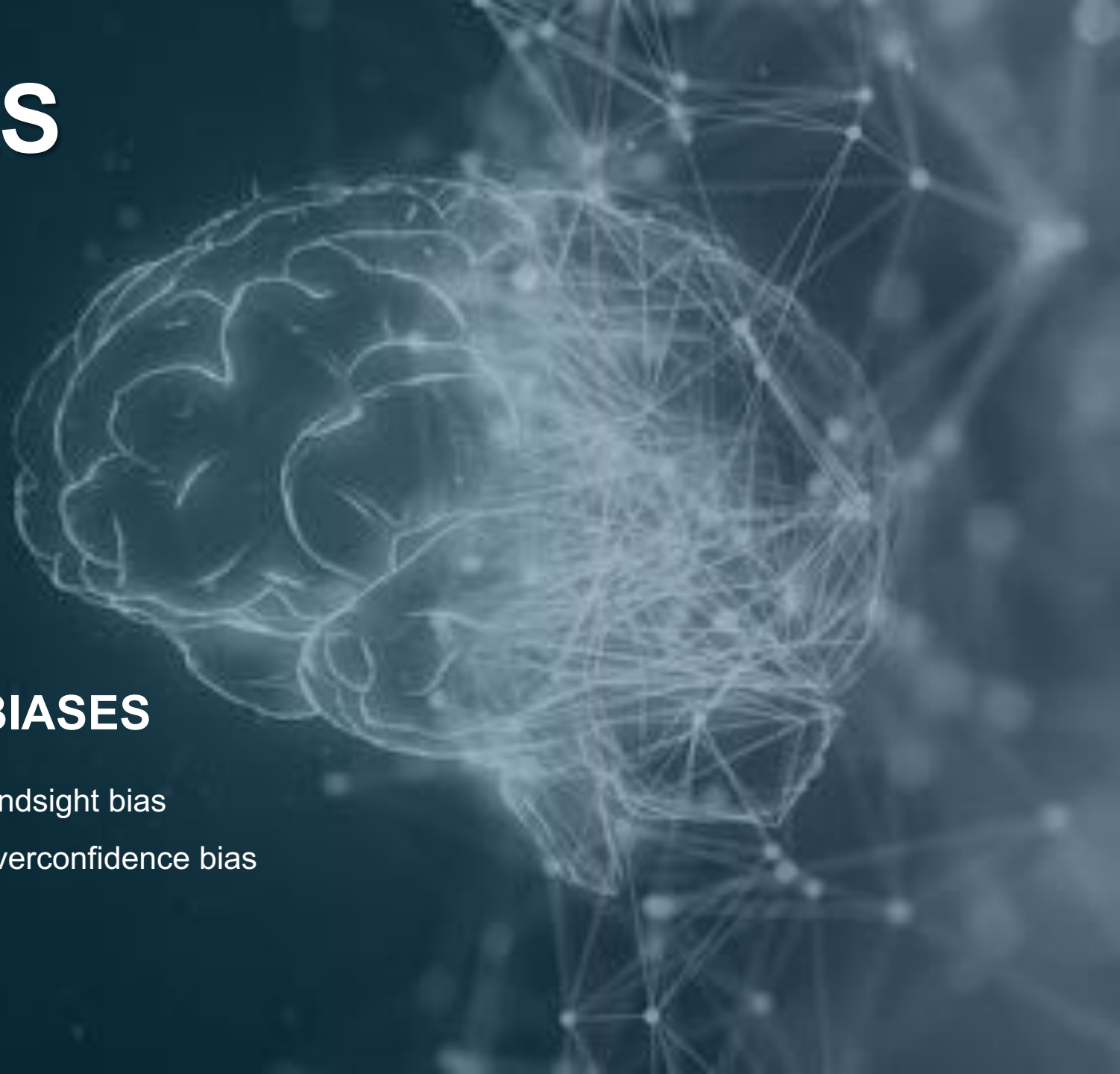
Overconfidence bias

Optimism bias

Outcome bias

Magical thinking

Paradox of choice



ACTION BIAS



BUSINESS AIRLINE

THE LEAGUE

SOFTWARE

ACTION BIAS in CYBERSECURITY



ACTION BIAS is the impulse to act to gain a sense of control over a situation and eliminate a problem, and is particularly likely to occur if others expect us to act.



IN CYBERSECURITY, Action Bias can lead to increased risk and damage from various events; and is approached differently by users, administrators or executives.

IMMEDIATE *vs.* NON-IMMEDIATE ACTION

- Some situations **DO** require immediate action.
- We are not suggesting you let bad things happen.
- Have a plan and follow the plan.



The TWO MOST DANGEROUS WORDS in CYBERSECURITY

NEVER AGAIN

COUNTERMEASURES to ACTION BIAS



What are the *wrong* countermeasures?

COUNTERMEASURES to ACTION BIAS

RISK MANAGEMENT
CULTURE CHANGE

LEADERSHIP EDUCATION
SLOW DOWN

Preparation, analysis and education can help avoid damaging impacts of cyber attacks, and avoid complications due to ill-considered reactions to malicious events.

COUNTERMEASURES to ACTION BIAS

Research Ideas

- Validation of threats
- Simplify and normalize deep thought vs a reflex
- Evolve the mental models

SUMMARY

“

A delay is better than a disaster

”

Chelsey “Sully” Sullenberger, Capt US Airways Flight 1549

TAKEAWAYS

Next week you should:

- Start spreading the word about action bias to raise awareness

In the next 3 months you should:

- Review your plans and SOPs
- Develop appropriate metrics and goals

Within 6 months you should:

- Run a TTX
- Work on culture change

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