

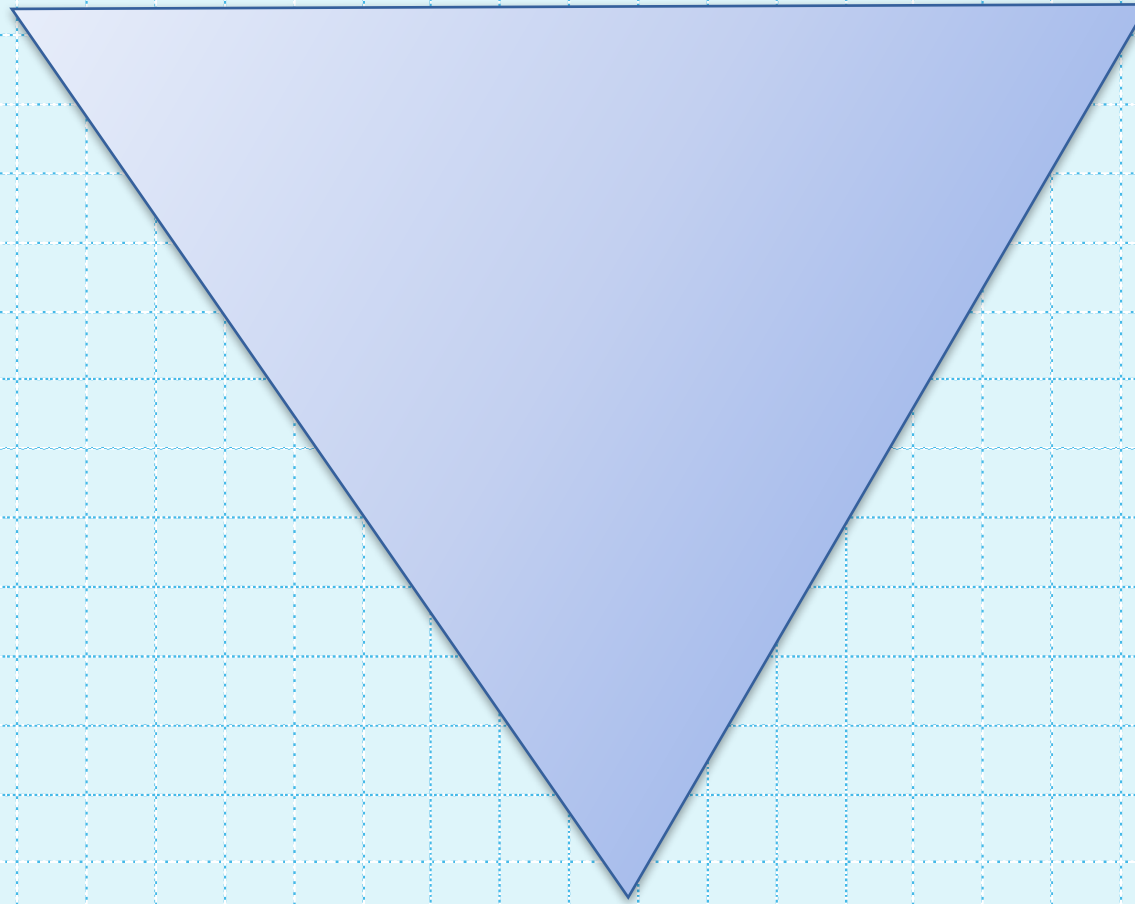
Neuroscience, Neuroplasticity and Neural Integration: A Pathway to Resilience and Well-Being

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WHAT CONNECTS MIND, BRAIN, AND RELATIONSHIPS?

MIND

(EMBODIED)
BRAIN



RELATIONSHIPS



Four Facets of MIND:

Subjective Experience
Consciousness
Information Processing
Self-Organization

Integration and Health: **A “FACES Flow”:**

Flexible

Adaptive

Coherent

Energized

Stable

Integration:

○ A simple but powerful framework

Integration is:

The

LINKAGE

of

D I F F E R E N T I A T E D

Parts

The River of Integration



Integration, Presence and Health

- ◆ 1. Studies of Well-Being reveal the interconnected connectome, or the linkage of differentiated regions best predictor;
- ◆ 2. Studies of impaired well-being reveal impaired integration in the brain;
- ◆ 3. Neural integration is the mechanism beneath regulation (mood, emotion , thought, attention, behavior, relationships, morality)
- ◆ 4. Integrated Relationships → Neural Integration → Health

Trauma and Impaired Integration

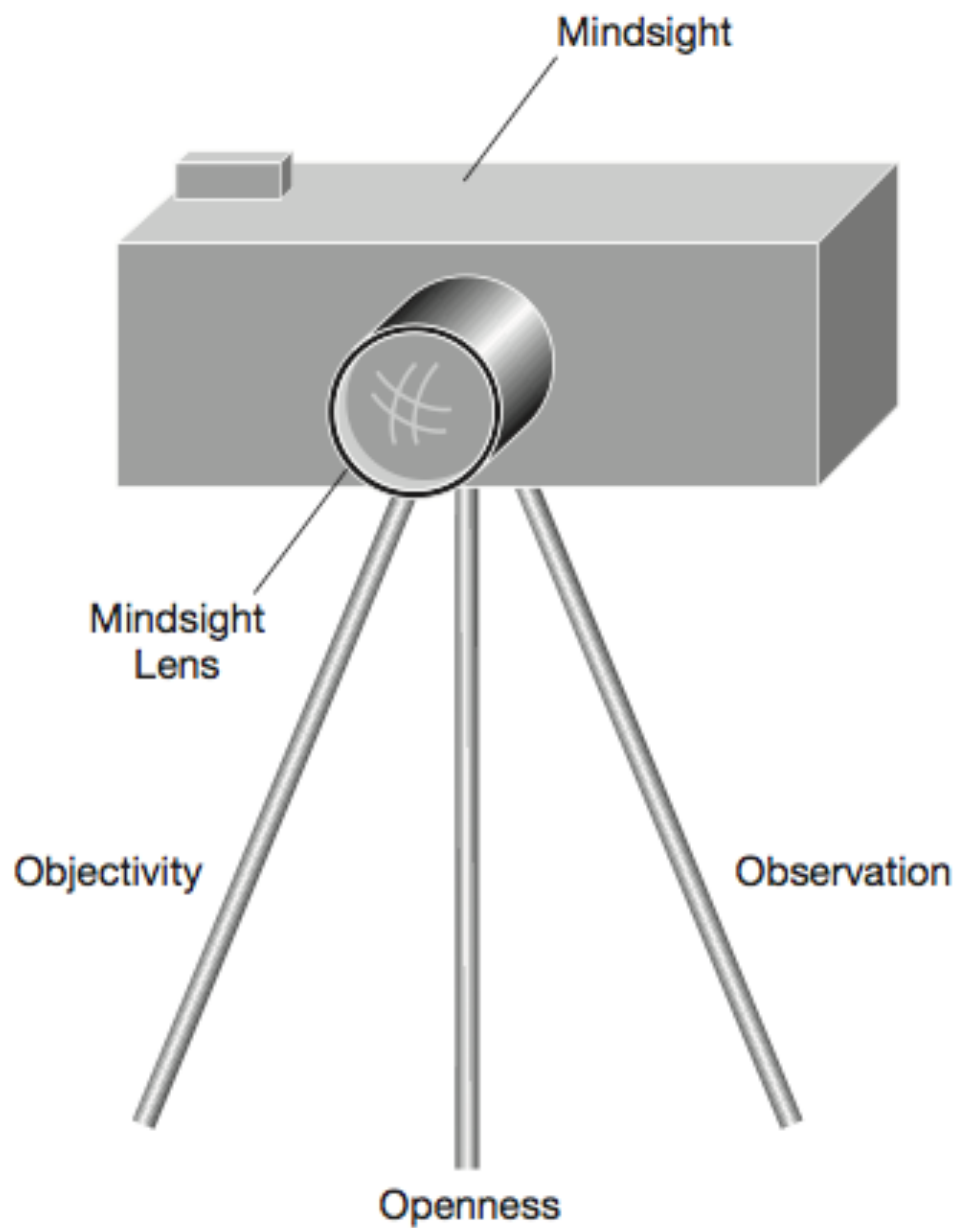
- ◆ Trauma induces neural effects on the capacity for integration:
 - Linking fibers compromised in their growth
 - Epigenetic changes
 - Self-reinforcing interpersonal behaviors
 - A “Trapped Mind” potentially caught in a neurally and interpersonally reinforcing loop of potentially maladaptive, destructive, and addictive behaviors.

REGULATION




◆ Monitoring

◆ Modifying

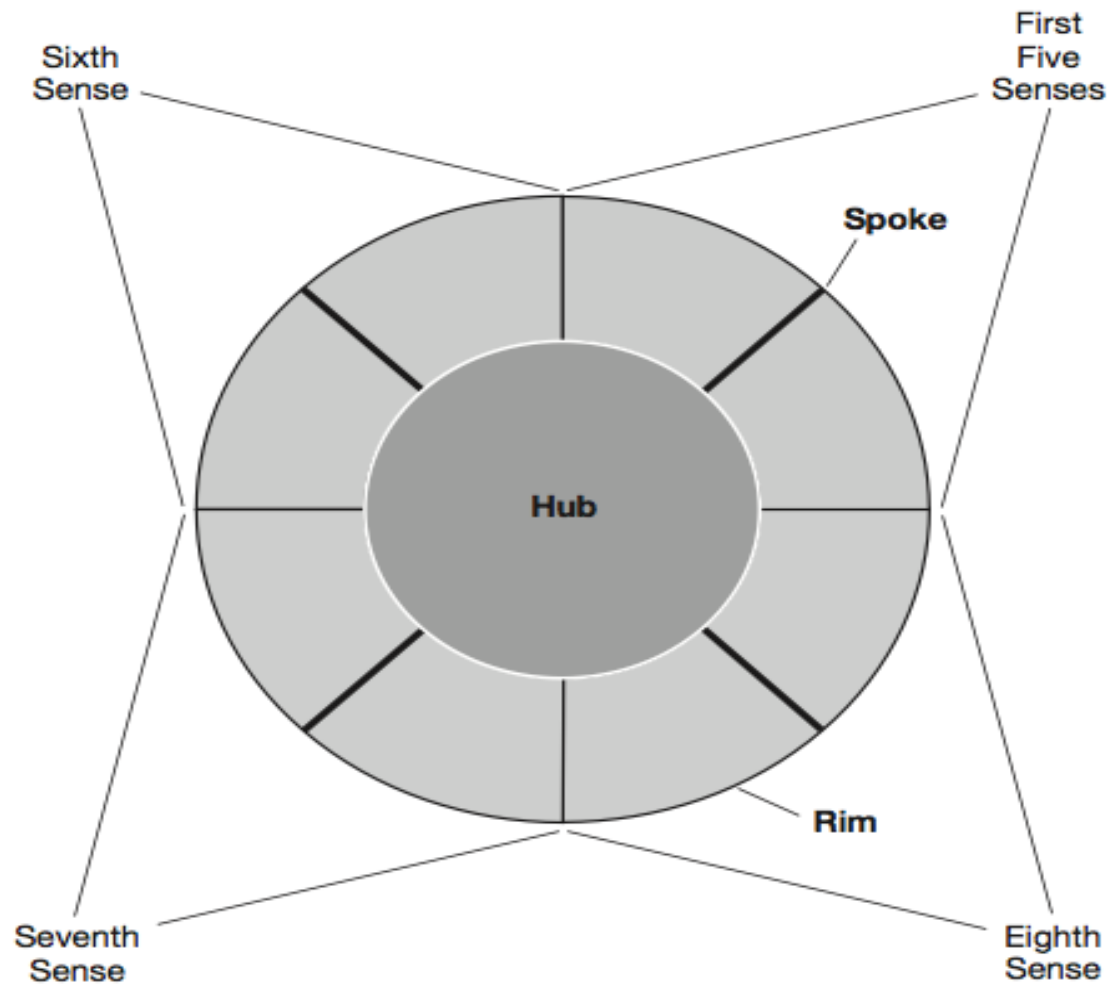


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If Consciousness is needed for change, and integration is the basis for well-being, how can we integrate consciousness?

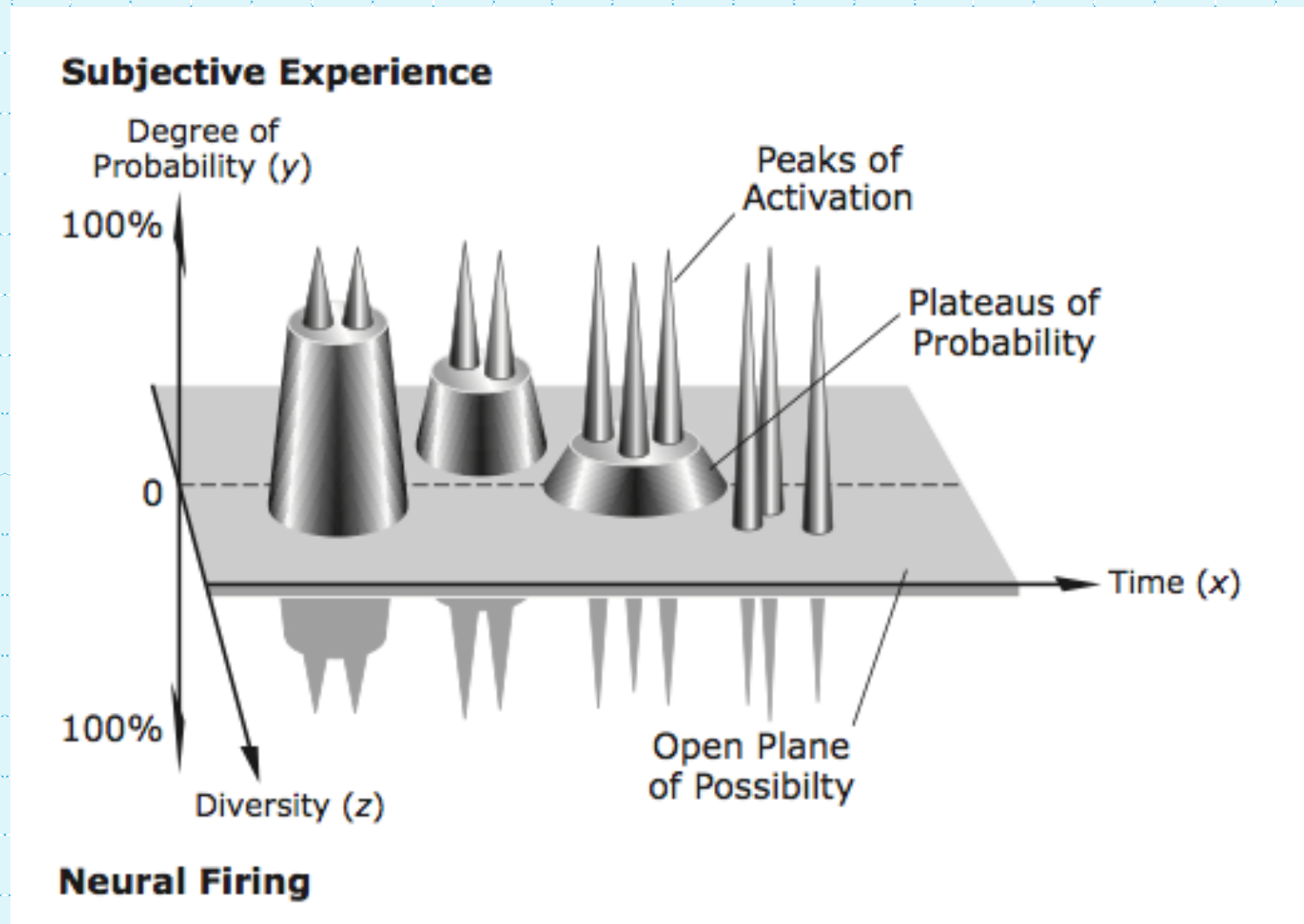
The Wheel of Awareness



Implications and Applications of the Wheel of Awareness

- ◆ 10,000 person study: Universal findings across wide range of backgrounds;
- ◆ Shift in relationships with others and self;
- ◆ Reduction in Chaos and Rigidity;
- ◆ Illumination of Nature of Awareness itself:
 - Quotes: “Clarity, Joy, Expansiveness, the infinite, eternity, God, Love, Peace, Sense of being a fundamental part of the whole, connected to others, the world, the universe”

The Plane of Possibility



A No-Brain and a Yes-Brain

- ◆ Reactivity (NO!) versus Receptivity (Yes...)
- ◆ Threat state of REACTIVITY: Four F's
 - Fight
 - Flight
 - Freeze
 - Faint

Strategies of Cultivating Integration and Resilience:

- ◆ “Where Attention Goes, Neural Firing Flows, and Neural Connection Grows
- ◆ Reflective Practices “SNAG” the brain toward integration:

Stimulates

Neuronal

Activation &

Growth

Cingulate

Left Cingulate Cortex

Right Cingulate Cortex

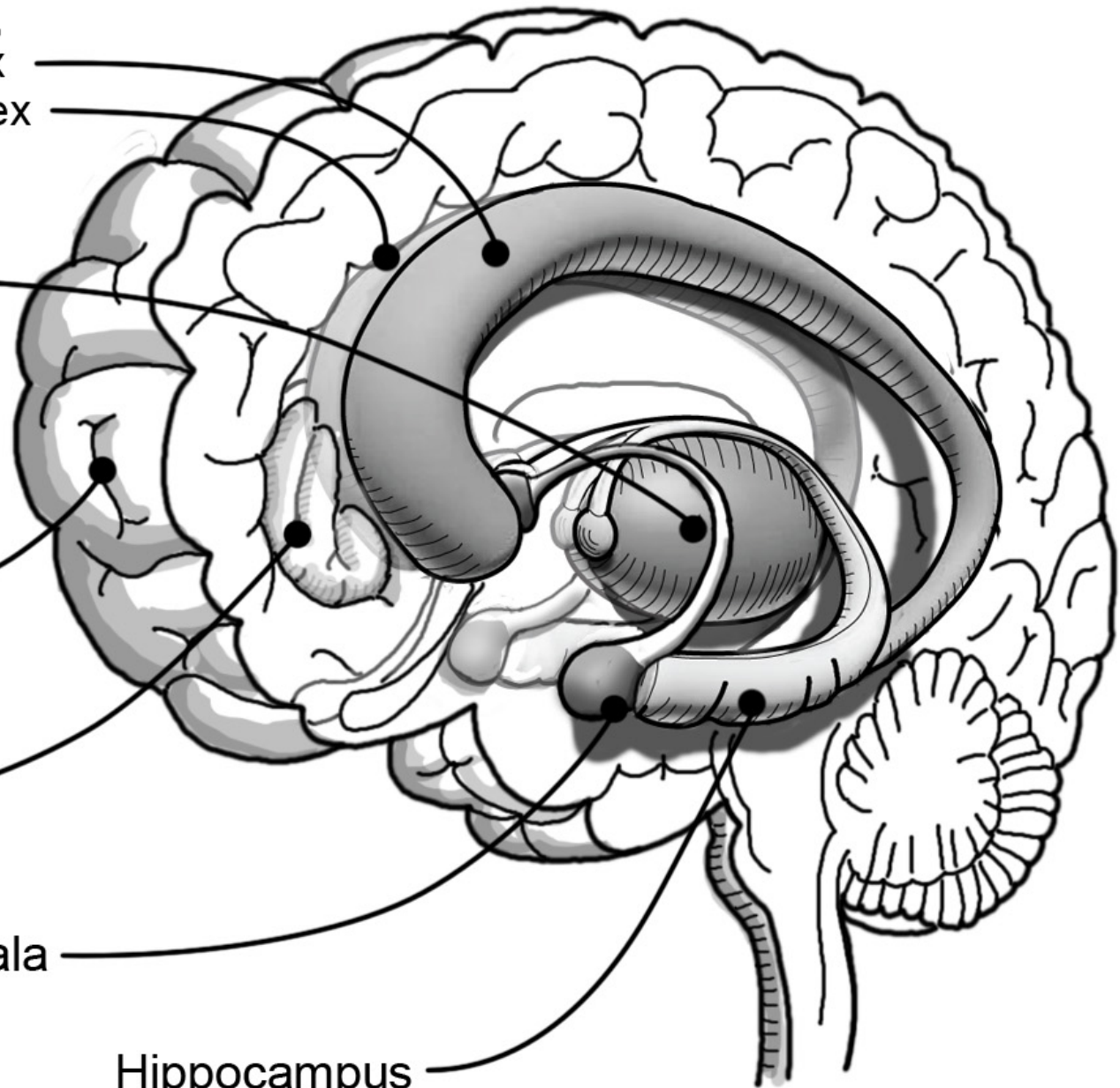
Thalamus

Middle
Prefrontal
Cortex

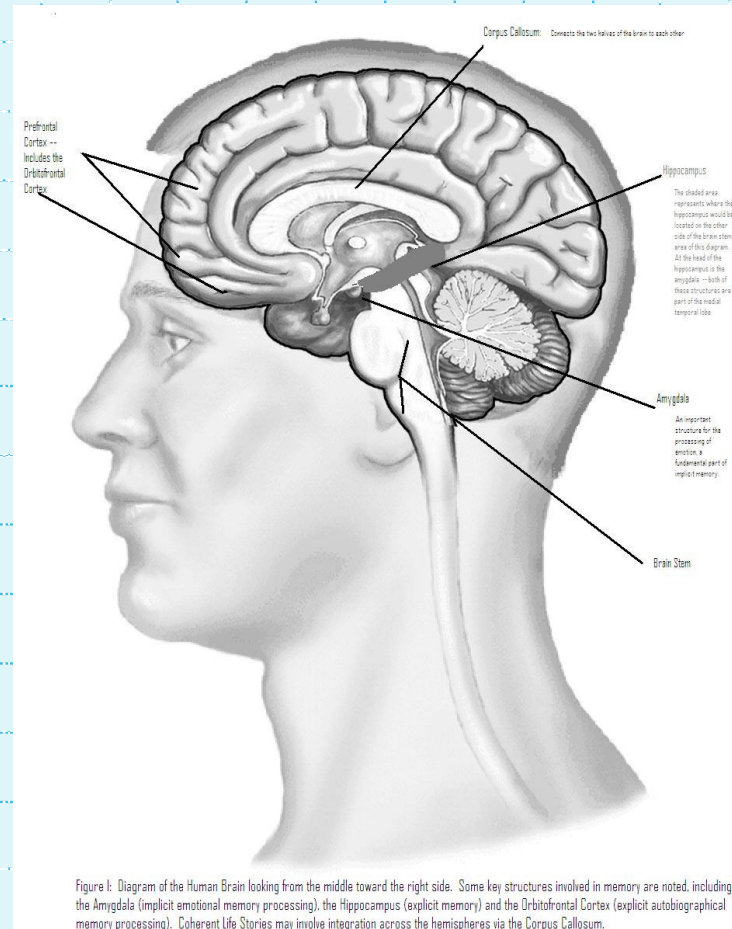
Insula

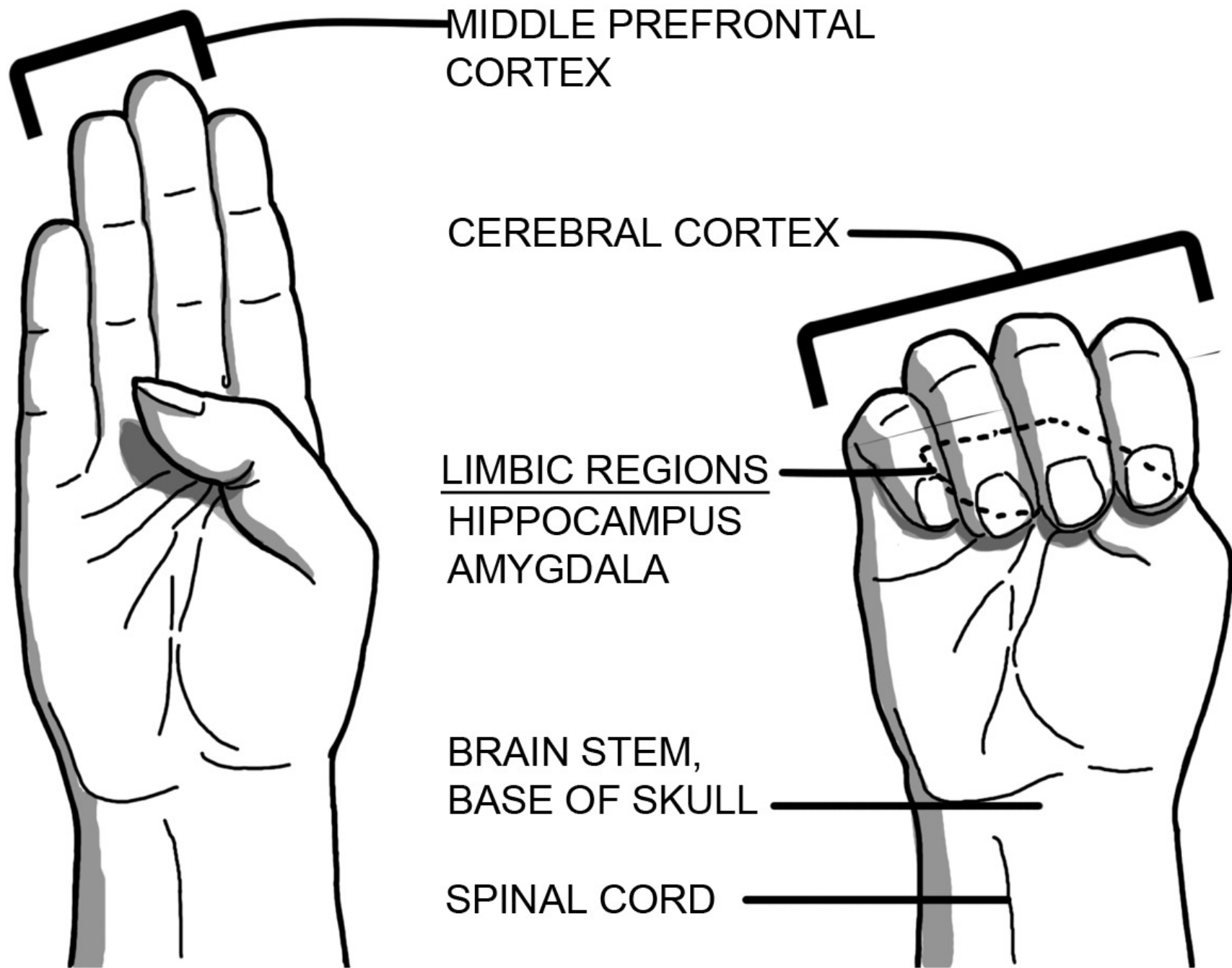
Amygdala

Hippocampus



The Brain in the Palm of Your Hand





Integrative Prefrontal Functions

- Bodily Regulation
- Attuned Communication
- Emotional Balance
- Fear Extinction
- Flexibility
- Insight
- Empathy
- Morality
- Intuition

An Example: The Low Road

- ◆ Temporarily Disengaging the the Prefrontal Cortex dissolves any or all of its nine functions
- ◆ Shame shuts down efforts at Repair
- ◆ Disconnection socially mediated in same anterior cingulate region as bodily pain
- ◆ Cycle of
Rupture→Disconnection→Shame-
Denial→Disconnection

The “Four S’s” of Attachment: Children Need to be:

- ◆ Seen
 - ◆ Safe
 - ◆ Soothed
 - ◆ In order to develop “Secure Attachment”
-
- ◆ Remembering REPAIR is essential, as ruptures may be common!

The **PART** we play as parents

◆ Presence

◆ Attunement

◆ Resonance

◆ Trust

Presence and “Mindful Awareness”

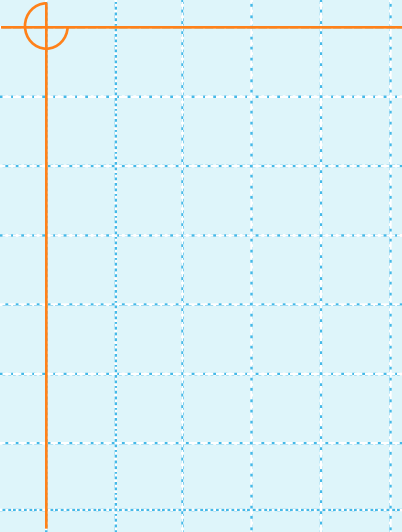
- “A form of awareness that comes from paying attention, on purpose, non-judgmentally to the present moment” (Kabat-Zinn)
- Mindful *Practice* involves:
 - A Loving Awareness and a Kind Attention (Goodman-Kornfield/Kornfield; Shapiro)
 - Focusing Attention on Intention
 - Awareness of Awareness itself
 - “Training the Mind” to focus on inner experience
 - Fundamentally Integrative: Differentiating Sensory Awareness from Observing/Narrating Awareness and Linking with Attentional Practice

Mindfulness: Using awareness & the focus of attention to transform:

- ◆ The *Brain* (Davidson et al) (Holzel, et al)
- ◆ The *Immune System* (Davidson et al)
- ◆ Sense of *Well-Being* (Kabat-Zinn et al)
- ◆ Physician *Burn-Out* (Reduction: Epstein, et al)
- ◆ *Attention* (Jha, et al)
- ◆ *Relational Function* (Shapiro, et al)
- ◆ *Epigenetic Regulation* (Fredrickson, et al)
- ◆ *Telomerase Levels* (Epel, et al)

Mindfulness, Mindsight, & Integration

- ◆ “Mindfulness”: Training Focused Attention, Open Awareness, and Kind Intention
- ◆ Self-Compassion: Mindfulness, Self-Kindness, and our Interconnected Humanity (K. Neff)
- ◆ Mindsight: Perceiving energy and information flow within and between people and moving that flow toward integration
 - Insight
 - Empathy
 - Integration.



*Integration
Made Visible
Is*

**Kindness and
Compassion**