

Teaching Auditors to Be Better Thinkers

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The Trolley Problem





Memory Test



What Words Do You Remember?



Mental Filing System





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Active Thinking

Engage with each thought



Passive Thinking

Mindless absorption



Active awareness. We have to choose to do it. Use strategies that force us to pay attention differently and engage with the subject

Attentional Control

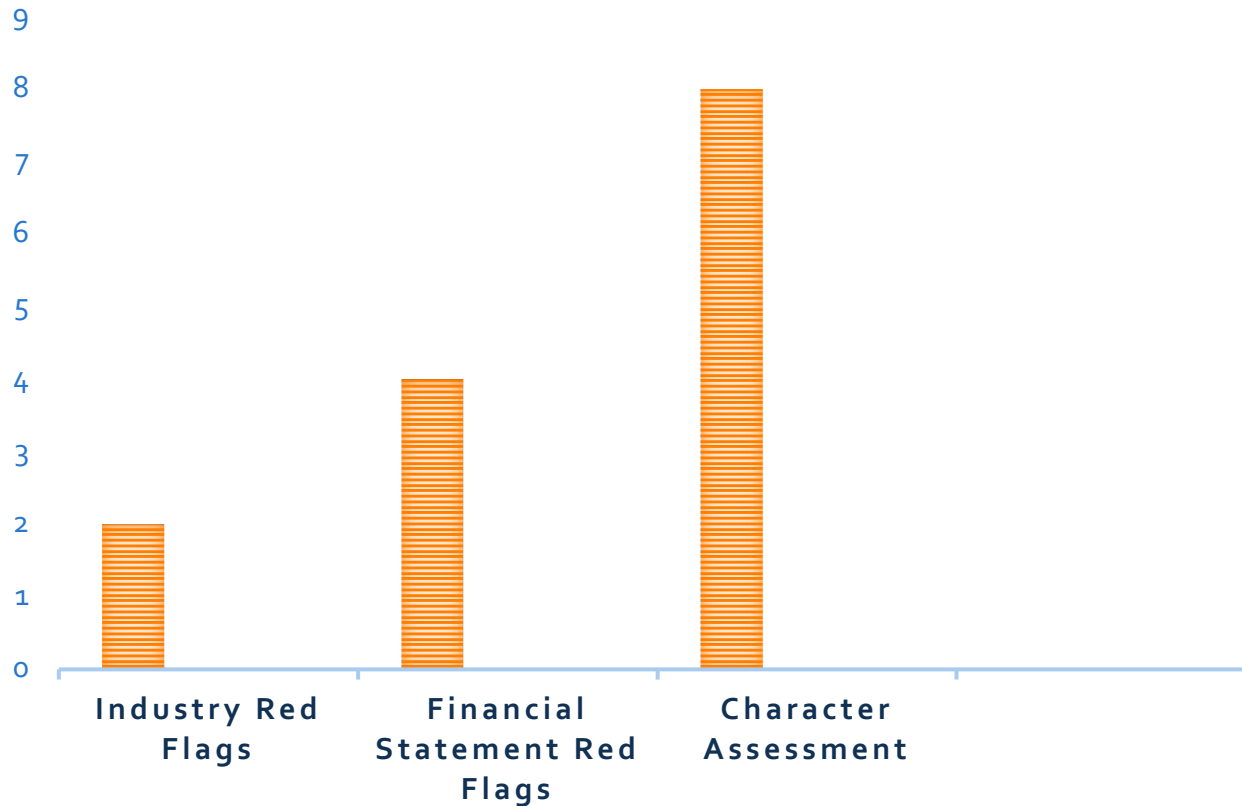




What are the most important thinking skills for CPAs?

The background of the slide is a blurred photograph of a library. On the left, there are wooden bookshelves filled with books. The right side of the image is dominated by a bright, out-of-focus light source, creating a bokeh effect with circular spots of light in warm tones like yellow and orange, and some cooler spots in light blue. The overall atmosphere is soft and intellectual.

Objectivity Bias



Attribution Error-

- A cognitive bias of over emphasizing personality characteristics and under-emphasizing situational awareness.

Study: Auditor Prioritization



Situational Awareness

The perception of environmental elements and events with respect to time or space, the comprehension of their meaning, and the projection of their future status.

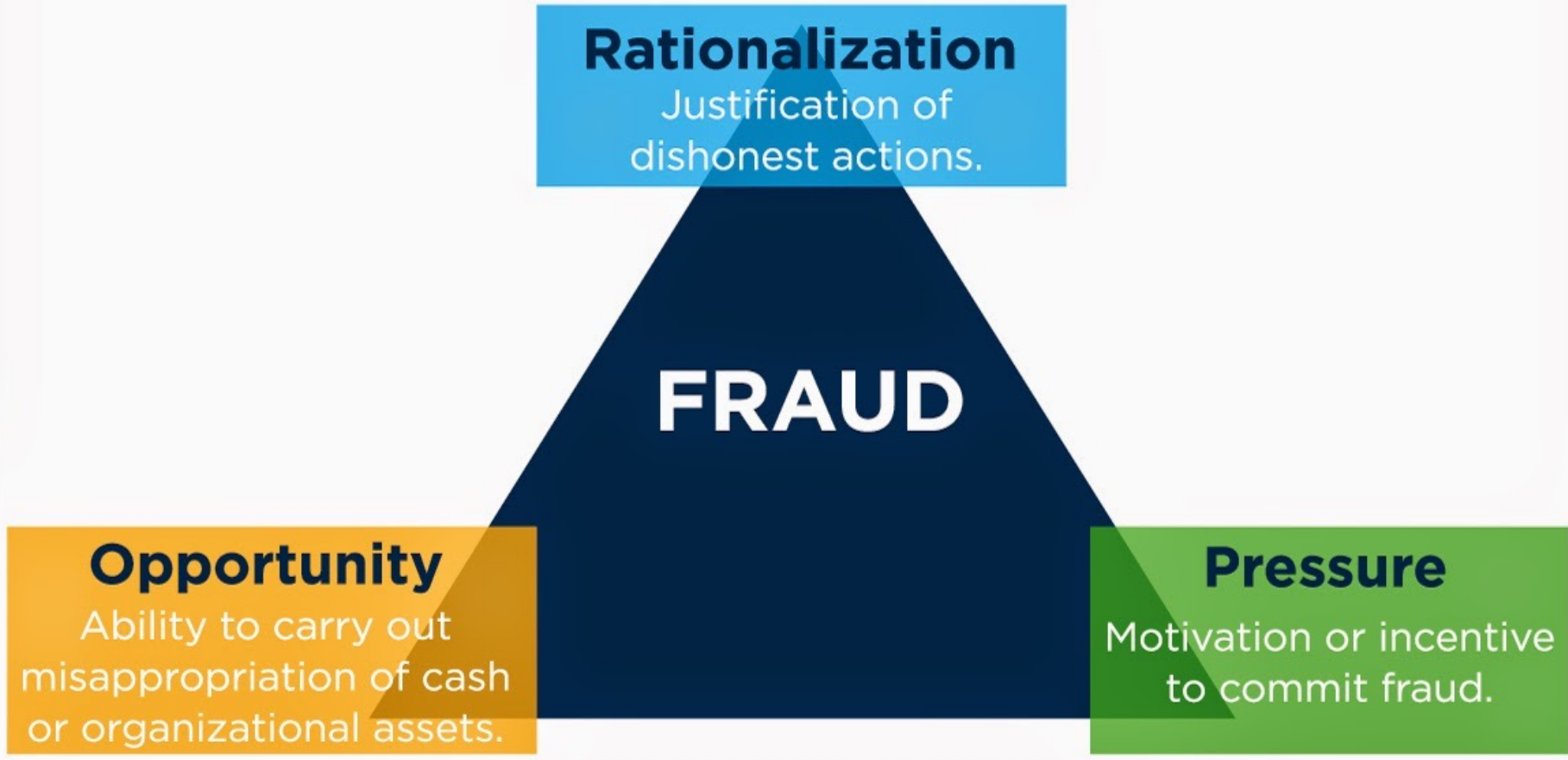
Skepticism



Stable versus Unstable Indicators



The Fraud Triangle

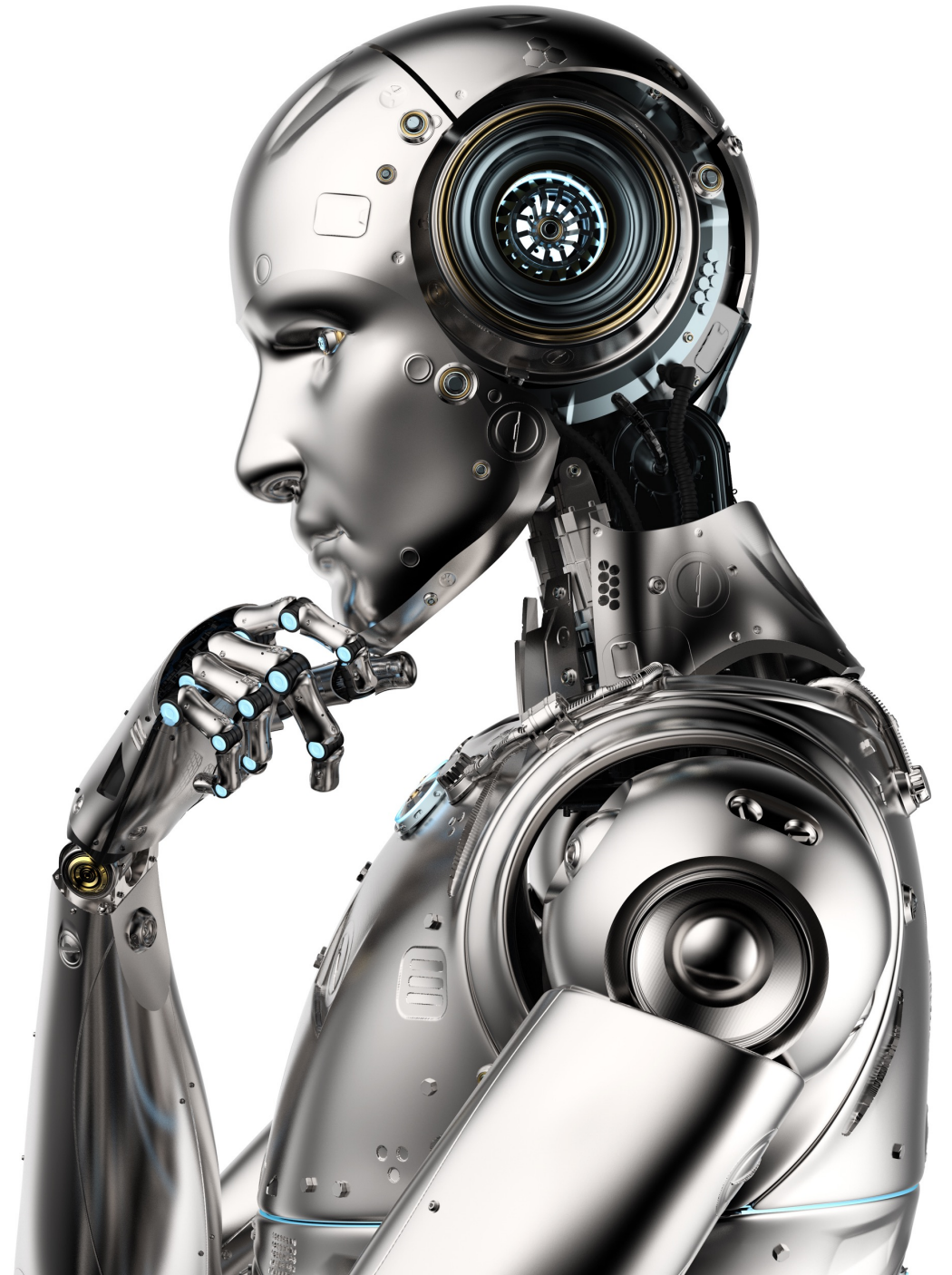


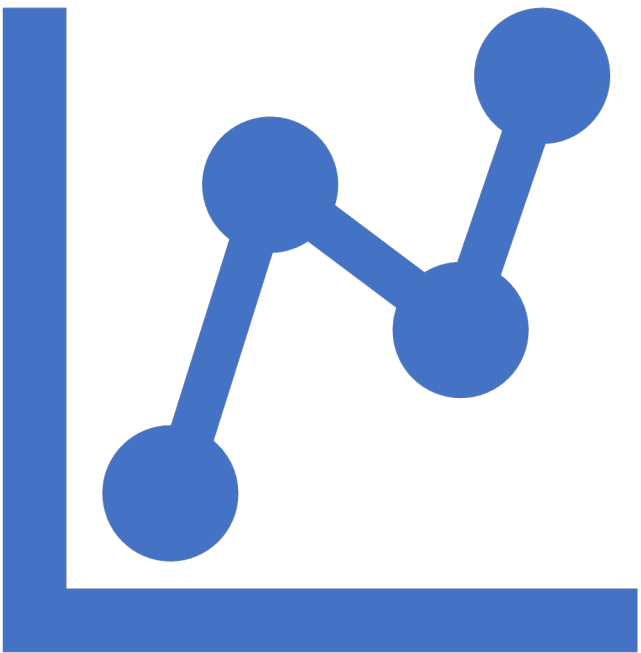
Two Types of Information

Diagnostic- relevant to the
evaluation that is being made

Non-diagnostic - irrelevant or
inconsequential in regard to
the evaluation being made

Default Reasoning and “Default to Truth”





Bias Towards Quantitative
Data/Hard Facts

Object Details

Title: Kouros

Artist/Maker: Unknown

Culture: Greek

Place: Greece (?) (Place created)

Date: about 530 B.C. or modern forgery

Medium: Dolomitic marble

Dimensions: 206.1 × 54.6 × 51 cm (81 1/8 × 21 1/2 × 20 1/16 in.)



What Causes Thinking Errors?

Not:

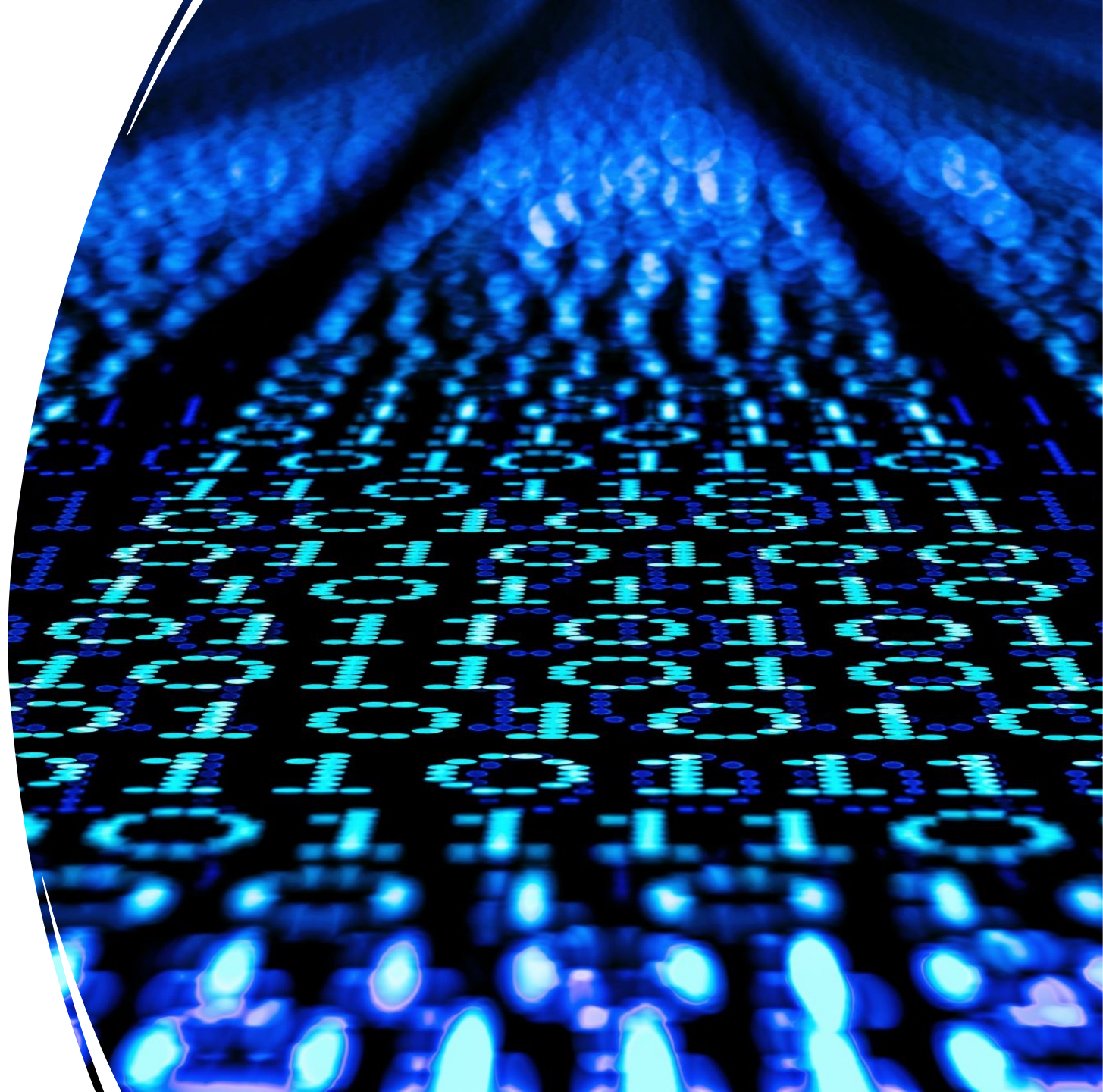
- Lack of knowledge
- Lack of intelligence
- Lack of time

It is:

- Lack of bandwidth
- Faulty assumptions

Bandwidth

What lowers bandwidth?



Using mental shortcuts
to make quick
judgments

Heuristic Thinking

The Brain Knows

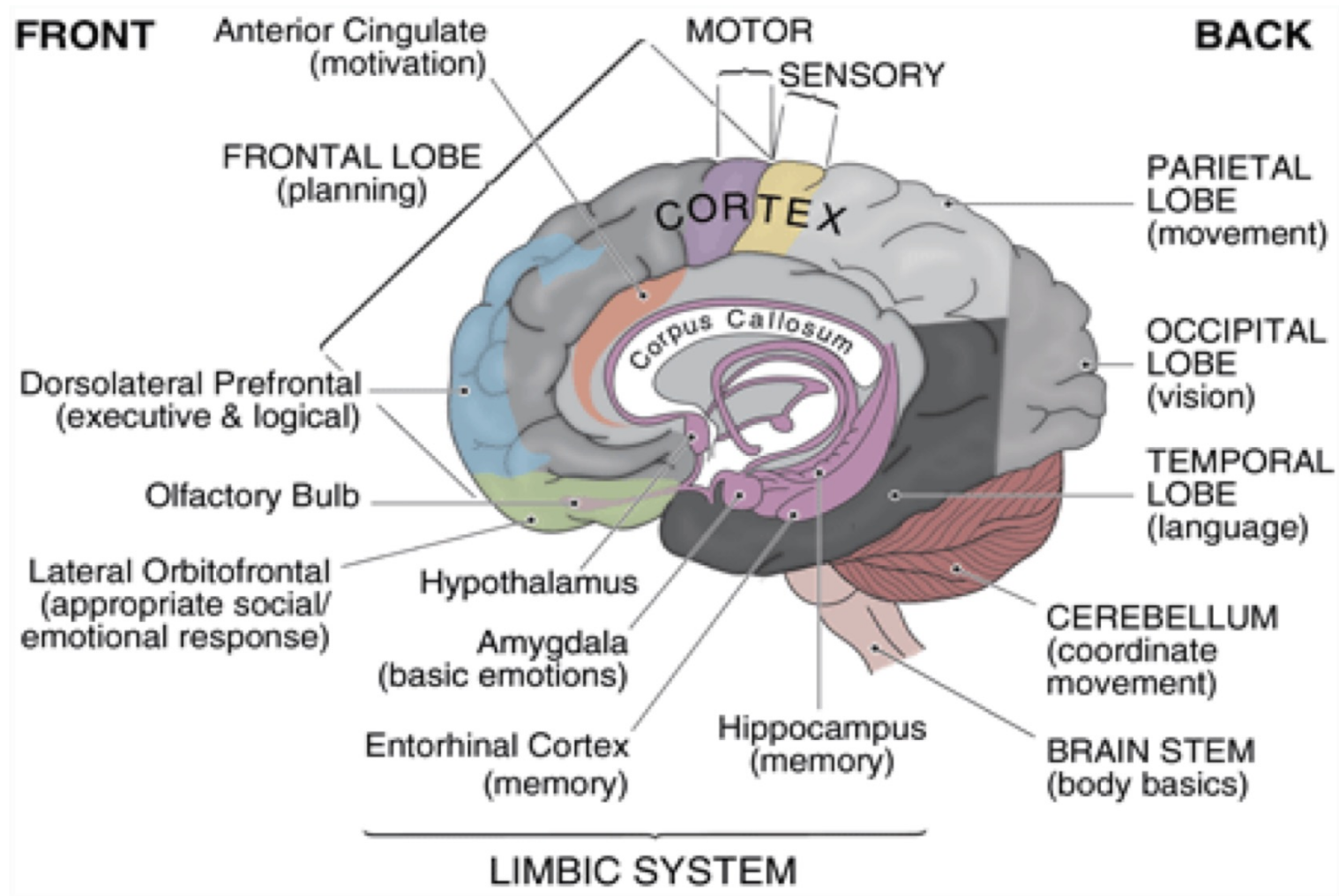
When we manipulate our thinking to fool ourselves into believing things it causes dissonance.

The mismatch can cause instability in thinking, internal distrust and neuroticism

It may present as anger, poor self-esteem, need for external validation

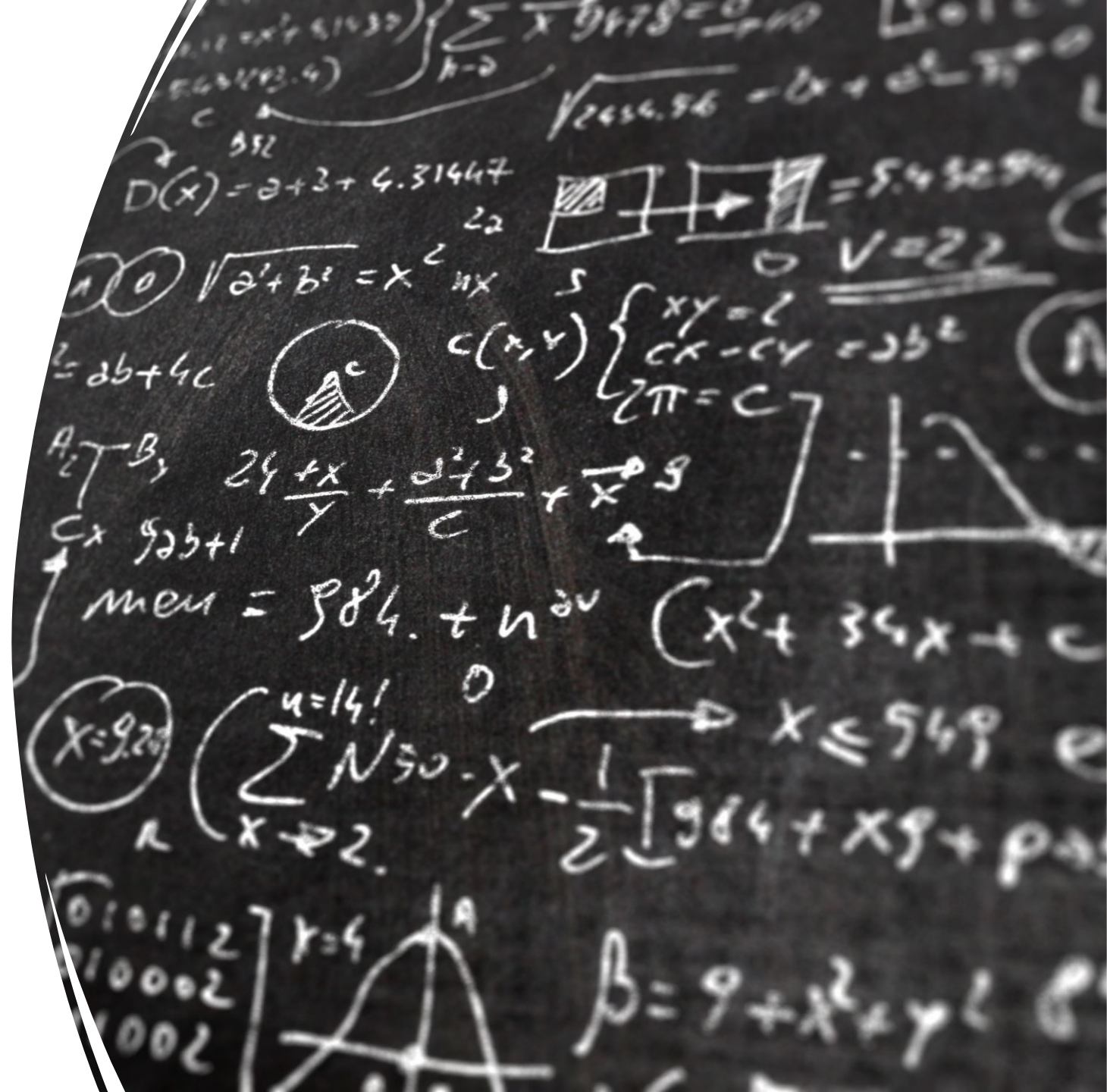


Functional Neuroscience

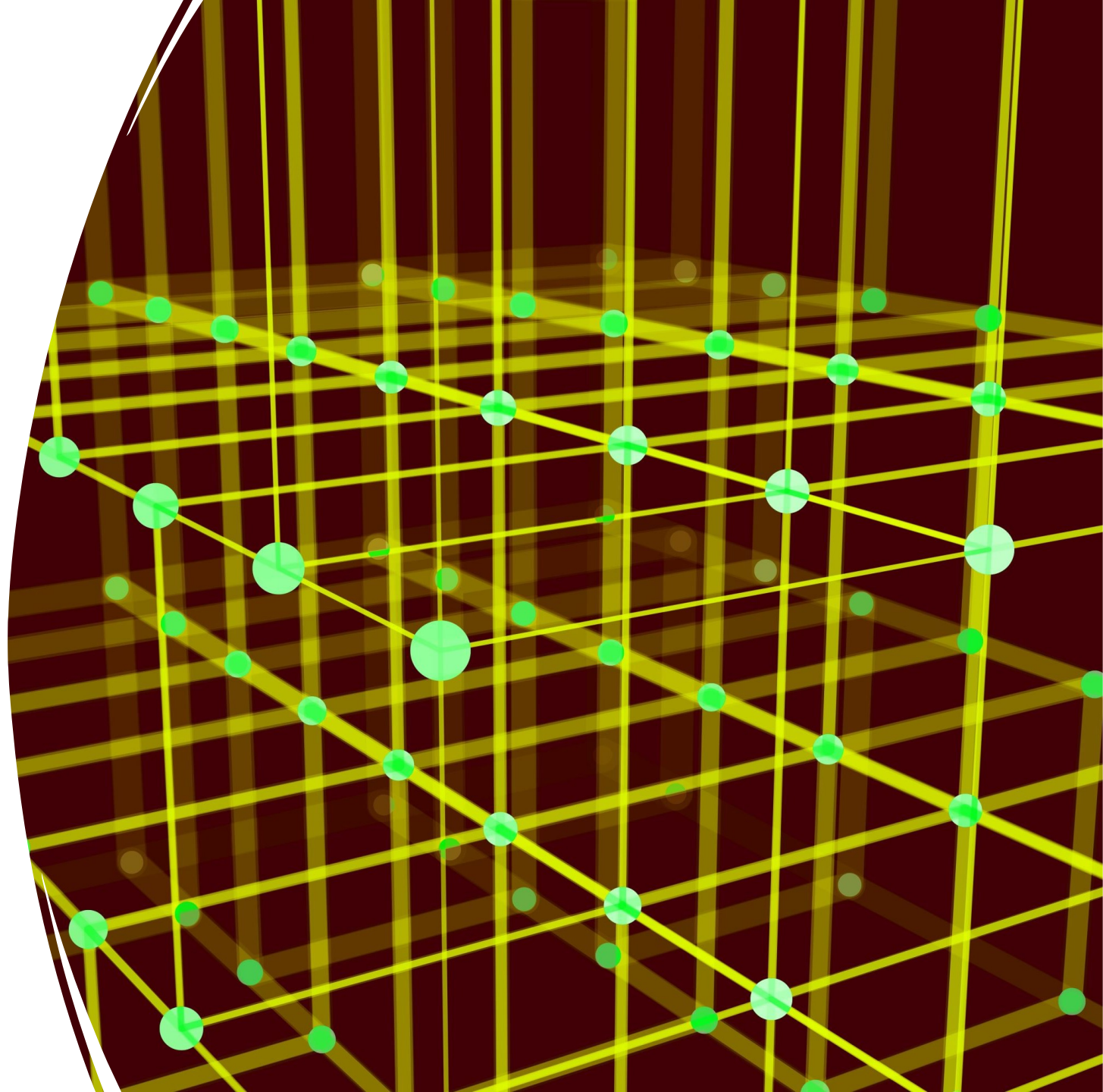


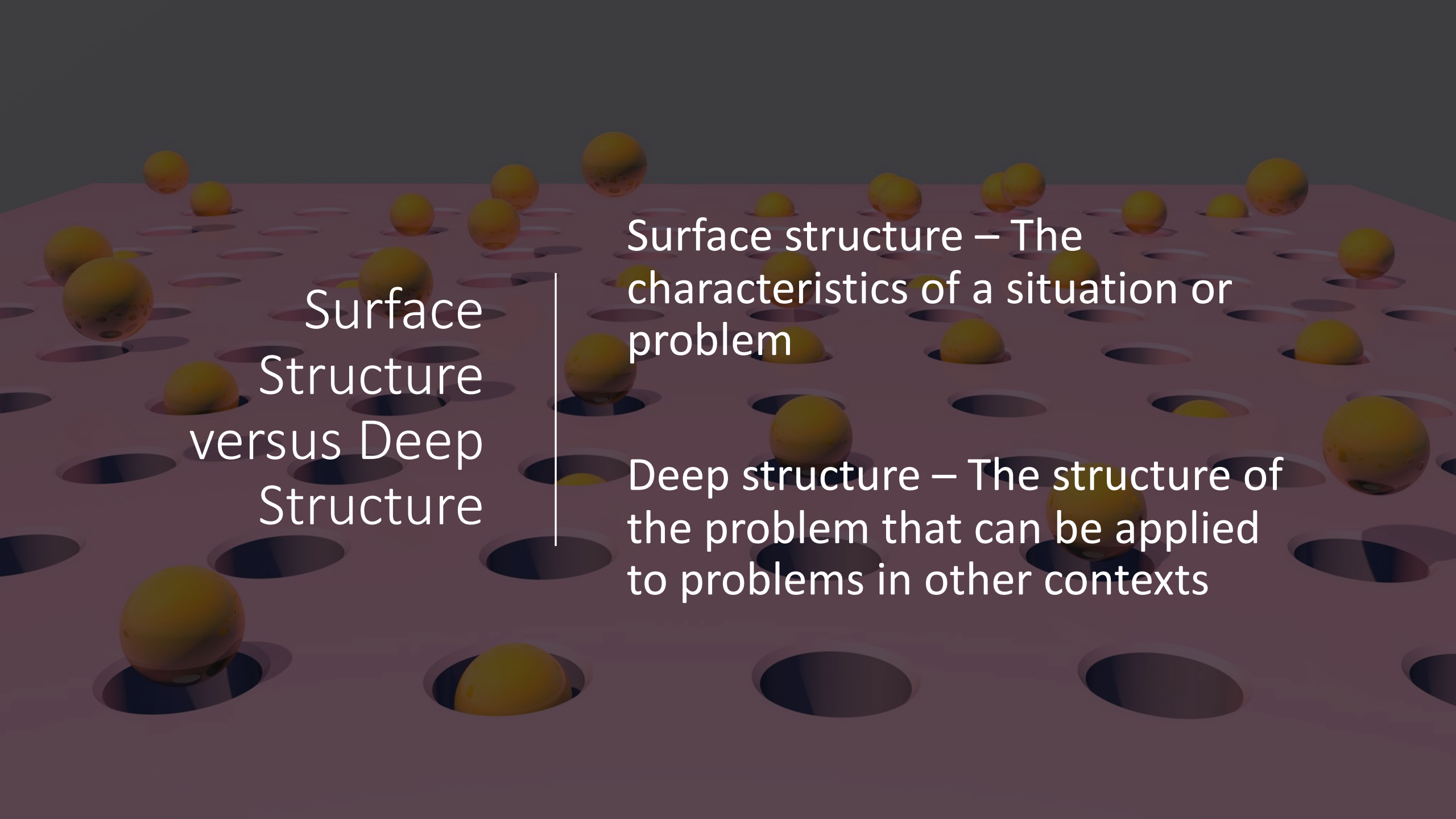
3 “Layers” of Thinking

- Logical
- Reactive (emotional)
- Associational



Logic





Surface
Structure
versus Deep
Structure

Surface structure – The characteristics of a situation or problem

Deep structure – The structure of the problem that can be applied to problems in other contexts

CARD #

1

2

3

4

A

K

8

5

CARD #

1

2

3

4

Check is
over
\$2,000

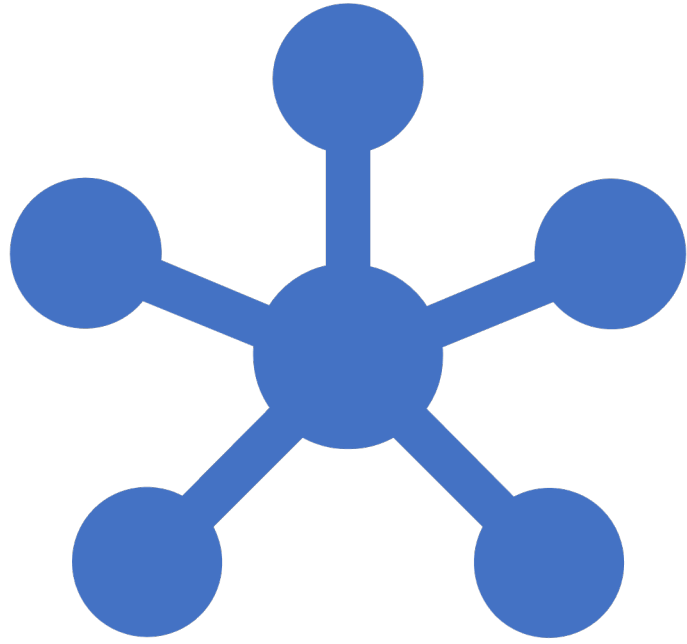
Check is
under
\$2,000

Check
Has
2
Signatures

Check
Has
1
signature

Confirmation Bias



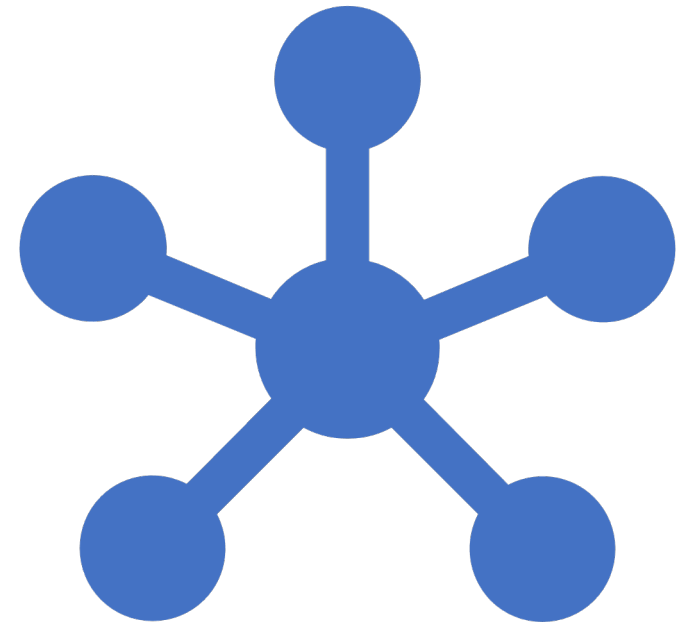


Combinatorics

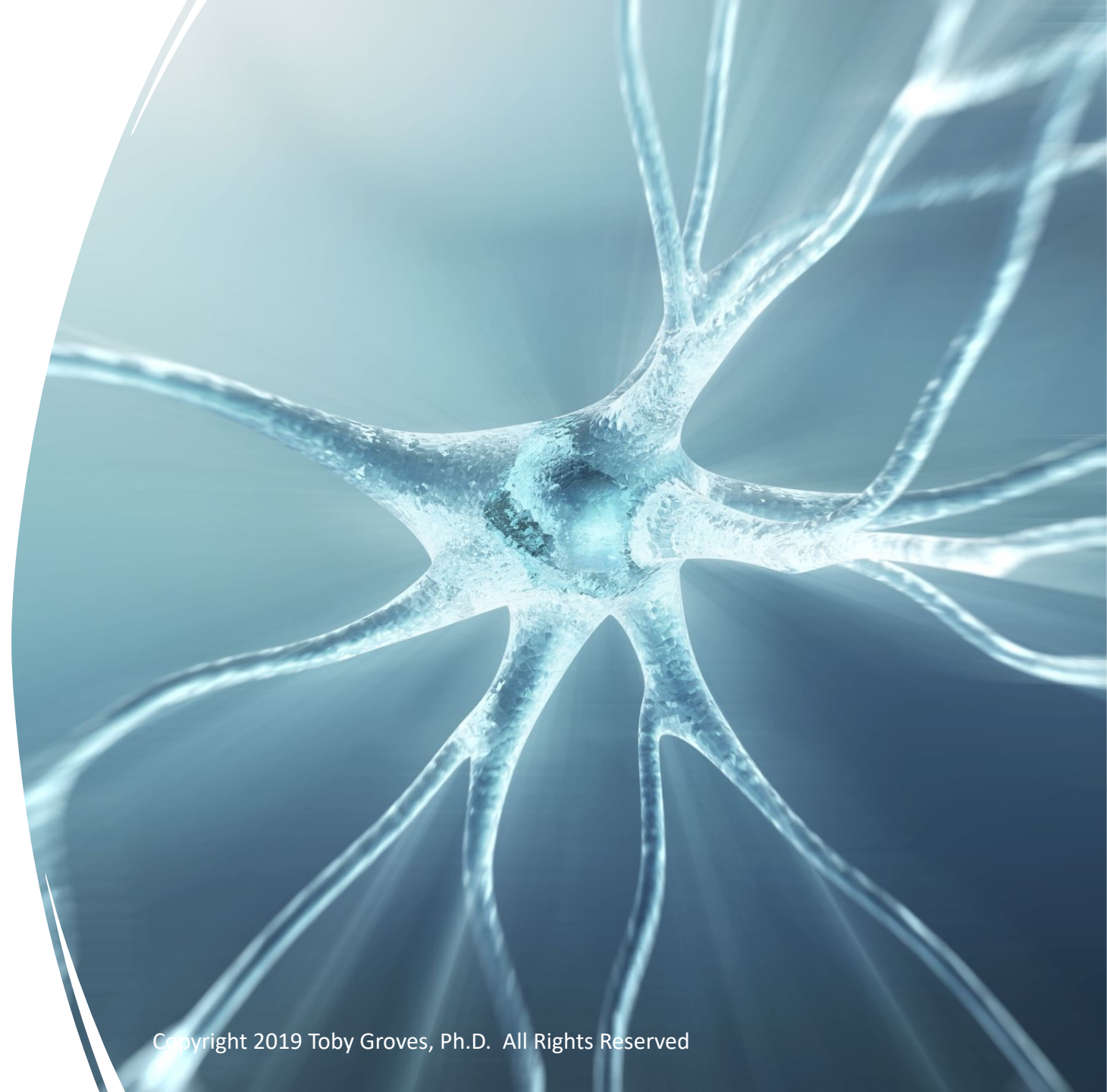
The Birthday Problem

What are the odds that, in a group of about 25 people, 2 have the same birthday (month and day)?

- A. $< 5\%$
- B. Between 5% and 10%
- C. Between 10% and 25%
- D. Between 25% and 50%
- E. $> 50\%$



Reactivity



Motivated Reasoning

Using emotionally-biased reasoning to produce justifications or make decisions that are most desired rather than those that accurately reflect the evidence, while still reducing cognitive dissonance.

Mindfulness

The activated amygdala immediately shuts down neural pathways to the prefrontal cortex-which is why we can become disoriented in a heated conversation. Complex decision-making and access to multiple perspectives is shut down. Our attention narrows and we force ourselves into safety. The view that I am right and you are wrong- even though under normal circumstances we would see other perspectives.

Memory also becomes untrustworthy-the brain drops the memory function in an effort to survive the threat. Have you ever been in a fight with someone and you have trouble remembering any positive thing about them at that moment?

When our memory is compromised-we can't recall things that might help us calm down-we simply are filled with the flashing red light "attack, danger, danger, protect".

We lose control of the choice of how we react.



Mindfulness

- Stay present . Simply notice that you are provoked-through bodily cues
- let go of the story-this is difficult-but just for a minute let go of the judgmental process-this can stop the feedback loop between our thoughts and our body- as long as the negative thoughts persist, so do those stress hormones. It isn't that we are wrong - its that we need more clear perceptions and that happens when the nervous system is relaxed.
- Allow the mind to be open and notice
- In a few short minutes the production of adrenaline and cortisol will stop. Paying attention to this (even count as you breathe if you want) re-establishes equilibrium faster-and restoring your ability to think, listen and relate.



Humility

- Avoid overconfidence and over-optimism



Mindset and Associations



"Failure is an opportunity to grow"

GROWTH MINDSET

"I can learn to do anything I want"

"Challenges help me to grow"

"My effort and attitude determine my abilities"

"Feedback is constructive"

"I am inspired by the success of others"

"I like to try new things"

"Failure is the limit of my abilities"

FIXED MINDSET

"I'm either good at it or I'm not"

"My abilities are unchanging"

"I don't like to be challenged"

"I can either do it, or I can't"

"My potential is predetermined"

"When I'm frustrated, I give up"

"Feedback and criticism are personal"

"I stick to what I know"

*Carol Dweck, Ph.D. *Mindset*



Internal Dialogue

Depletion

Every cell in our body uses glucose for energy

The harder you concentrate on a difficult problem, the more energy you burn

What else causes depletion? Stress or anxiety

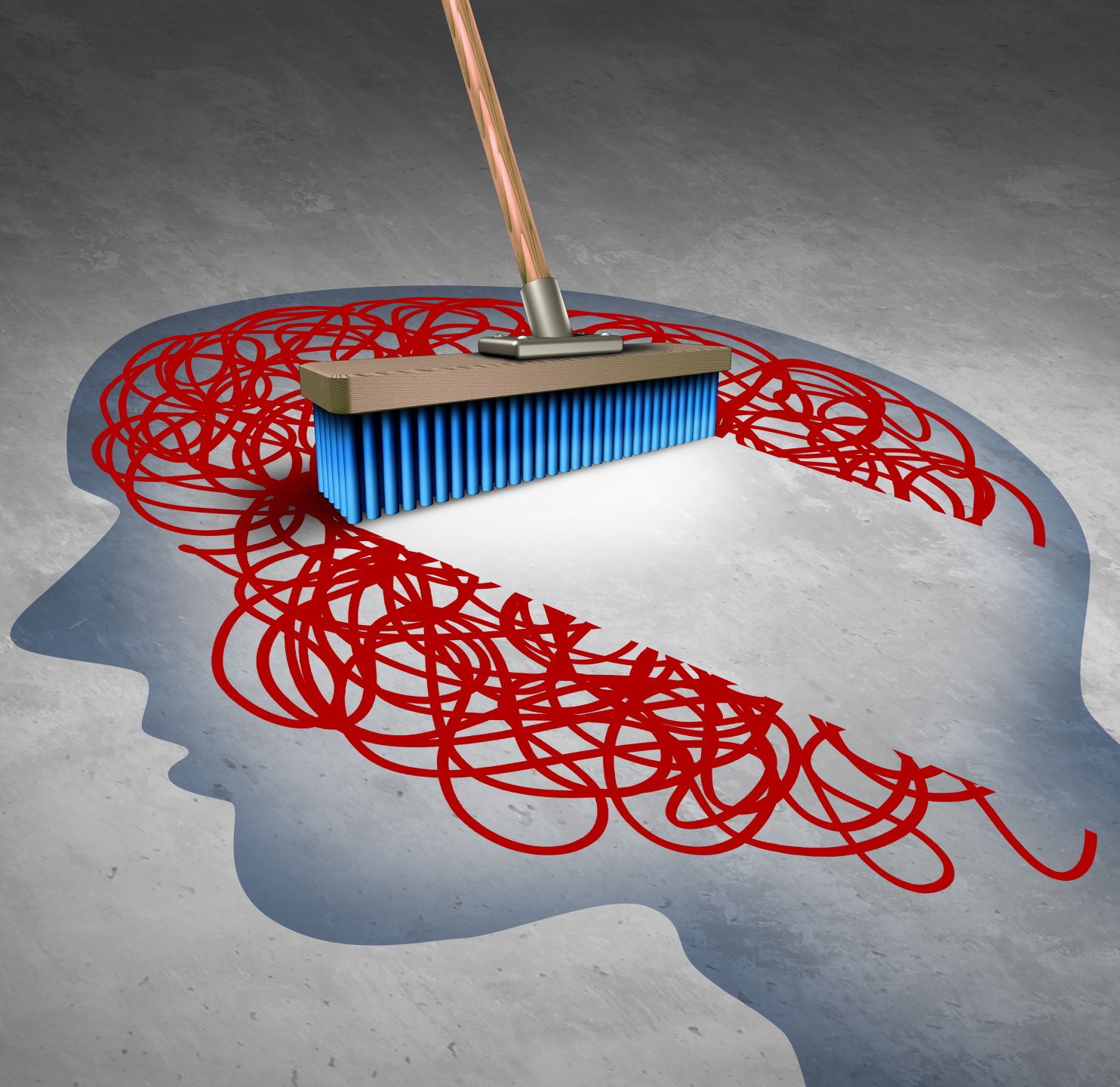
The “more information is always better” bias

- Research shows that CPAs, doctors, pilots and other professionals have much higher levels of confidence in their diagnoses and decisions when more data is available
 - The accuracy of their judgment, however, does not improve with the additional information. Get overwhelmed with information/rely on less relevant data
- Stock market performance/weather forecasts

The “more information is always better” bias

- Wider knowledge- Having 4 or 5 pieces of demographic knowledge for a row of 10,000 clients versus just 1,000 may provide more data- but better to have more columns of knowledge for each client to compare that can support meaning (more cases does not equal more meaning)
- Different perspectives- Look at it like asking a friend for their perspective. If you ask more friends, you will learn different information you can compare about the same subject. Triangulate.

Declutter Your Thinking

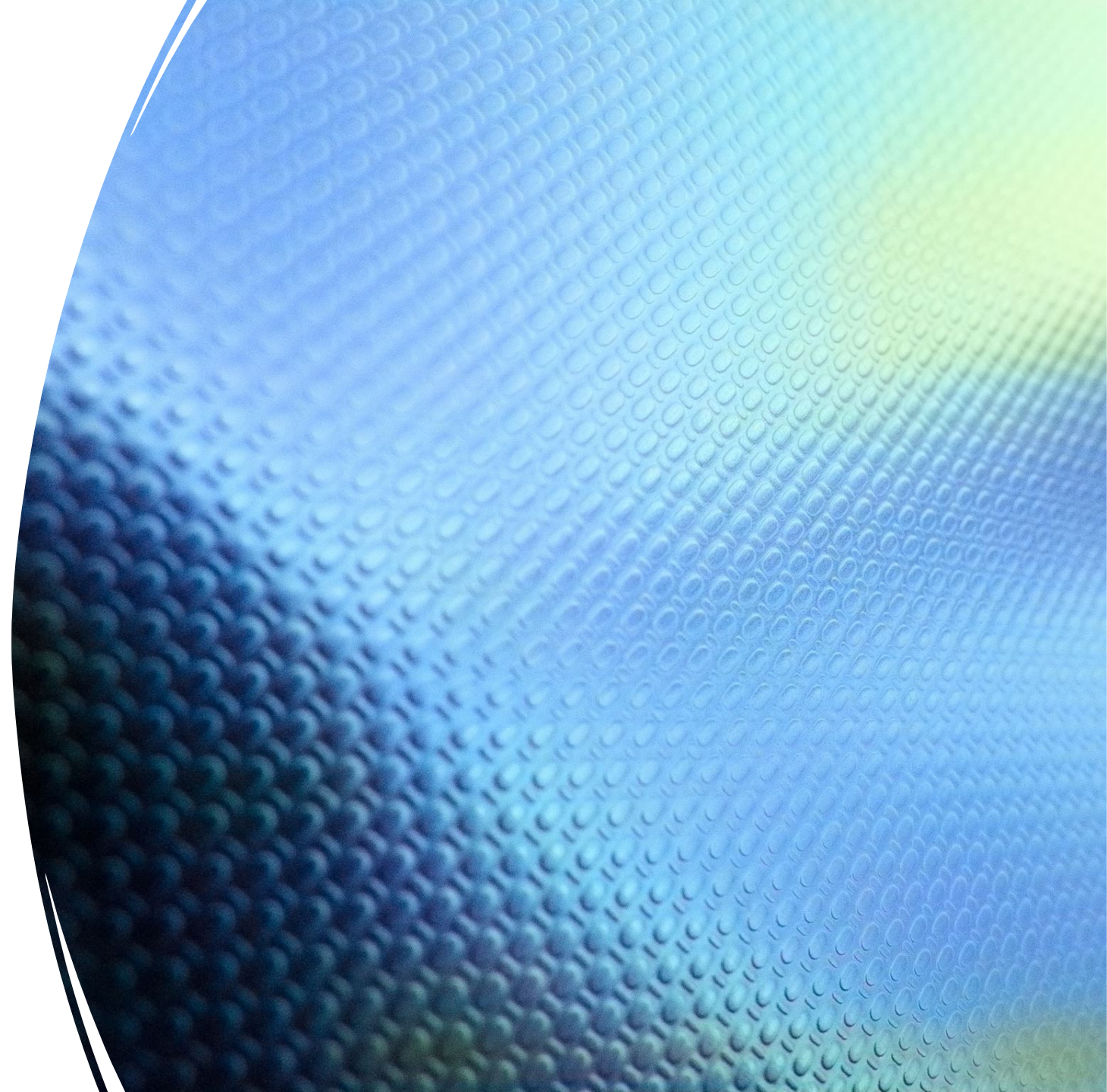




Working Memory

Information you're able to hold in your head for a few seconds to several minutes

Openness



Seeing things
differently
and shaking
old habits



Intellectual Curiosity and the Beginners Mindset





The ability to voluntarily bring back wandering attention over and over again is the very root of judgment - William James

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