Neurodiversity Meets Cultural Diversity: Unpacking Bias in the Brain

2025 Covenant HealthCare Respiratory Care Conference

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CARDINALS STAND OUT

COVENANT HealthCare

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Explores Neuroscience Behind Implicit Bias

- What is IB?
- How unconscious bias is formed in the brain
- Neuroplasticity and IB tendencies

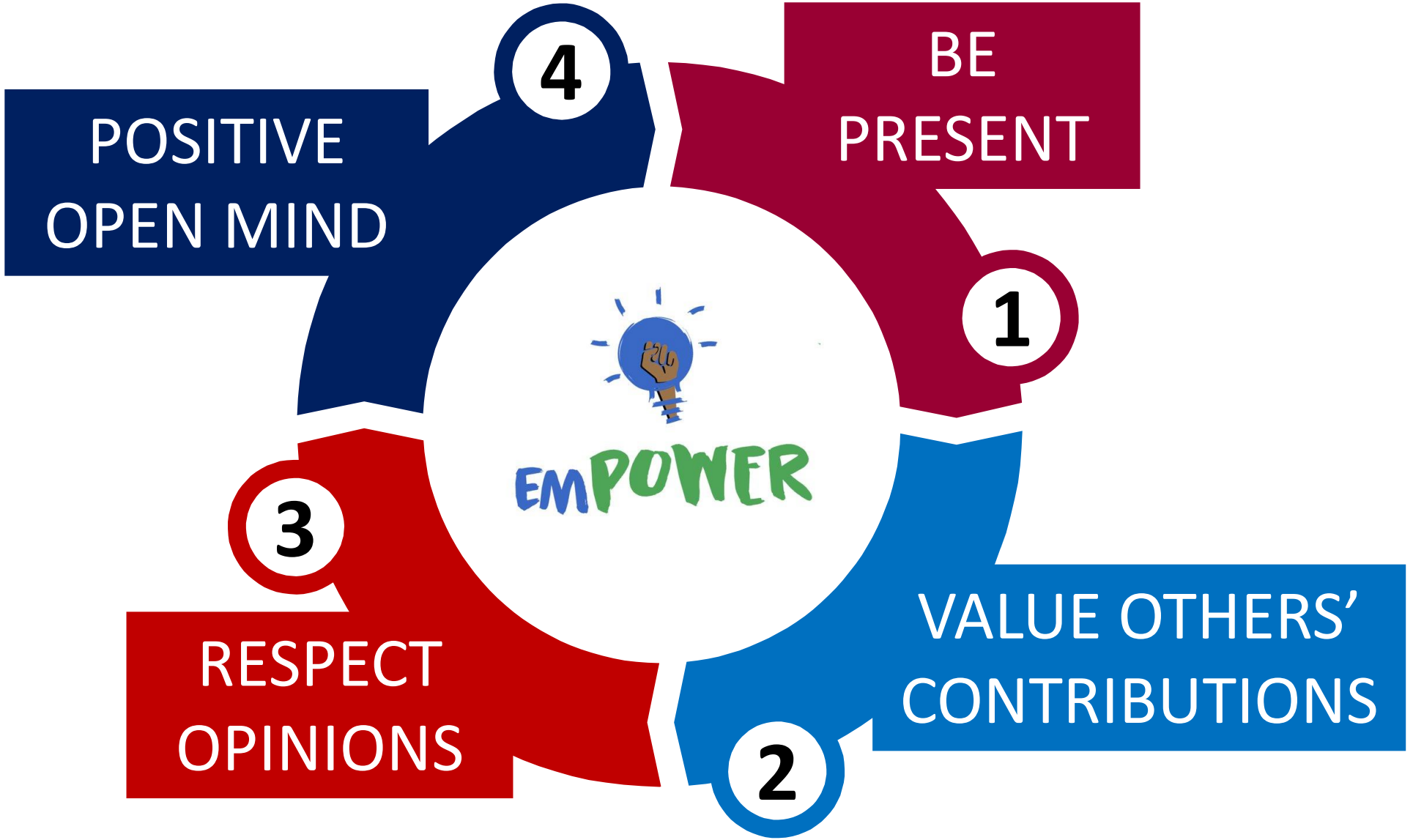
Discuss how IB Affects Interactions with Other

- How IB influences decisions and behaviors
- Why patterns often occur automatically

Examines Evidence-based Strategies

- Tactics and strategies to recognize, interrupt, and reduce implicit bias within and beyond workplace.

4 INTENTIONS TO HOLD



OPENNESS

…getting others to be as open as you.

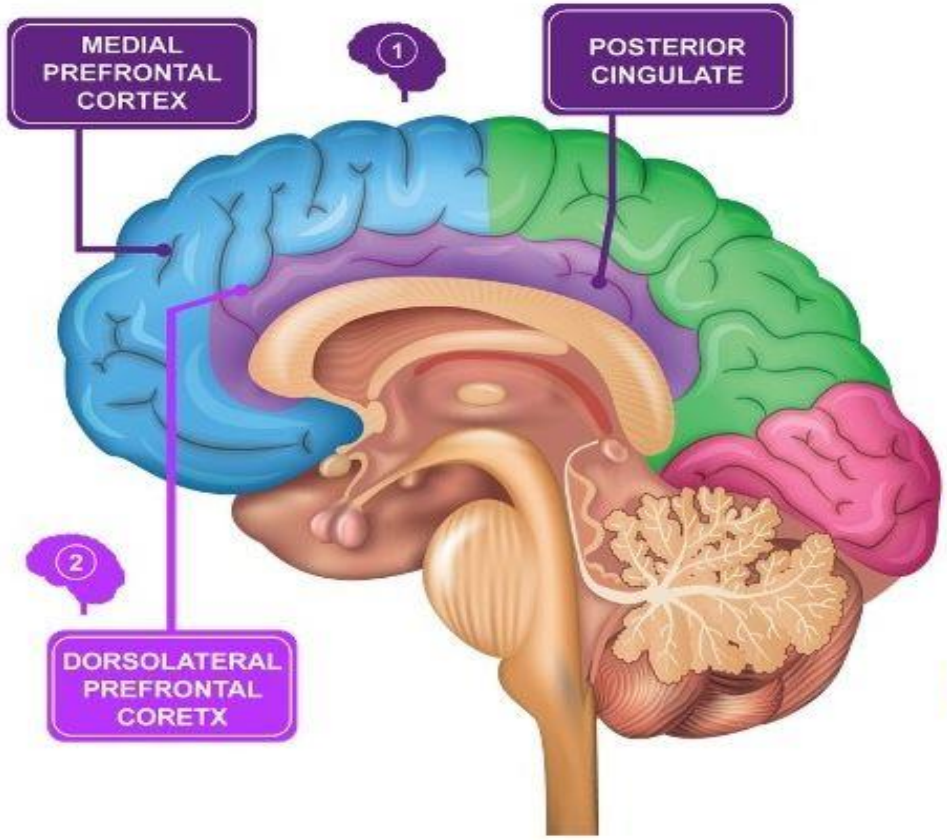
PERSUADE

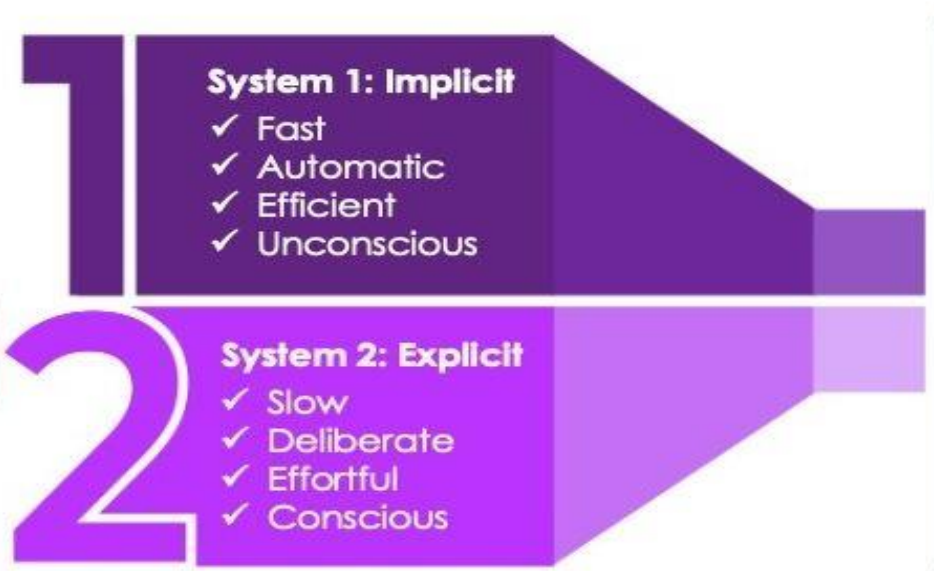
…persuading others to change their core attitudes/beliefs

AGREEMENT

…getting all to agree with you or follow your logic.

3 INTENTIONS TO LET GO OF





Every field that studies the mind agrees that we have at least two information-processing systems.

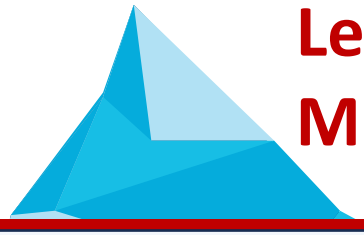
- ✓A predisposition or preference for a particular person, group, or perspective.
- ✓Typically, not based on fact or reason, but rather a combination of many factors.

The Iceberg as Metaphor

The iceberg metaphor is a valuable tool for discussing implicit bias because it illustrates the concept's subtle and deeply ingrained nature.

- ✓ Highlighting the subconscious nature
- ✓ Emphasizing the pervasiveness
- ✓ Explaining the impact
- ✓ Encouraging self-reflection and deeper exploration

The Iceberg as Metaphor



Level 1: Conscious Mind (10%)

Level 1: Thoughts and perceptions that are focus of our attention now. Two Functions: Awareness and Behaviors

The Iceberg as Metaphor

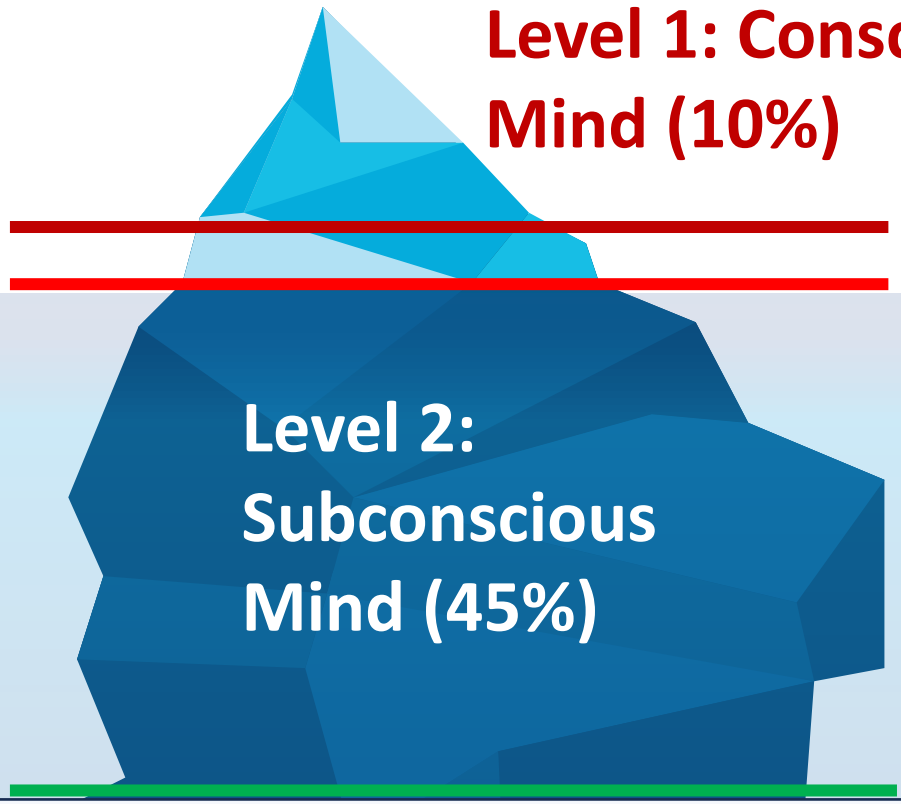
Level 1: Conscious Mind (10%)

Level 1A. Preconscious Mind (5%)

Level 1: Thoughts and perceptions that are focus of our attention now. Two Functions: Awareness and Behaviors

Level 1.A: Part of consciousness. Memory stored knowledge ready to extract when needed.

The Iceberg as Metaphor



Level 1: Thoughts and perceptions that are focus of our attention now. Two Functions: Awareness and Behaviors

Level 1.A: Part of consciousness. Memory stored knowledge ready to extract when needed.

Level 2: Part of consciousness, below the level of preconscious. Primary source of human behavior. One Function: Values

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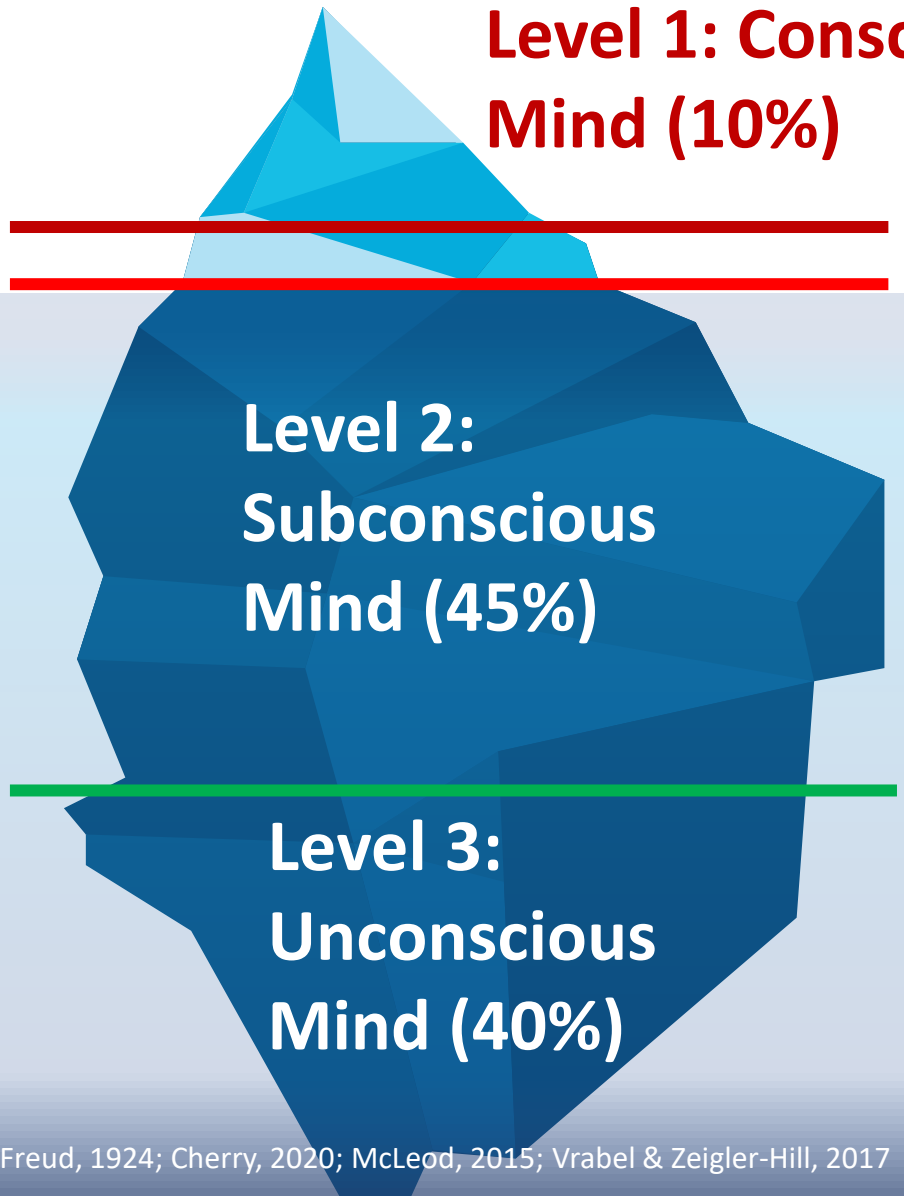

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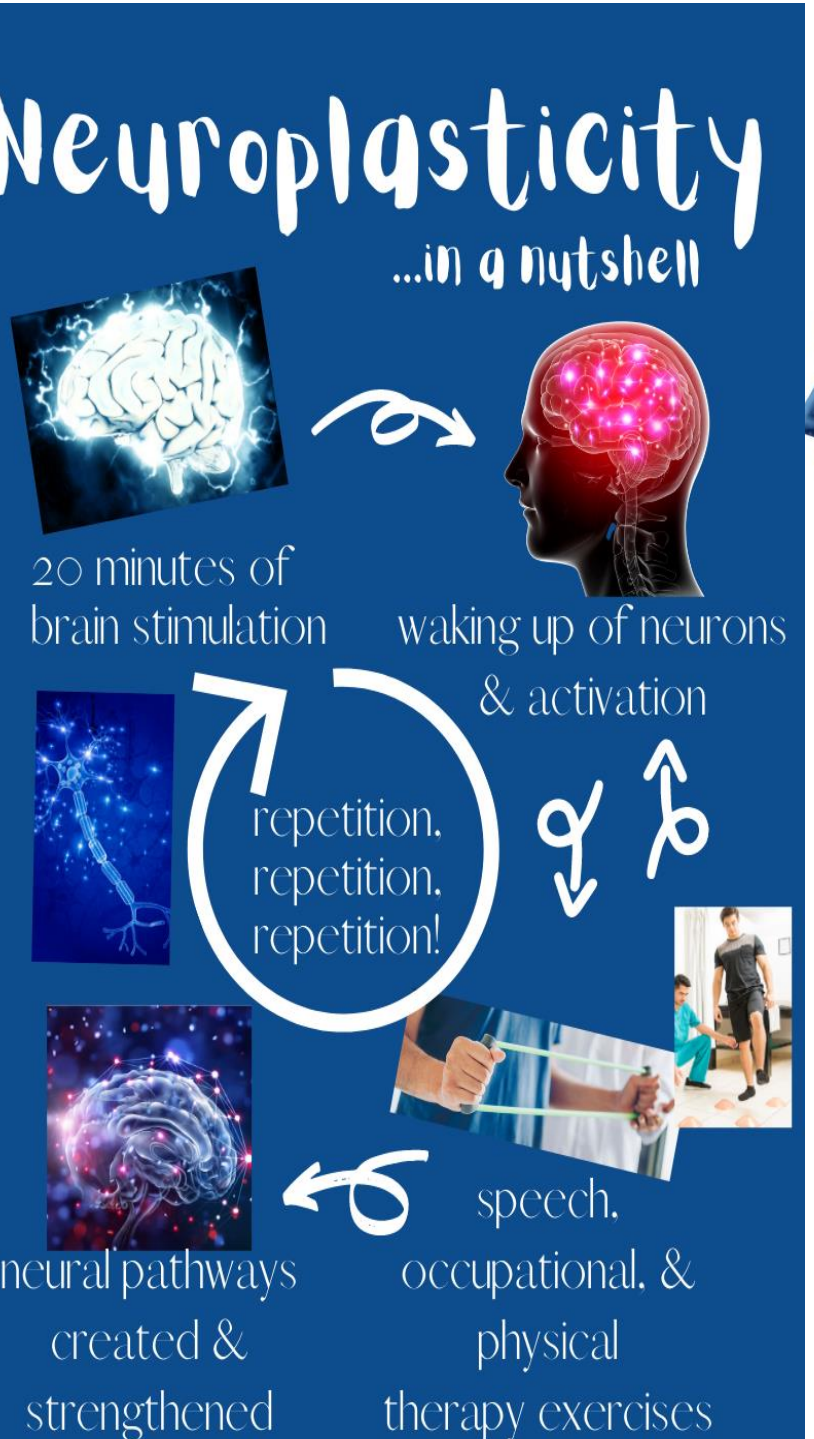
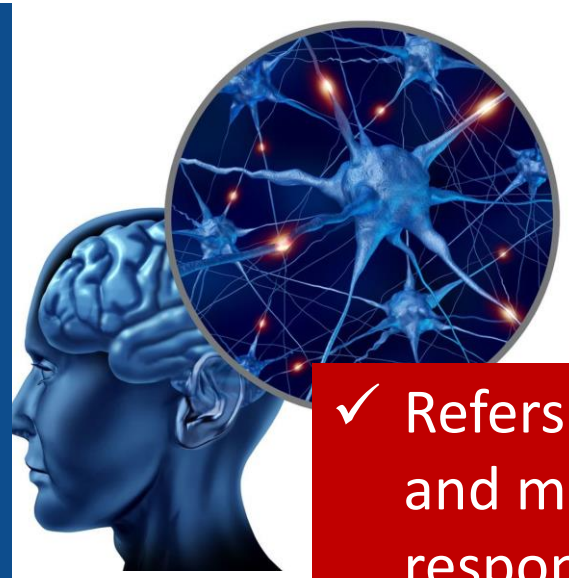
Level 3: The part of the mind that's not consciously available. One Function: Virtues

Freud, 1924; Cherry, 2020; McLeod, 2015; Vrabel & Zeigler-Hill, 2017





2 types of neuroplasticity
Functional & Structural

- ✓ Refers to the ability of the brain to reorganize and modify its neural connections in response to environmental stimuli, experience, learning, injury, and disease processes.
- ✓ It encompasses a range of mechanisms:
  - changes in synaptic strength & connectivity
  - the formation of new synapses
  - alterations in the structure & function of neurons
  - generation of new neurons.

Marzola P et al. Exploring the Role of Neuroplasticity in Development, Aging, and Neurodegeneration. Brain Sci. 2023 Nov 21;13(12):1610.

Concept of “Othering”

“Othering” is a phenomenon in which some individuals or groups are defined and labeled as not fitting in with the norms of a social group.

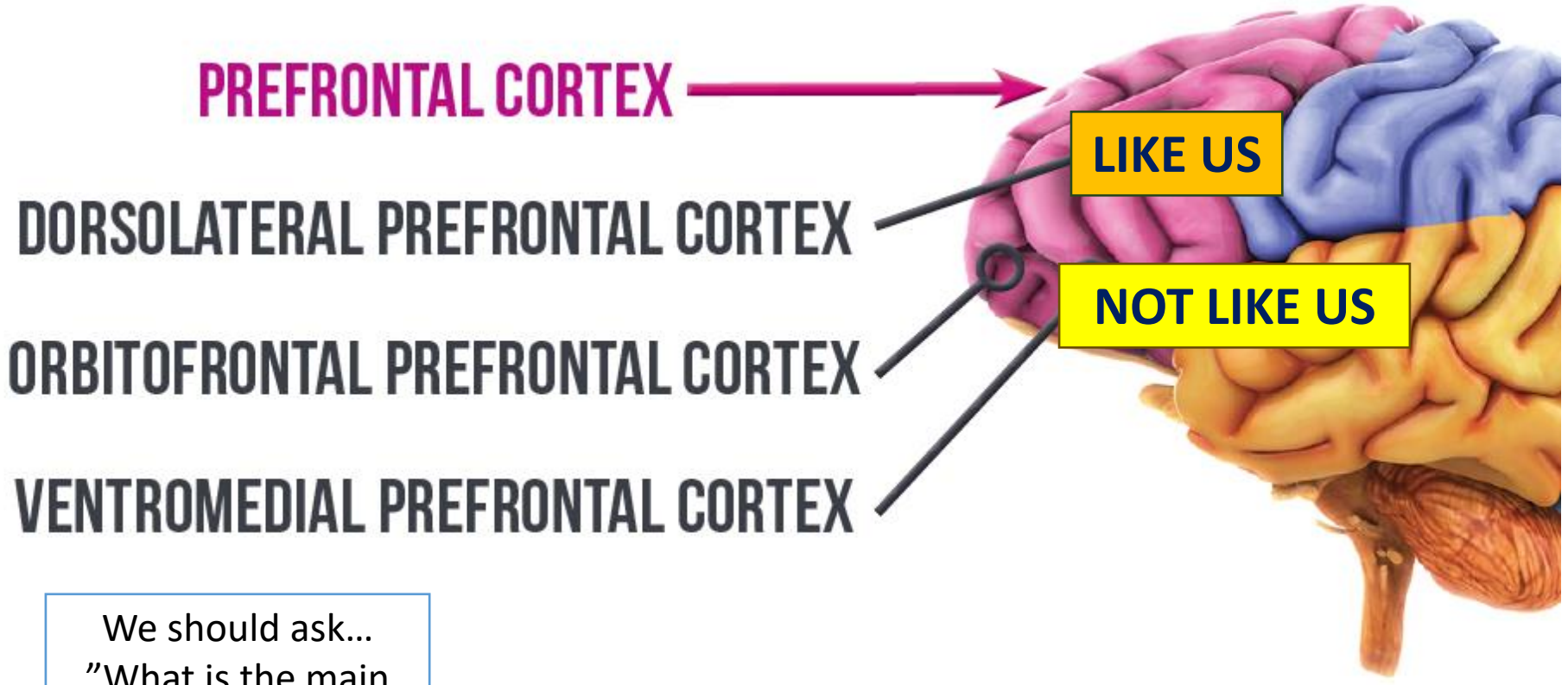
IB is our brain’s way of automatically assigning a person to a group whom we have coded as “not like us” or “other.”

It affects how people perceive and treat people who are part of the "in-group" versus those in the "out-group."

Akbulut N, Razum O. 2022; AbdulMagied, Salma Ahmed, 2022; Bhugra, D., Smith, A., Liebrenz, M., Ventriglio, A., Gnanapragasam, S. N., Buadze, A., … Poulter, D., 2023

Differentiation between ‘Like-us’ and ‘Not-Like –Us’

The literature tells us that the brain has a unique ability to differentiate between those who are “like-us” or the “in-group” from those who are “not like us” or the “out-group.”



We should ask… ”What is the main distinction between our implicit and explicit biases?” It’s AUTOMATIC!

Implicit bias is a function of our brains automatically assigning a person to a group whom we have automatically coded.

Rizzolatti G, 1980; Bobula KA, 2011; Navarrete CD, 2009

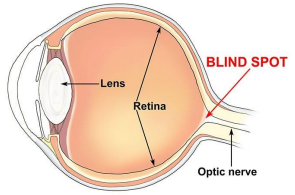
How This Influences Behavior

Seek Patterns Mindbugs

- Natural tendency to seek out patterns
- Ability to form associations

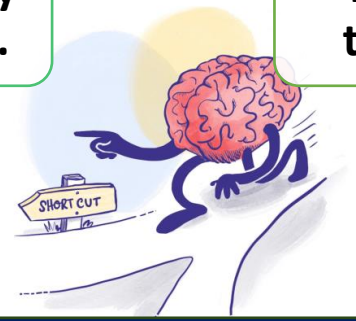
Blind Spots

- We all have something called a blind spot
- Your brain makes up for the gap in vision caused by our blind spots.



Shortcuts

- Brains tendency to simplify the world
- Makes it faster and easier for brain to sort through data



While people might like to believe that they are not susceptible to these implicit biases and stereotypes or believe they don’t participate in “othering,” the reality is that everyone engages in IB behaviors whether they like it or not.

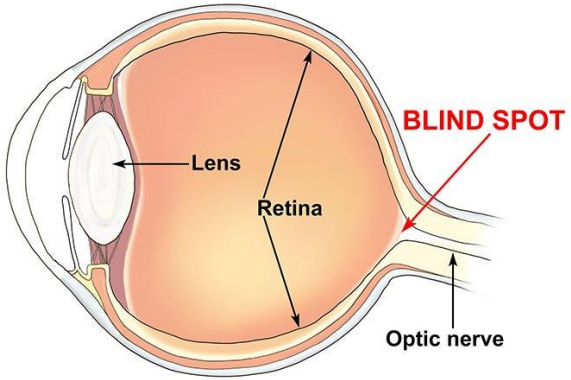
Mindbugs are ingrained patterns of thought that can lead to errors in perception, memory, reasoning, and decision-making.

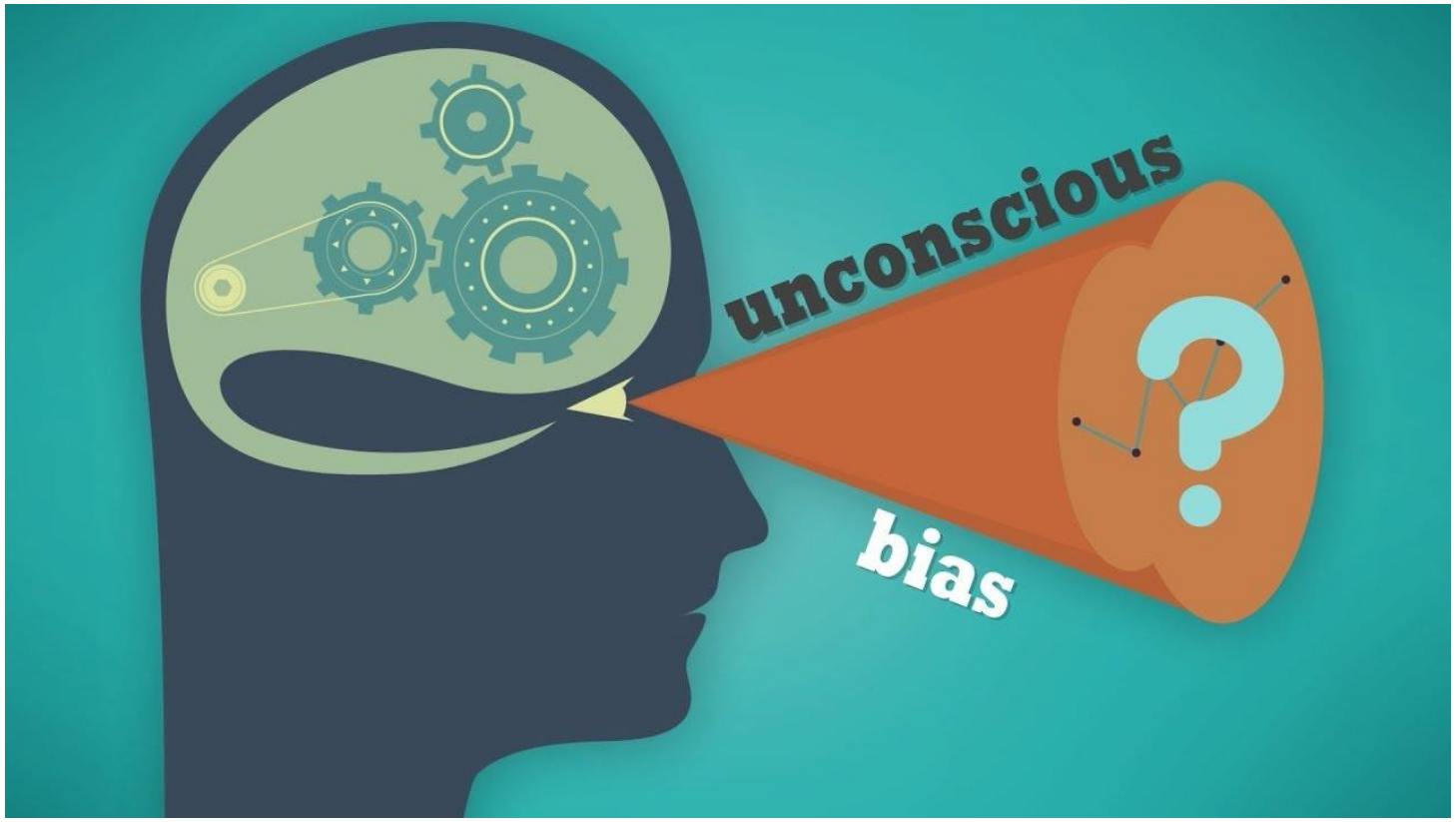
MINDBUGS

They are hidden biases that can influence our behavior and interactions with others, often without us even realizing it.

Banaji, Mahzarin R., and Anthony G. Greenwald. *Blindspot: Hidden Biases of Good People*

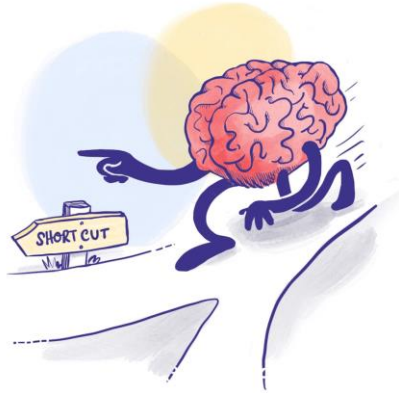
Blind Spots…



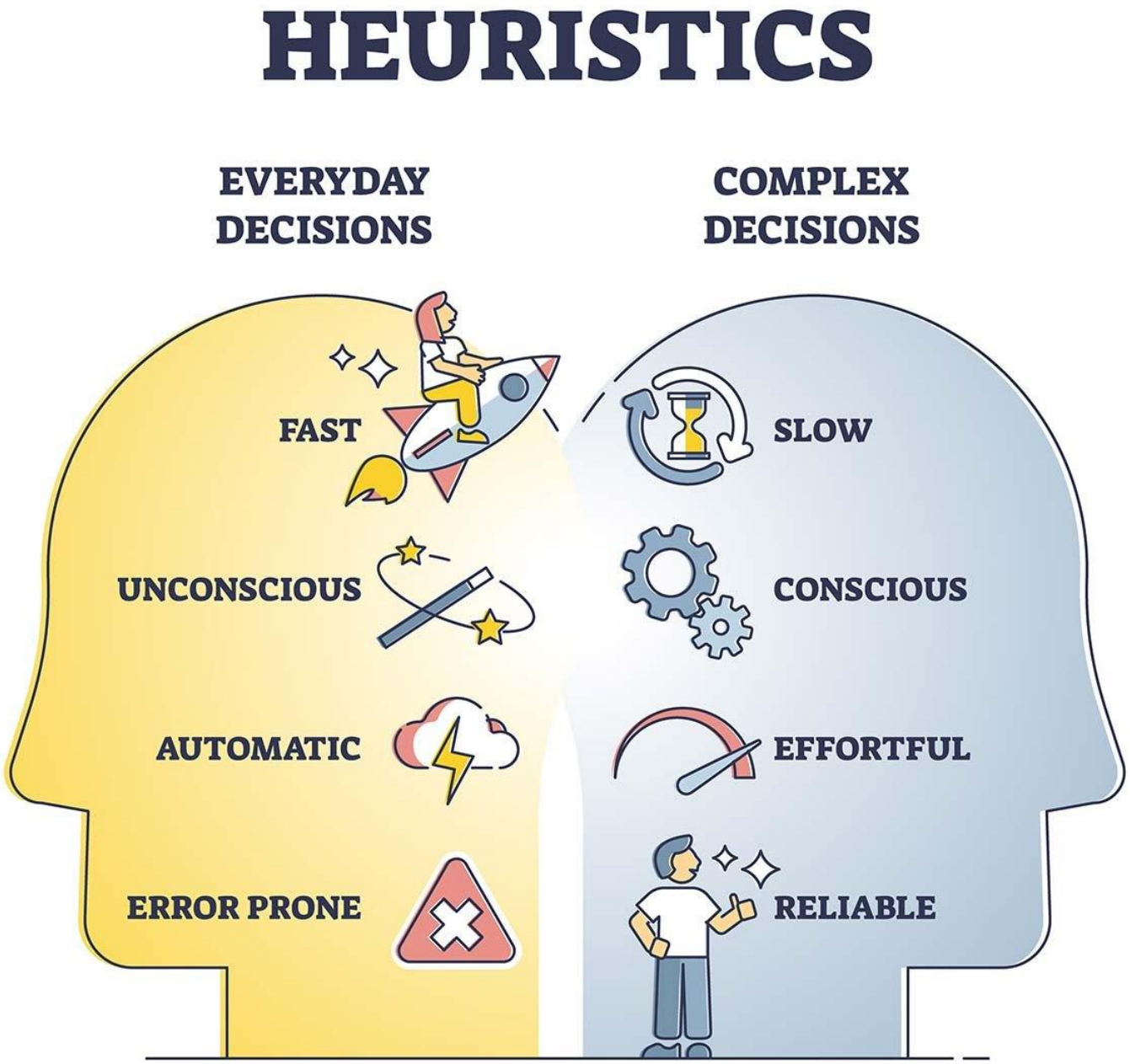


- Specific areas where someone lacks awareness of their own biases or limitations
- In the case of the mind…this is like a "gap" in perception.

Mental Shortcuts are called Heuristics



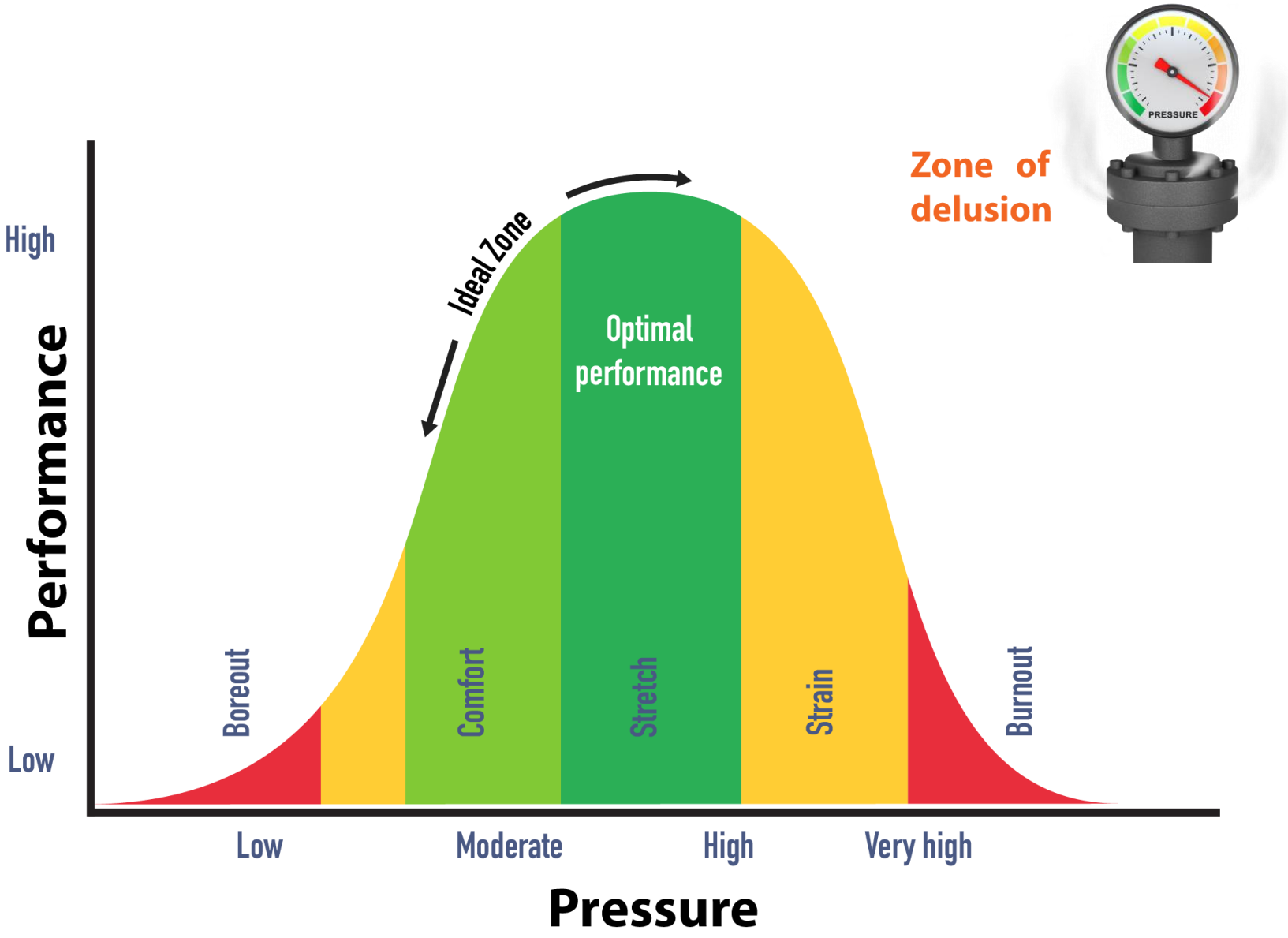
Heuristics can be thought of as general cognitive frameworks humans rely on regularly to reach a solution quickly.



Kahneman, D; Slovic, P; Tversky, A, eds. (30 April 1982); Myers, D. (2010); Pearl, J (1983); Emiliano, (2015).

What is the Role of Stress in Implicit Bias

The tendency to move into stereotypes is intensified when the situation in which a person is working to process the information is stressful.



Burgess DJ, 2010; Macrae CN, Milne AB, Bodenhausen GV, 1994; Balsa AI, McGuire TG., 2003; Green AR, Carney DR, Pallin DJ, et al., 1989; Holmes & Rahe, 1967

Implicit biases can **influence the way we perceive and interact with others**.

Stress is not caused by an external event, but only by your perception of the event. ~Dr. Michael Olpin

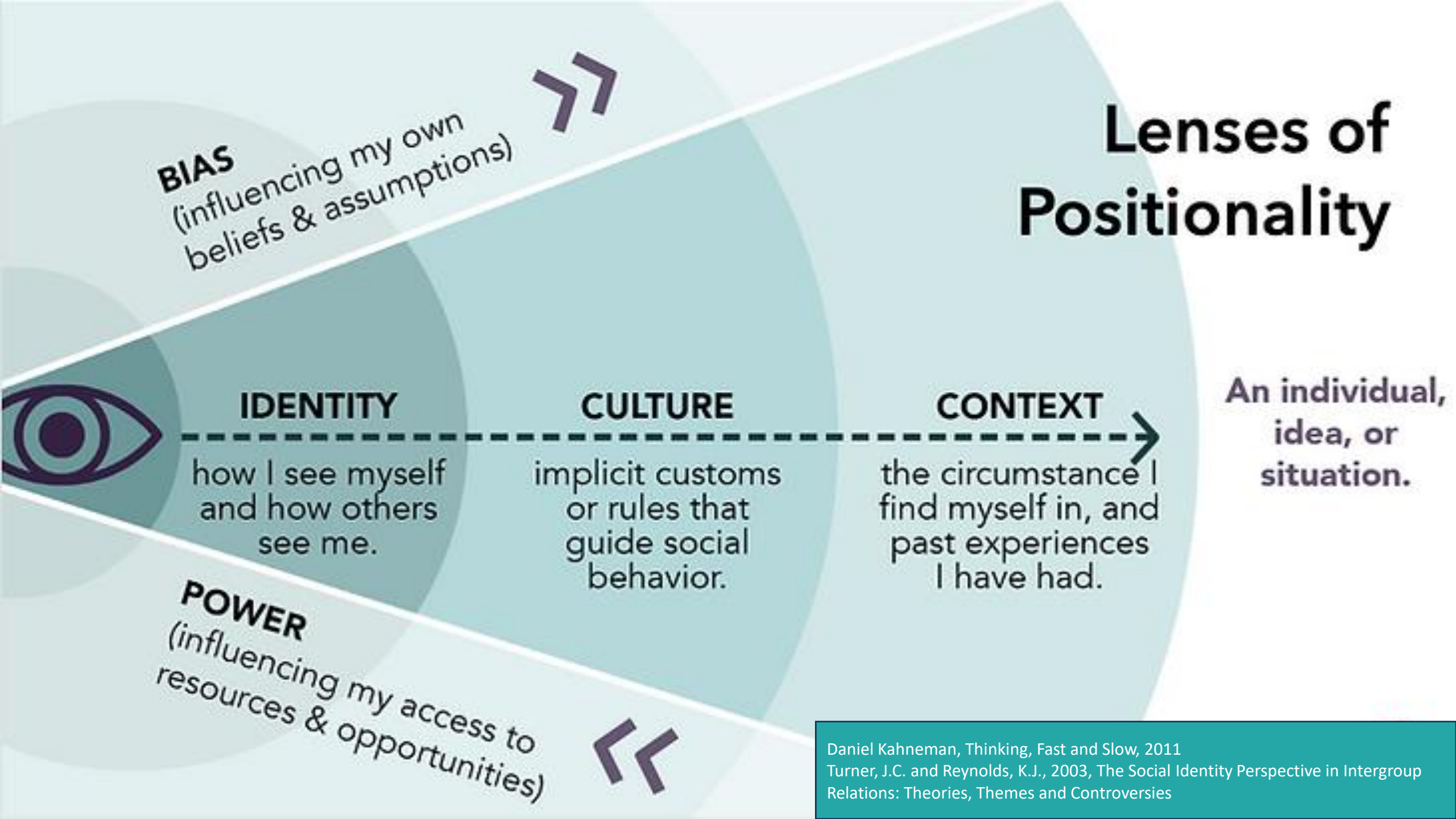
Stress is a Perception of an Imbalance of Perceptions

POSITIONALITY

Positionality refers to the understanding that an individual's perspectives and interpretations are shaped by their social location, including their identities, experiences, and biases.

How we engage with others based on our individual experiences, whether in daily interactions, leading a team at work, or comprehending positionality, is crucial for effective communication and being truly understood.

Lenses of Positionality



Daniel Kahneman, Thinking, Fast and Slow, 2011
Turner, J.C. and Reynolds, K.J., 2003, The Social Identity Perspective in Intergroup Relations: Theories, Themes and Controversies

Familiarize Views of Different Biases

1. Understand the types of biases.
2. Implicit bias operates outside of our conscious awareness.
3. Acknowledge that we all have biases.
4. Seek perspective – both positive and negative.
5. Connect with and get to know other people/cultures so you better understand them.
6. Increase exposure to members of different groups – diversify.

Keep in mind much of this is a matter of perspective!

Tactics and Strategies to Identify and Reduce Implicit Bias

I	Introspection: Explore your own prejudices
M	Mindfulness: Increase your own mindfulness
P	Perspective-taking: Consider other viewpoints
L	Learn to Slow Down: Before interacting
I	Individuation: Evaluate people on their own merits
C	Check your messaging: Use welcoming messaging
I	Institutionalize fairness: Support a culture of diversity and inclusion
T	Take two: Revisit and look for new ways to improve

Impact of Implicit Bias on Healthcare

Influencing treatment decisions

Patient-provider interactions,

Overall health outcomes, often leading to disparities that may receive lower quality care due to unconscious biases;

Disparities may manifest as misdiagnosis, undertreatment of pain, and reduced access to necessary medical interventions.

Thank you!

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