Becoming a Brain-Wise Therapist:

Using Play Therapy and Expressive Arts Across the Lifespan

with Bonnie Badenoch
Four Experiences of Neuroplasticity

• Exploration through the senses
• Encountering deeper meanings
• Focus on sensation of the breath
• Expansion into nonjudgmental receptivity
Brain and Mind

- Brain (noun) – the embodied and relational flow of energy and information.
- Mind (verb-like) – the embodied and relational process that regulates the flow of energy and information.

Thanks to Daniel J. Siegel
Hand Model of the Brain

Thanks to Dan Siegel
The Embodied and Relational Brain

Brain in Skull
Brain Stem
Central Nervous System
Heart Brain
Autonomic Nervous System
Gut Brain
Muscles

Other Brains

Other Brains

Other Brains
Autonomic Nervous System

Thanks to Stephen Porges – Polyvagal Theory
Limbic Region
Implicit Memory

- surge of feelings
- behavioral impulses
- bodily sensations
- perceptions
- sensory fragments

embodied anticipations
Play as a Limbic Conversation

Implicit memory – centered in the right hemisphere limbic region - is made up of

- bodily sensations,
- behavioral impulses,
- images,
- perceptions, and
- emotions.

Sand, art, play, and clay – along with anything else we can dream up - make direct pathways to the right hemisphere realm of movement, images, relational patterns, and emotional aliveness.
A Child’s Six Emotional Systems in the Deeper Brain

Rage

Seeking

Fear

Care

Separation

Distress

Play

Thanks to Jaak Panksepp
Influence and Internalization

The Reality of Interpersonal Oneness

emotional state

bodily state

intentions

Strictly congruent

Broadly congruent

Inhibitory

possibly much more with discovery of mirror neurons in more places in the brain

Thanks to Marco Iacoboni
Inner Community

Integrating flow of the brain

- Comforting Mother
- Comfortable Child
- Supportive Father
- Bright Child

- Rageful Father
- Terrified Child
- Passive Mother
- Caretaking Child
- Scared Child

Dissociated and operating alone
Aspects of Implicit Memory

Relational Pairs
Supporting Integration and Healthy Brain Development

Attuned Relationships
(empathy, understanding, safety)

- Calm mother/Relaxed son
- Warm grandma/Safe son

Relational Pairs
Blocked from Integration

Unempathic Relationships
(painful, child unseen, unsafe)

- Rageful father/Frightened son
- Frightened mother/Abandoned son

Implicit waves of anticipation of rage, ebbing and flowing in response to inner and outer experiences
Neocortex

- Somatosensory Cortex
- Motor Cortex
- Parietal Lobe
- Left Hemisphere
- Right Hemisphere
- Frontal Lobe
- Temporal Lobe
- Occipital Lobe
- Cerebellum
- Spinal Cord
- Brain Stem
Middle Prefrontal Region

- Medial
- Ventral
- Anterior cingulate
- Orbitofrontal
- Middle prefrontal regions

- Corpus callosum
- Thalamus
- Cerebellum
- Hypothalamus
- Amygdala
- Hippocampus
- Brain stem
- Spinal cord
**Implicit**

- Pre-birth until 12-18 months
- Amygdala-centered
- No time stamp
- Encoded without conscious awareness

**Explicit**

- Comes online between 12-18 months – not solid until 4-5 years
- Hippocampus links
- Integrates pieces of implicit
- Adds time – past tense possible
- Encodes with conscious awareness

**Autobiographical**

- Comes online at about 24 months – not solid until 4-5 years
- Middle prefrontal links
- Adds sense of self to story - "I saw the doggy run." "I felt sad when..."
The Two Hemispheres

How: Re-present, nailing down initial experience, making it static/less living, things and tasks rather than people

- Logical
- Linear
- Literal
- Practical language
- Making sense
- Social self
- Spoken narrative
- Detail monitoring
- Analytic problem-solving
- Fact accumulation
- Chalkboard of the mind
- Unrealistically optimistic
- Handling familiar
- Moderate levels of stress
- More defined neocortical columns

Note: All experience activates both hemispheres, although certain ways of experiencing are more right-centric or left-centric in their viewpoint.

How: In context, concerned with living between-ness, relational, in the moment, accommodates flow and change

- Attunement
- Voice quality/Eye gaze/Touch and gesture
- Circuits of attachment
- Awareness of body
- Affective experience
- Experience of self
- Regulation
- Empathic resonance
- Implicit memory
- Felt autobiographical narrative
- Intuition/Morality
- Metaphorical language
- Rapid processing of novelty
- Present moment
- Severe levels of stress
- More integrated neocortical columns
Presence
Contact
Reflection
Responsiveness
Delight
Security
Ambivalence
Avoidance
Pathways toward Disorganization

- Disorganized
- Ambivalent
- Secure
- Avoidant
Disorganization