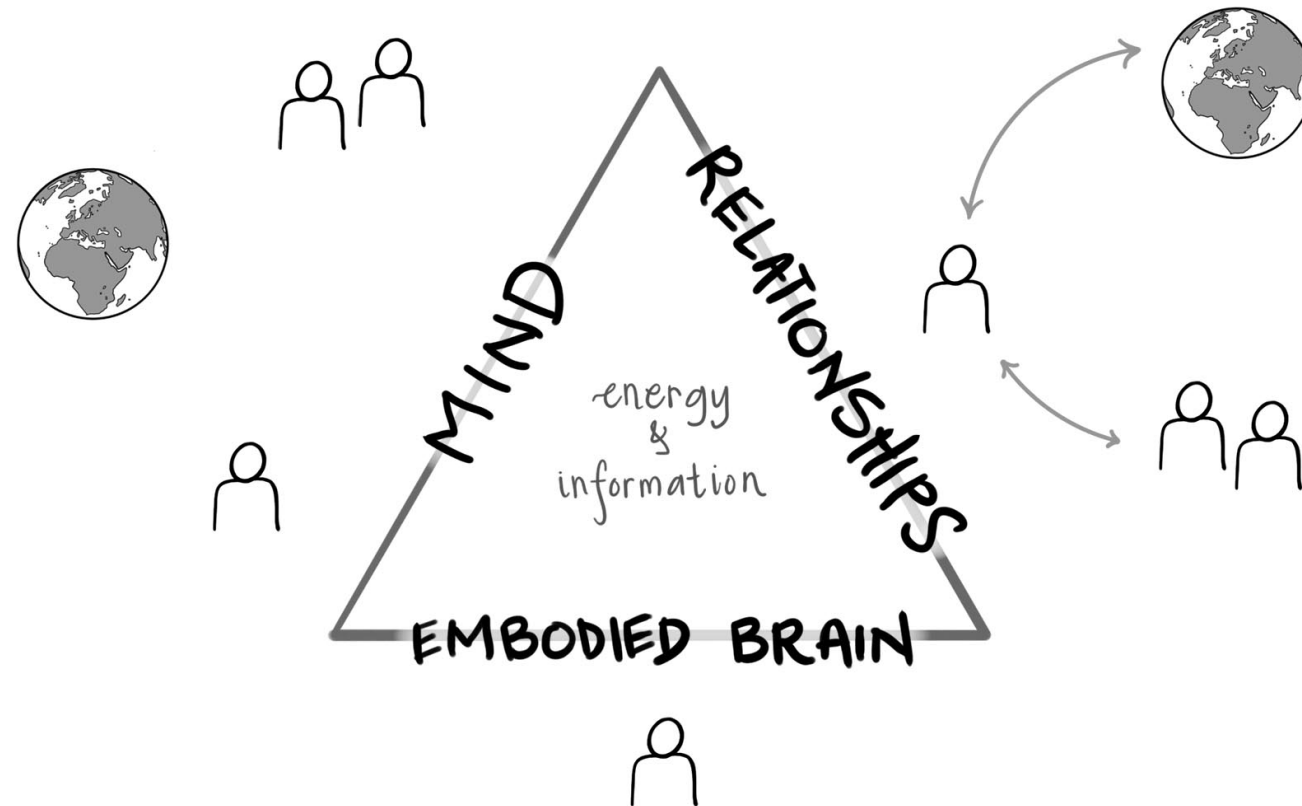


A close-up photograph of a field of red poppies. The flowers are in various stages of bloom, with some fully open and others as buds. The green stems and leaves are visible, and the background is a soft-focus field of more flowers and grass, with a bright sun flare in the upper right corner.

Attachment, Trauma, and Psychotherapy: Neural Integration as a Pathway to Resilience and Well-Being

Dan Siegel, MD

Triangle of Human Experience



Meaning Making and the Mind

- The “self in the world”
- The Embodied Mind: “Neurosomatic Systems (Ed Tronick) the embed implicit meaning
- Mismatches frequent in connection and communication: Issue is Repair
- Role of “Self-Organization” in development

Trauma and Meaning Making

- What is the meaning I can make of experience?
- The “outer world” and the “inner world”
- Making Sense in a world that “makes no sense”
- Arnold Modell: “The vitality of the private self depends on the capacity to

Making Meaning

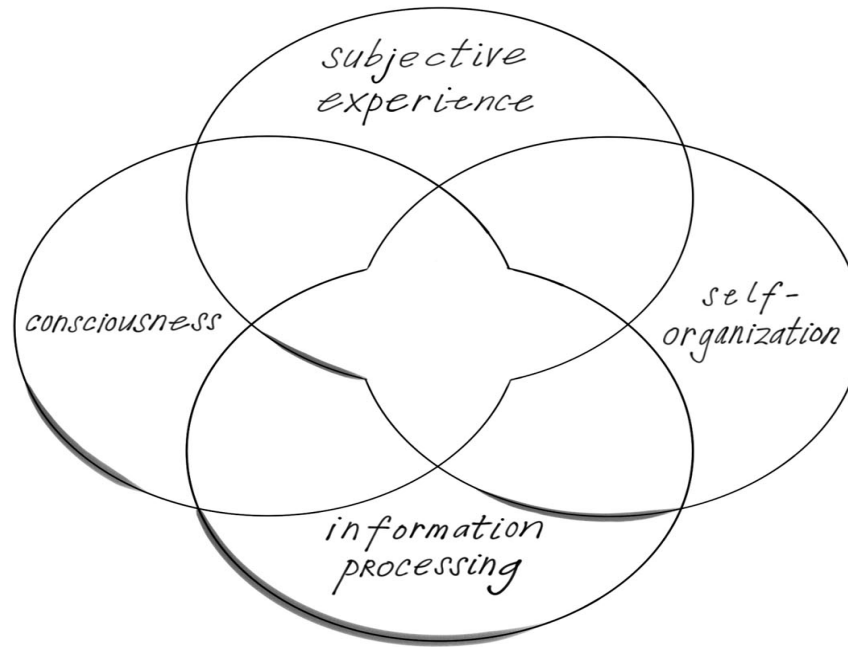
- Arnold Modell/Ed Tronick: “The vitality of the private self depends on the capacity to generate meaning; the ability to generate meaning is a psychic triumph leading to mental growth, expansion of consciousness, deep pleasure, self-regulation, and connection.”

Failure to Make Meaning

- Modell/Tronick: “...the inability to make meaning is a ‘psychic catastrophe’ leading to mental shrinkage, constricted consciousness, disorganization, fear, dysregulation, anxiety, disconnection, and loneliness.”

The Mind's Many Facets

FOUR FACETS of MIND



Mind as Energy Flow

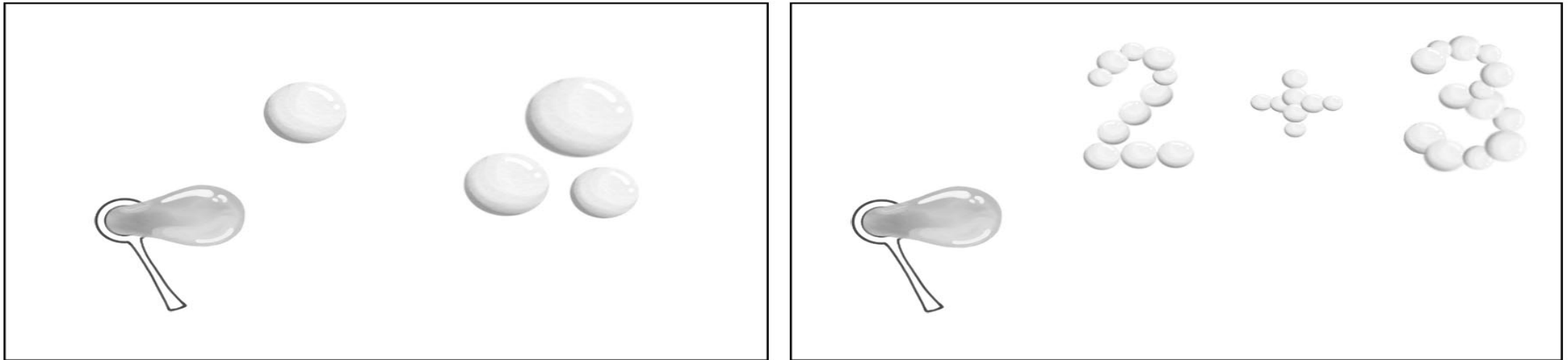
- Mind EMERGES from energy flow.
- Some energy flow has symbolic value—we call this “information.”
- Energy is the movement “from possibility to actuality.”
- This movement is more like a verb than a noun.
- Mind ALSO regulates that flow as a Self-Organizing process.

Nouns and Verbs

- We can experience life and perceive experience as fixed entities or nouns.
- We can experience and perceive life as relationships and verb-like unfoldings or “happenings.”
- This distinction parallels “linear thinking” in contrast to “systems thinking.”
- Newtonian versus Quantum views of Energy

Mind as Energy and Information Flow

Conduit & Constructor



Meaning Making and Construction

- Coping strategies attempt to shape the flow of energy, altering how we perceive and conceive and respond to experience.
- Trauma → Anticipation of Stress
- Meaning: World is an unpredictable and THREATENING place
- Lack of repair, lack of internal regulatory skills → Dysregulation and ongoing reactivity

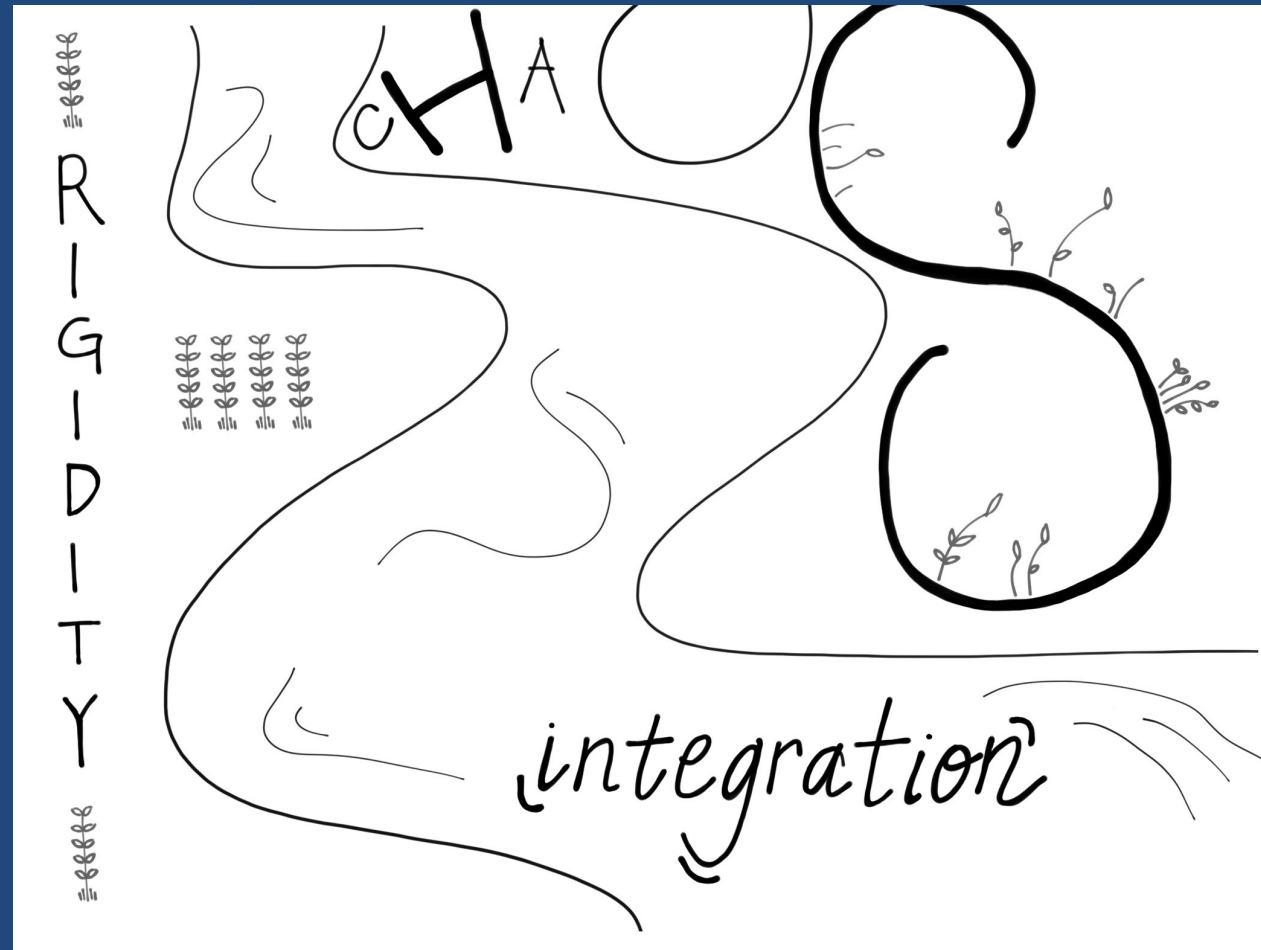
“Sense of Self” in the World

- Relational Trauma →
- I am not whole
- I have no hope
- I cannot cope
- I am helpless
- I am defective

Sense of Connection in the World

- Relational Trauma →
- “others are threatening”
- We cannot connect
- I cannot trust you
- You cannot help me
- There is no “we” in us
- We are “out of synch”

The River of Integration



Attachment I: Relationships in Research (ISS: Infant Strange Situation) Studies

F Relationship Type

- B - Secure
- A - Avoidant.....
- C - Ambivalent
- D - Disorganized.....

F Parenting Behavior

- Responsive, Consistent
- Rejecting, Distant
- Inconsistent/Intrusive
- Frightening,
Confusing, Fearful

Attachment I: Relationships in Research (ISS: Infant Strange Situation) Studies

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Attachment II: Adults Making Sense of Their Lives (Adult Attachment Interview)

Adult Narrative-----	→Child Attachment
• F – Free/Secure-----	-----Secure
• Dis – Dismissing-----	-----Avoidant
• E- Preoccupied	-----Ambivalent
• U–Unresolved-----	-----Disorganized
Trauma or Grief	

Integrative Functions of the Prefrontal Cortex

1. Bodily Regulation
2. Attuned Communication
3. Emotional Balance
4. Fear Modulation
5. Flexible Responding
6. Insight
7. Empathy
8. Morality
9. Intuition

Trauma and Impaired Integration

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

Trauma and the Body

- Neglect and Abuse impair the development of integrative fibers of the brain.
- The timing of traumatic experience shapes which fibers are affected.
- Integrative impairment leads to classic PTSD symptoms including dissociative processes.
- ACES scores and impact on: Cardiovascular, Immune, Inflammatory, and Telomere systems

Ways to Change a Brain

- **Mechanisms of Change:**
 - Synaptogenesis
 - Neurogenesis
 - Myelinogenesis
 - Epigenesis
- **Strategies of Change:**
 - The Focus of Attention activates specific circuits
 - Three Pillars Mind Training
 - A Sense of Trust enhances receptive learning
 - Memory Retrieval as a Memory Modifier
 - Unlearning and Learning
 - Deep Practice and Skill Training

Principles of Neuroplasticity

- 1. Relationships
- 2. Sleep
- 3. Nutrition
- 4. Aerobic Exercise
- 5. Humor
- 6. Novelty
- 7. Close Paying of Attention

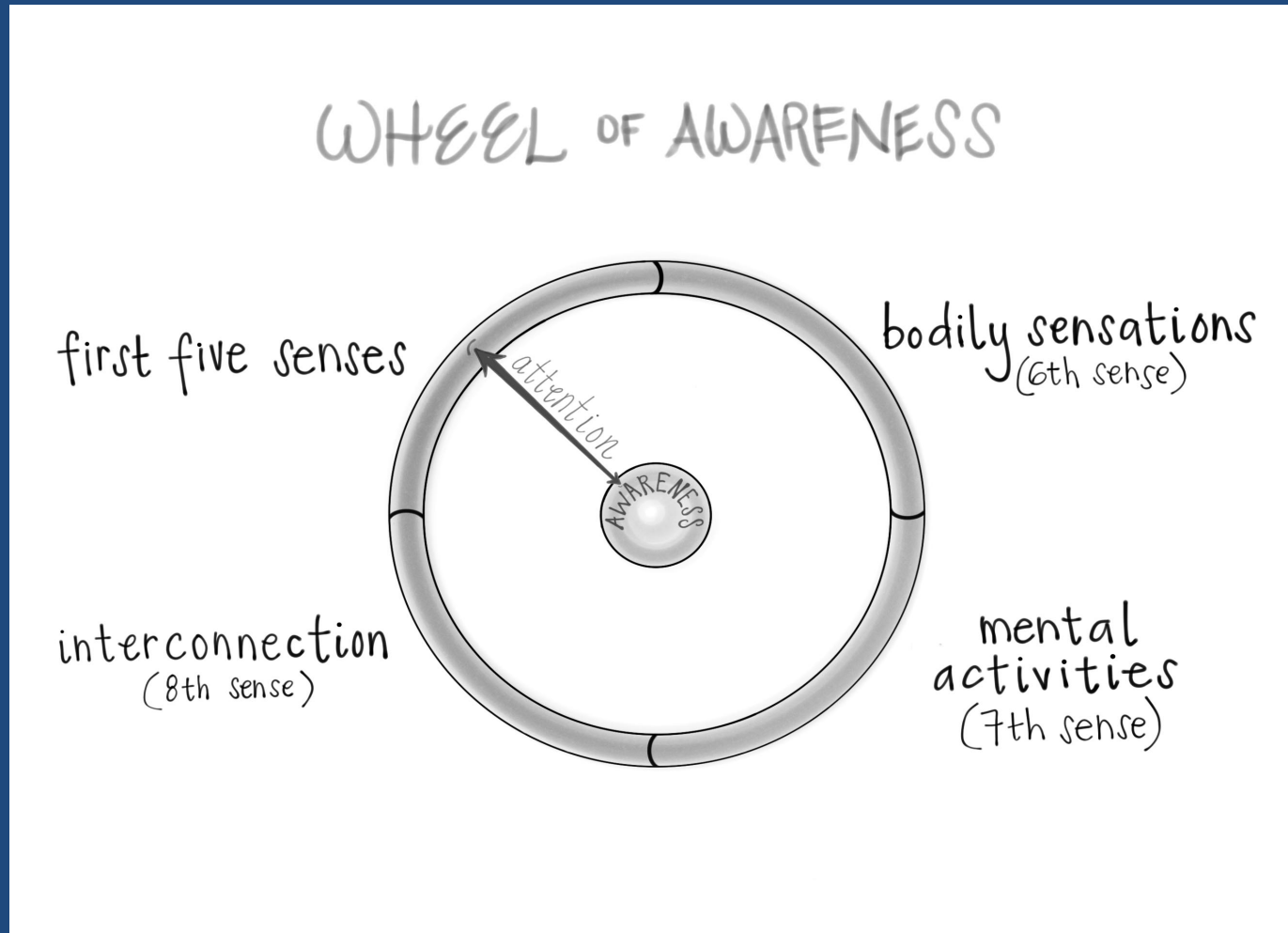
Integration and Neuroplasticity

- Integration creates Harmony
- Impairments to Integration lead to Chaos and/or Rigidity
- The Nine Domains of Integration
- Strategies for Enhancing Neuroplasticity

Domains of Integration

- 1. Consciousness
- 2. Vertical
- 3. Bilateral
- 4. Memory
- 5. Narrative
- 6. State
- 7. Interpersonal
- 8. Temporal
- 9. Transpirational

Integrating Consciousness



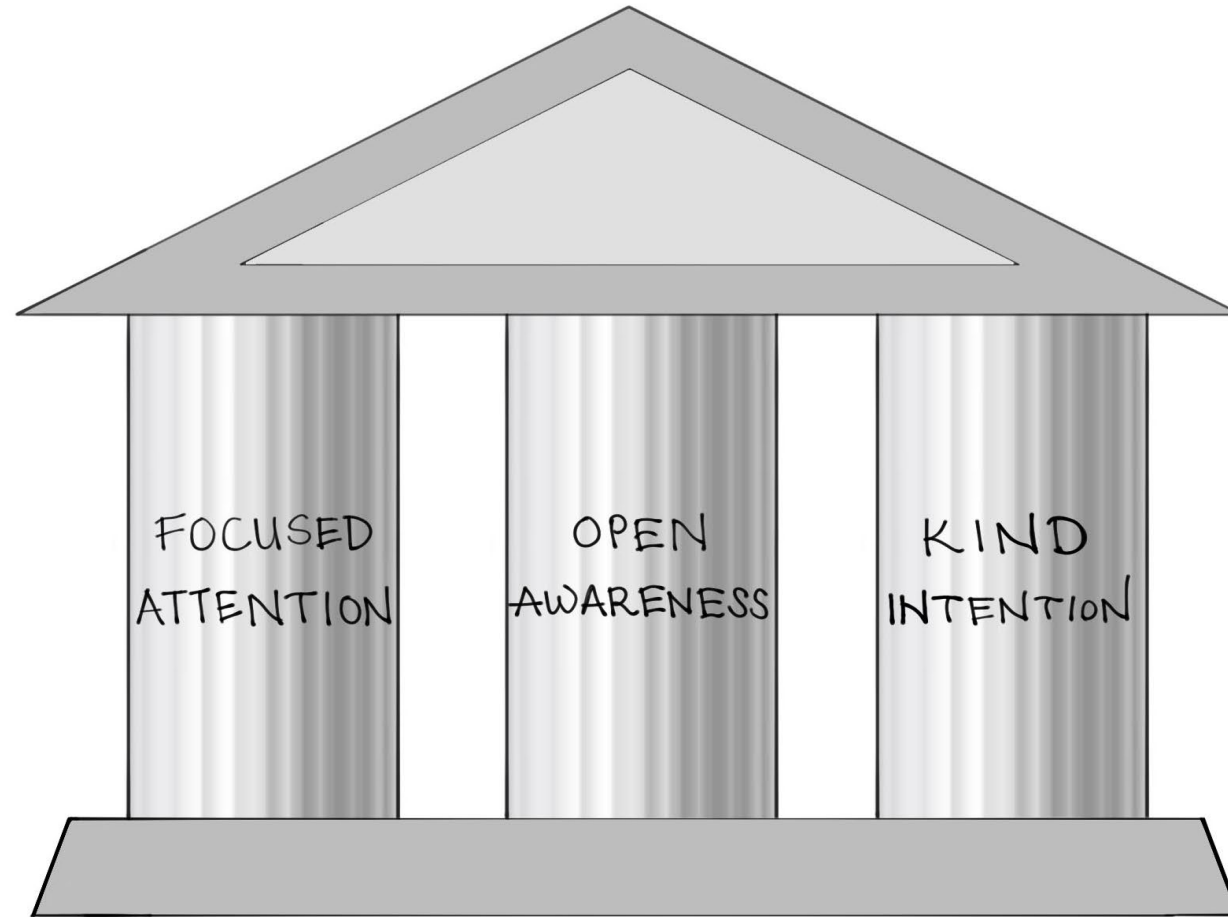
The Role of Consciousness in Change

- How and Why is consciousness needed for change in psychotherapy?
- What is consciousness?
- How does trauma impact our experience of consciousness?
- Can consciousness be cultivated—can it be integrated?

Empirical Findings

- Research Reveals:
 - Cultivating the Mind can:
 - Improve cardiovascular, immune, inflammatory, and telomere systems;
 - Integrate the brain;
 - Enhance our relational health;
 - Be achieved with mental training.

Three Pillars of Mind Training



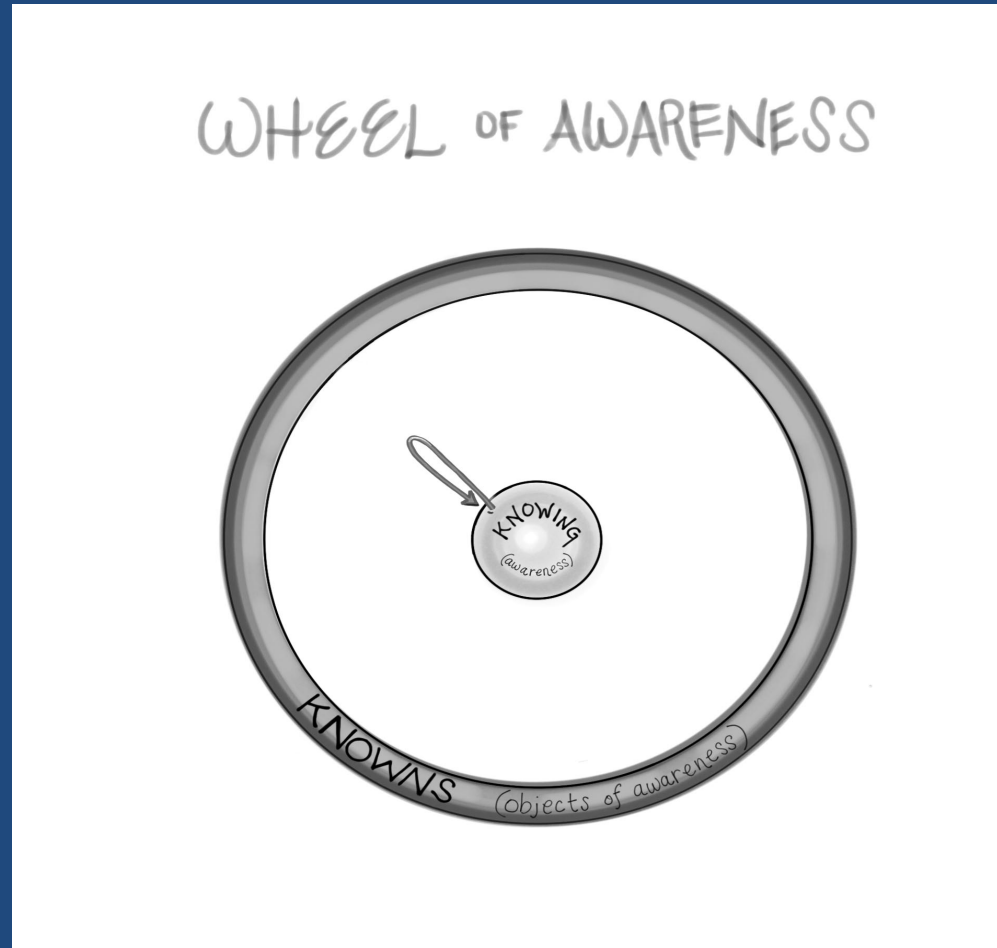
Focused Attention

- Practical Tips for training Focused Attention
 - Sustaining
 - Redirecting
 - Embedding Kindness in Practice

Open Awareness

- Awareness is distinct from attention—even focal attention
- The subjective sense of “knowing” versus the “knowns” of what we are aware of.
- If there is no differentiation of knowing from known, trauma can lead to being on “automatic pilot”
- The impact of trauma on accessing this receptive state of open awareness

Hub-in-Hub



Consciousness and Uncertainty

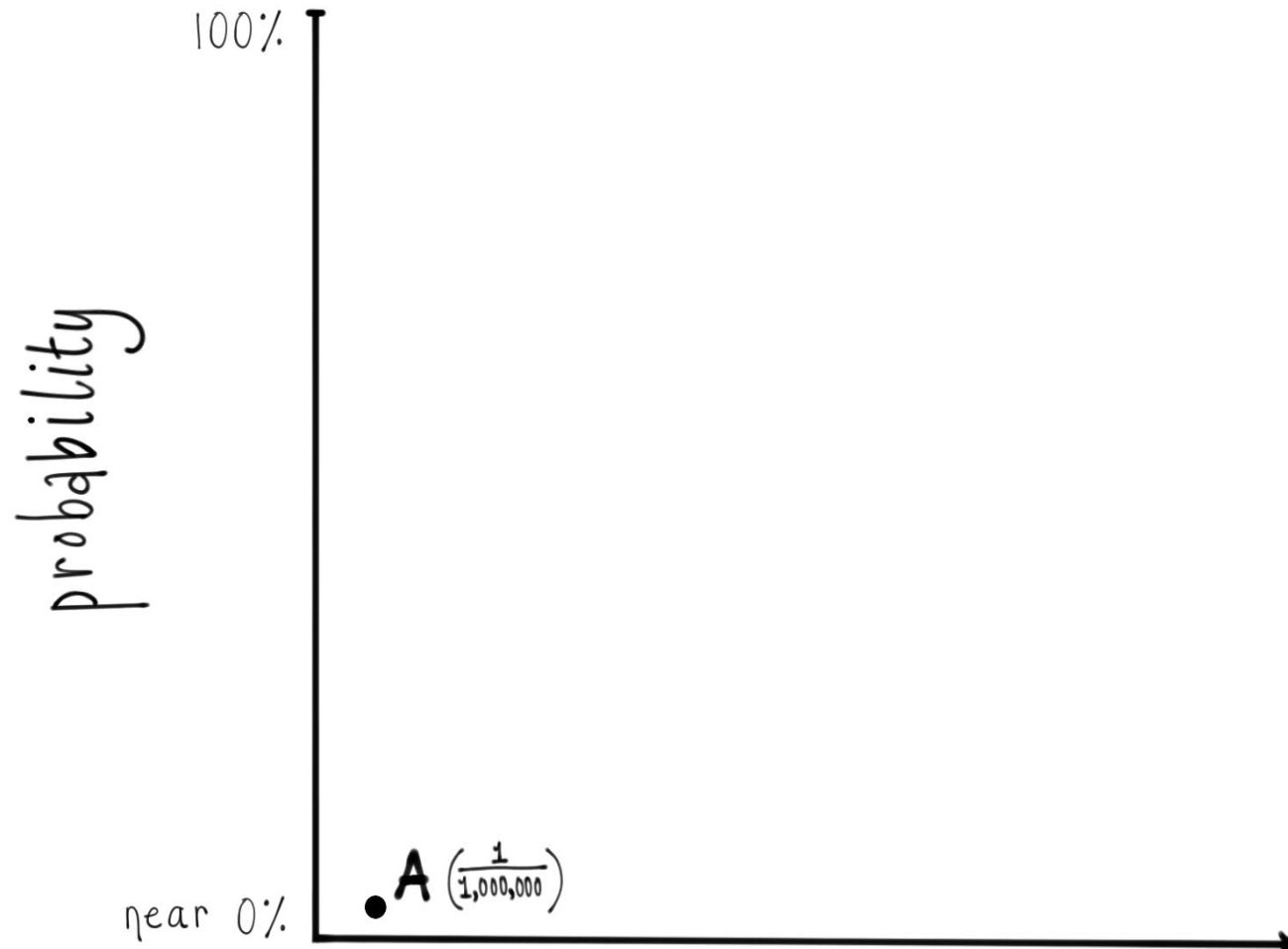
- Pure awareness as source of terror or sanctuary of relief?
- Relating to uncertainty
- Why is the “hub of the wheel” experienced in such different ways yet with familiar patterns?

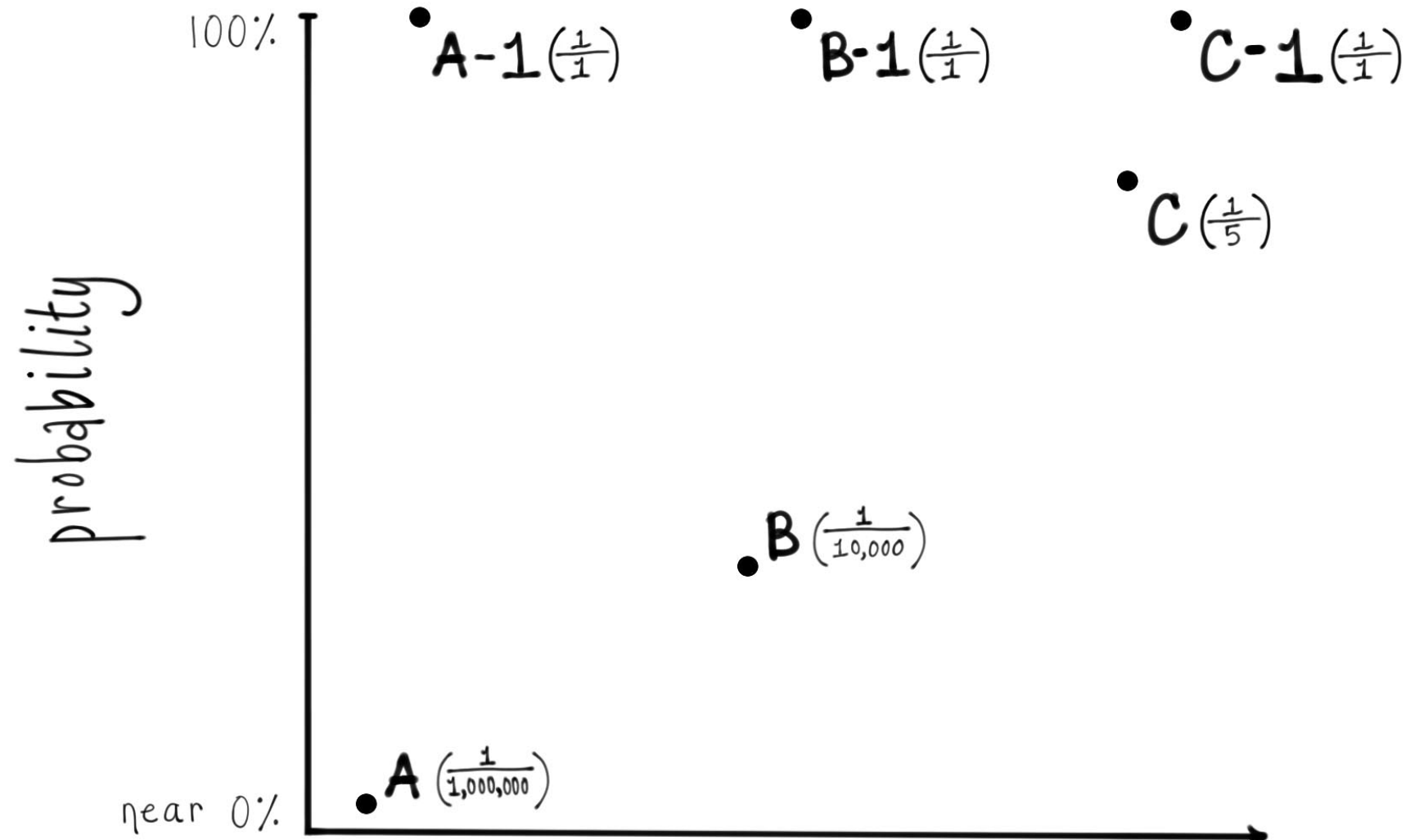
Mind as Energy

- Turning toward the science of energy to understand trauma.
- If mind emerges from energy, then going to the biology, chemistry, and physics of energy makes sense.
- What is energy?

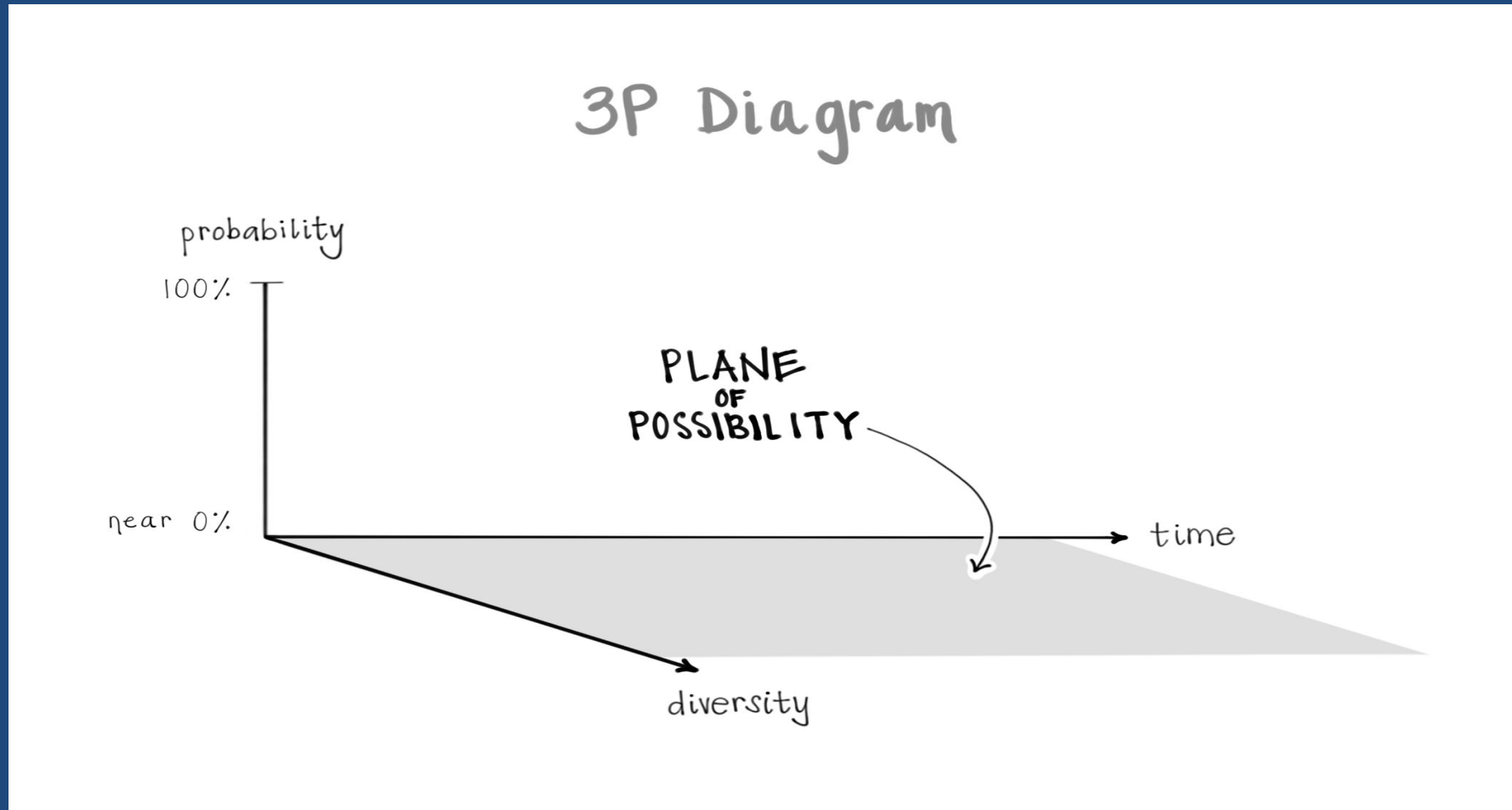
Energy as Probability

- “Energy is the movement from possibility to actuality.”



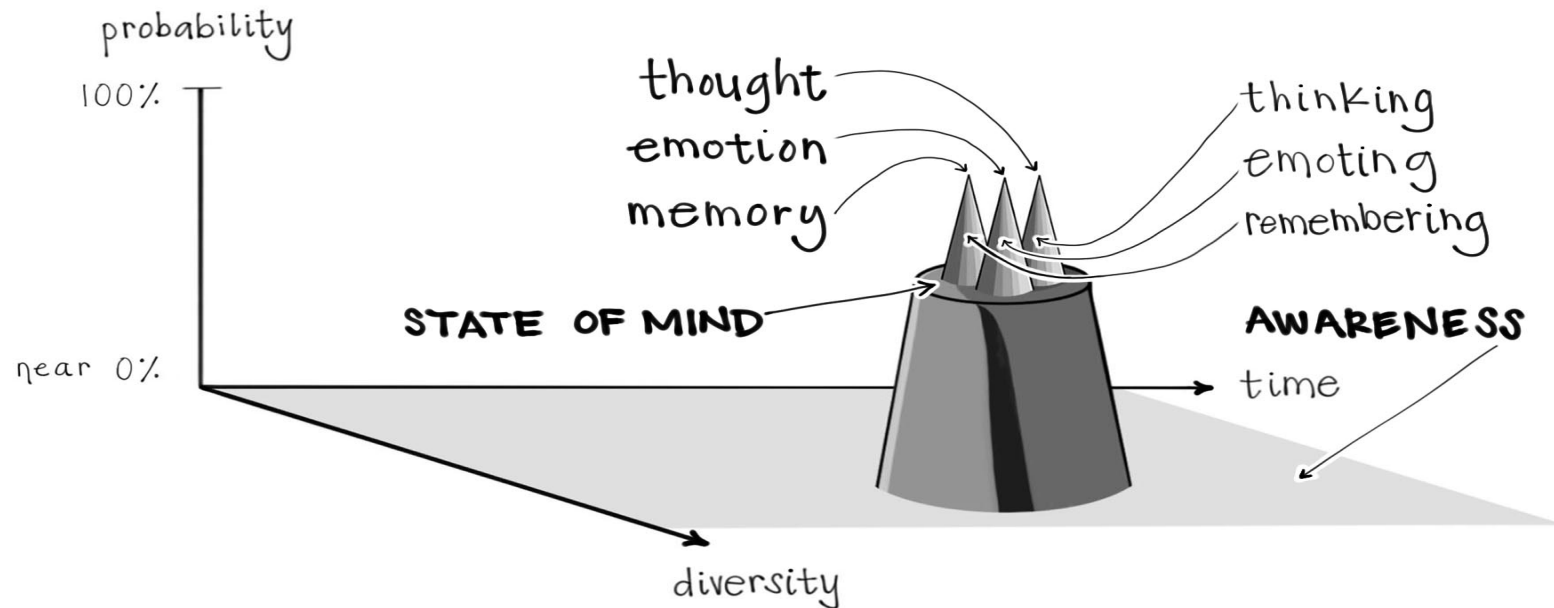


A Plane of Possibility

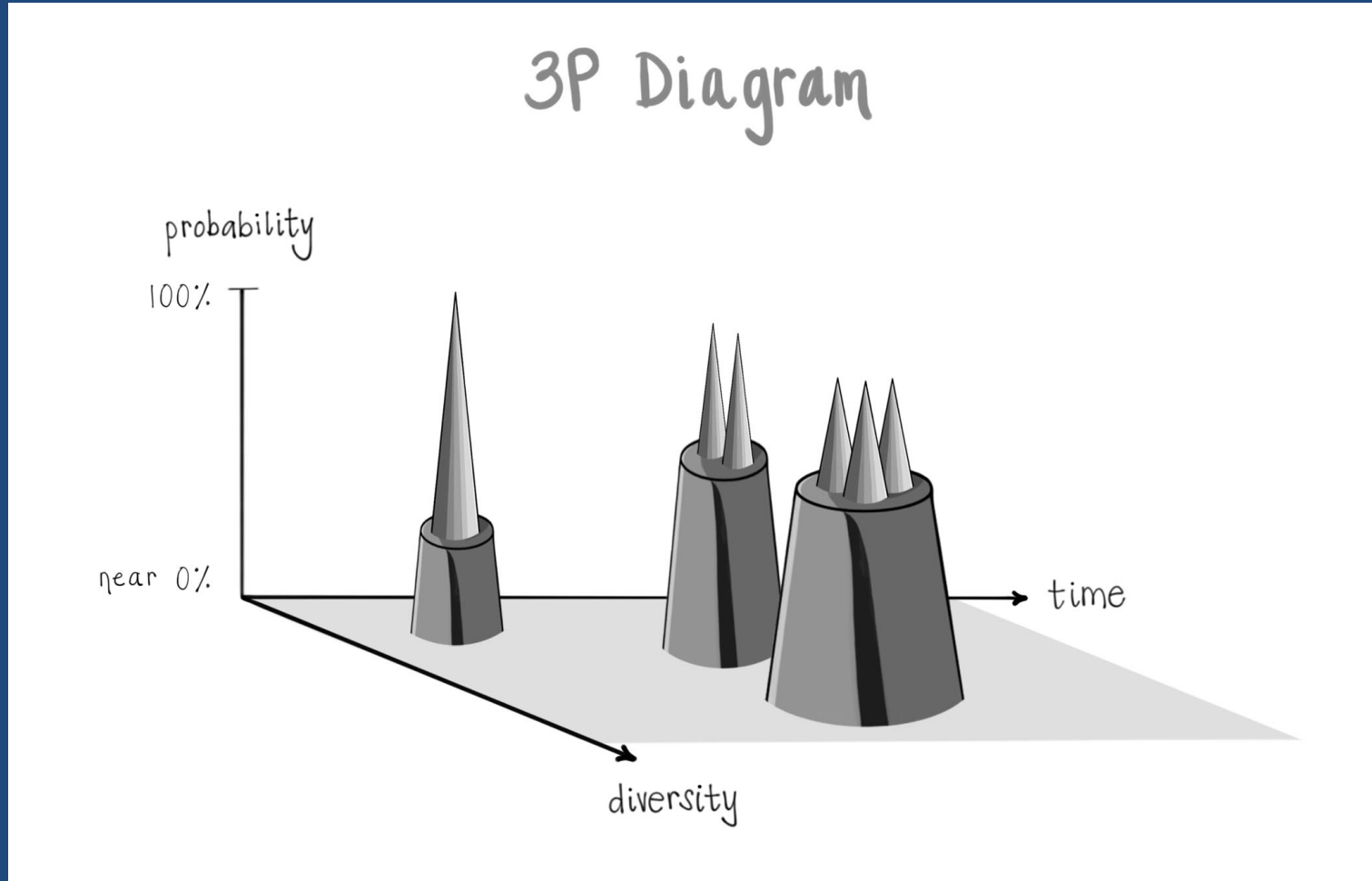


Mental Processes from a 3P Perspective

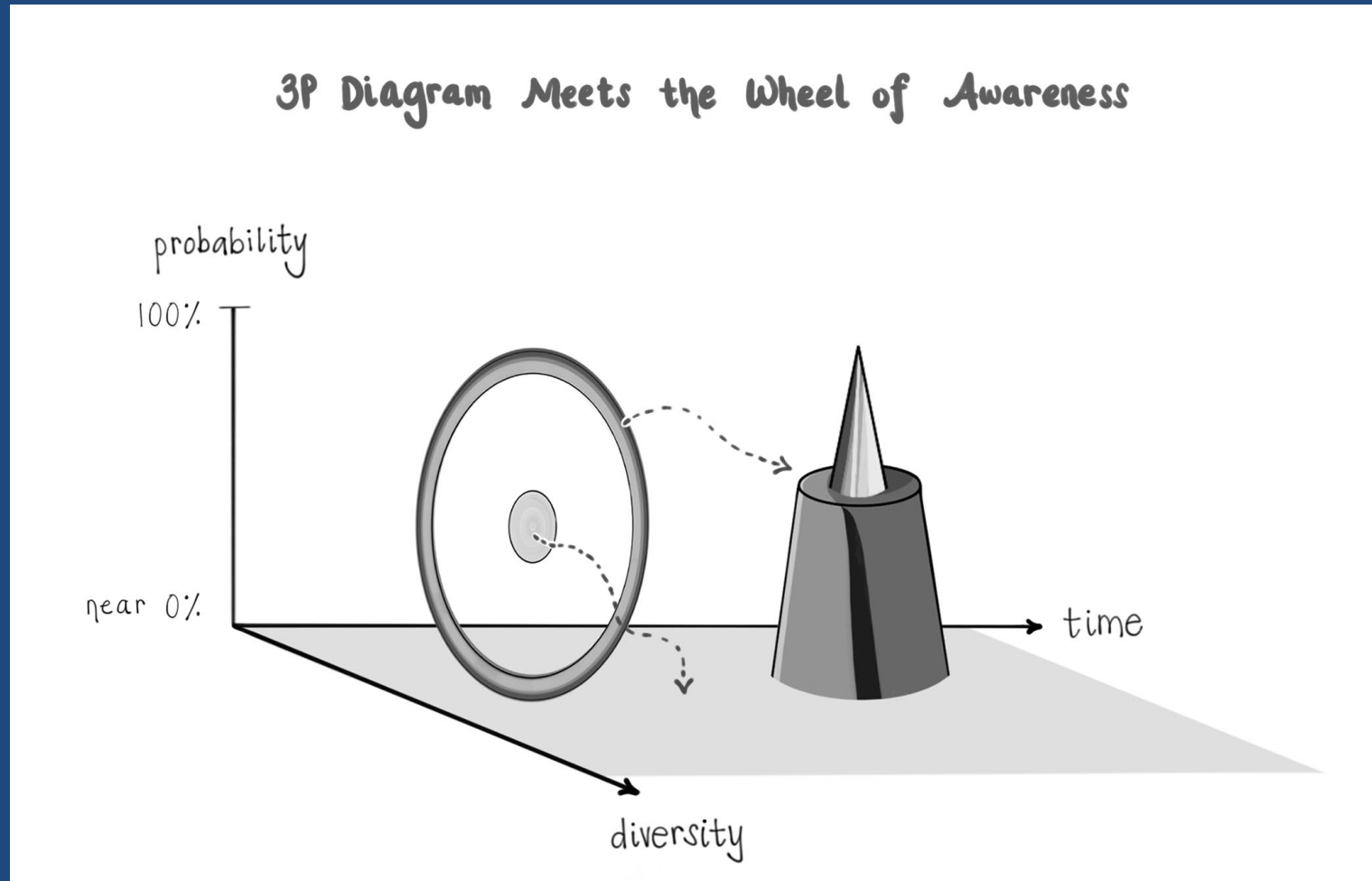
3P Diagram with State of Mind



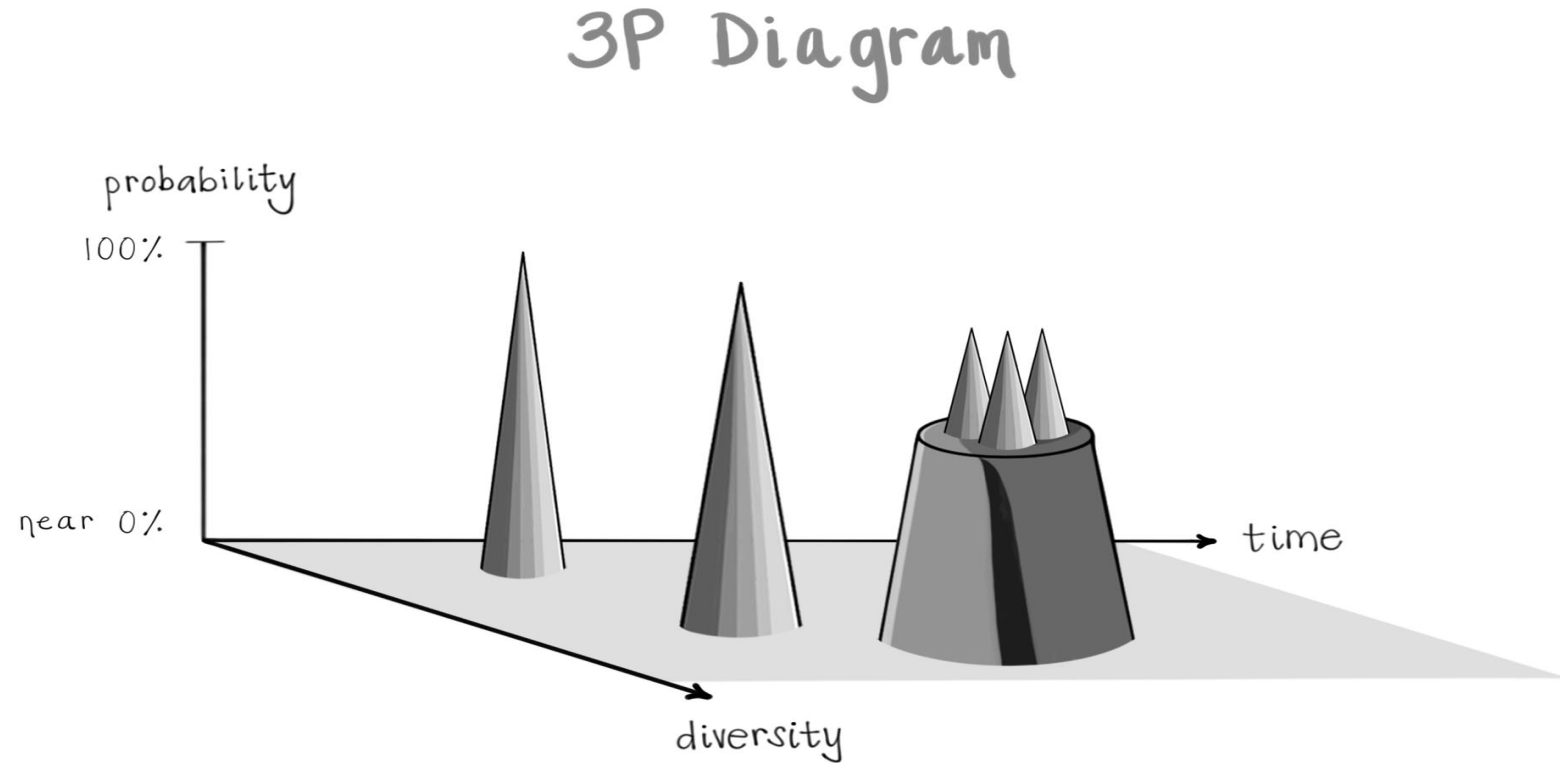
Self States and a 3P View of Mind



Integrating Plane, Plateaus and Peaks



A 3P Perspective of the Mind



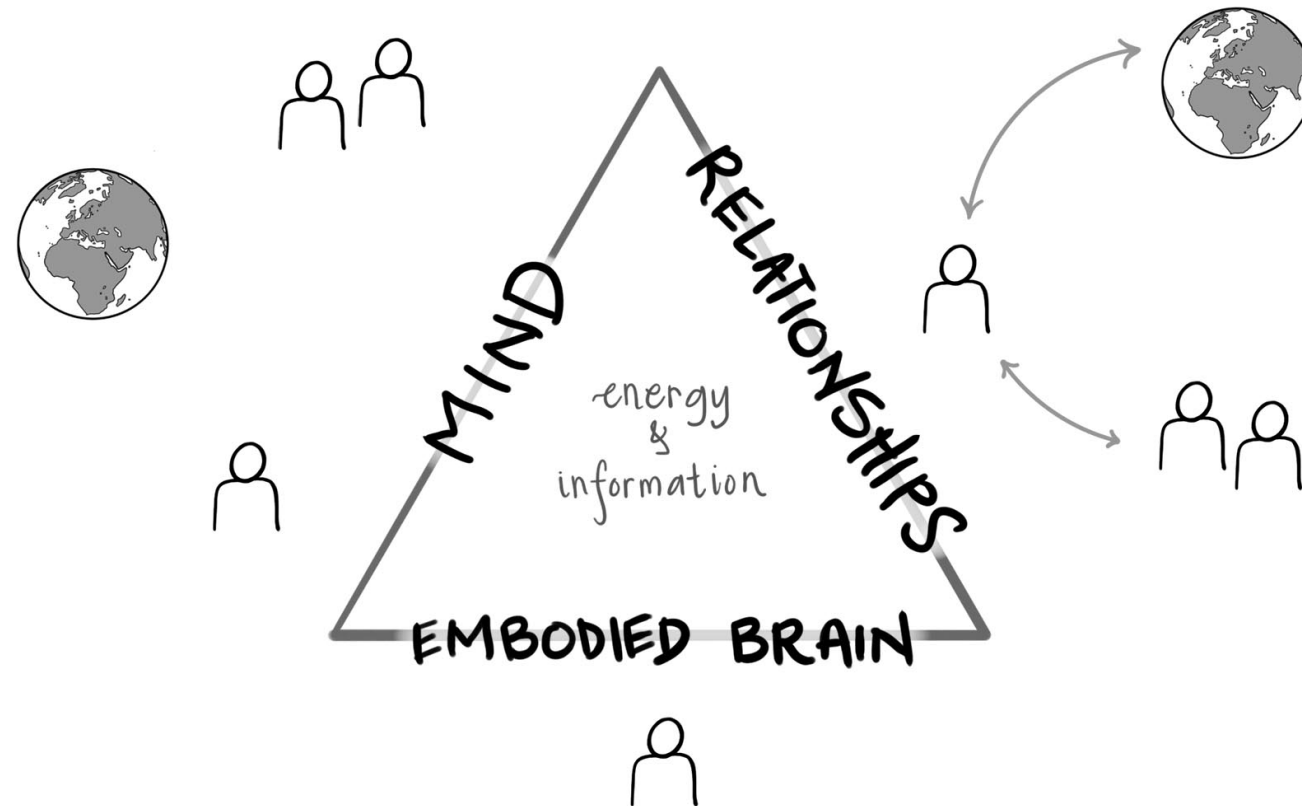
Domains of Integration and Well-Being

- Consciousness
- Bilateral
- Vertical
- Memory
- Narrative
- State
- Interpersonal
- Temporal
- Identity

Freeing the Mind, Integrating Identity

- “Bring it on” is the state of accessing the hub
- Moving beyond symptom reduction to Freedom of Mind
- The embodied and relational mind in the resolution of trauma

Triangle of Human Experience



As with any form of psychotherapy, the clinician needs to assess risks of harm to self or others in clients/patients that are inherent when therapeutic interventions are applied.

Interpersonal Neurobiology synthesizes a range of empirical studies to provide an interdisciplinary scientifically grounded approach that extends existing knowledge into a new framework.