Trauma, autism, depression, BPD, Schizophrenia …. All share…

- Difficulty feeling safe
- Auditory hypersensitivity
- Flat facial affect
- Lack of vocal prosody
- High heart rate/low vagal tone

1

Parent responsiveness at 4 months predicts

- cognitive development at one year
- Attachment security at 1 year
- Child and adolescent capacity for empathy
- Reflective capacity at 30 years.

2

The effects of toxic stress on the mind

- The mind is a process that regulates the flow of energy and information. It is an emergent and self-organizing system
- EMBODIED
- RELATIONAL

3

F.A.C.E.S. (Dan Siegel's work)

- Flexible
- Adaptive
- Coherent
- Energyzed
- Stable

4

Functions available to a healthy mind

Bodily Regulation	Attuned Communication	Balanced Emotions
Soothing/ Modulating Fear	Flexibility	Insight
Empathy	Intuition	Morality

5

Healthy brain: Islands and bridges

6

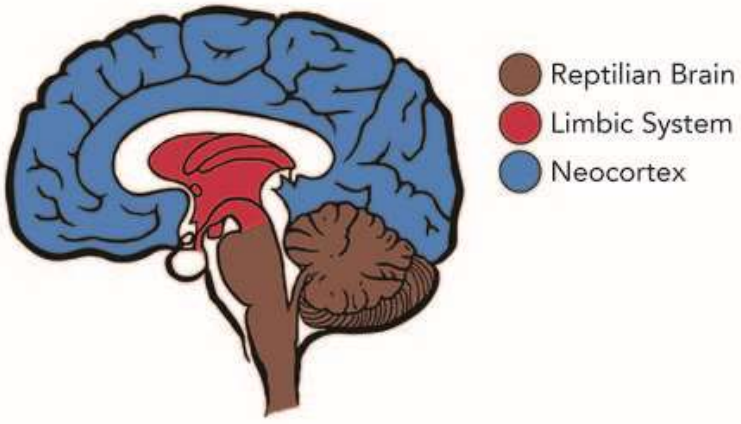
Differentiation & Integration

DDP strengthens all of These bridges.

- Bi-lateral
- Vertical (being open to experience)
- Memory (connect implicit with factual and autobiographical)
- Narrative (making meaning from observing experiences)
- State (awareness of moods)
- Interpersonal (recognizing own and other's needs
- Temporal (past, present, future)
- Consciousness (mindful awareness: what is known, unknown and experienced)

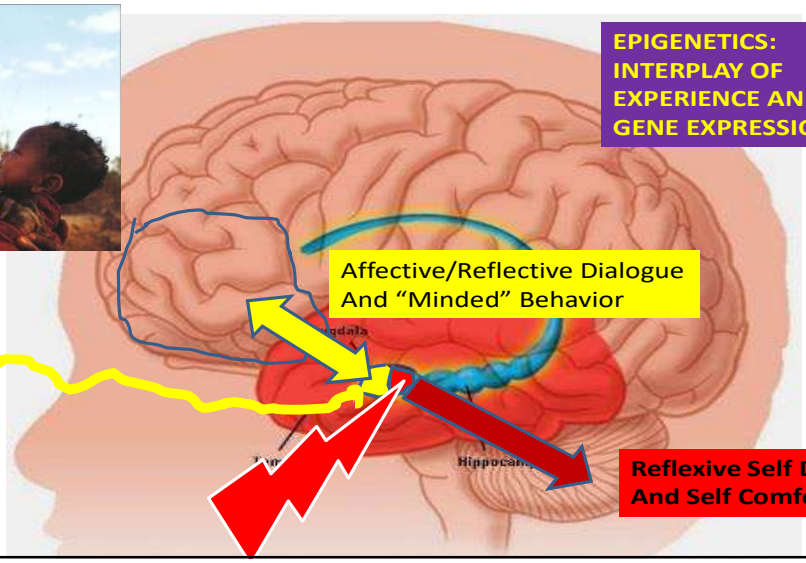
7

THE TRIUNE BRAIN



8

Experience Dependent Sculpting of the Amygdala and Its Connections



9

Bruce Perry

Complexity of Function

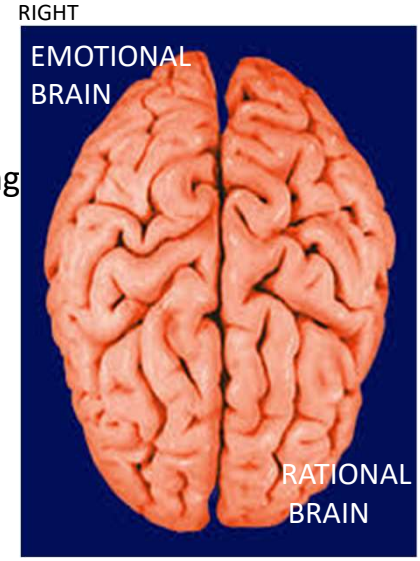
- Abstract Thought
- Concrete Thought
- Affiliation
- "Attachment"
- Sexual Behavior
- Emotional Reactivity
- Motor Regulation
- "Arousal"
- Appetite/Satiety
- Sleep
- Blood Pressure

10

Heavier
Develops earlier
Socio-emotional Functioning
Nonverbal processing
Seat of emotional arousal
Processes anything related to self-preservation
Implicit systems
Unconscious mind
Dominant in times of stress

RIGHT

LEFT



Logical
Analytical
Language
Develops in third year
Explicit systems
Conscious

Harm avoidance

Social approach

11

BRAIN STRUCTURE

- Controls core regulatory functions such as body temperature, heart rate, respiration, blood pressure, coughing and sneezing. Also plays a key role in consciousness and sexual arousal.
- OUR FIRST LINE OF DEFENSE

12

PAG; Periaqueductal gray

- Is the primitive danger-detection part of brain.
- It is always active in a traumatized person as its job is to suppress pain through production of endorphins and dynorphins -→ analgegia.
- How it lights up (dorsal vs lateral) determines whether you will have a hyperactive or more of a dissociative response

13

limbic system

Amygdala; everything to do with emotion, forming memories of things we love/hate. Major fear center. Combines input from all over the brain to make a decision about whether something is dangerous (stimulation can be real or imagined). Tags information from voice and face in particular.

Orchestrates early approach and avoidance learning that is fundamental to trust or mistrust

Optimally, inhibited by temporal cortex. However, if stress impedes the connection, behaviour becomes fear driven. Messages sent to the PAG, which is hard wired for Flight, Fight or Freeze.

- Develops early (by 8th month of gestation) and sensitive to early rearing experiences and context or cultural environment
- High speed detection of stimuli that have significant relevance to our health (+/-) less than 50 ms

-Implicit memories

-Early damage leads to profound difficulties in establishing emotional bonds and emotion regulation

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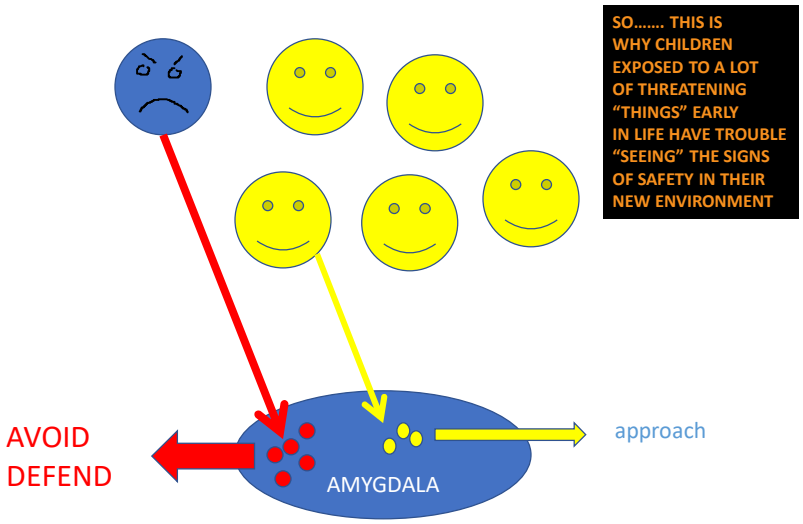
NEGATIVITY BIAS: AMYGDALA HAS STRONGER REACTION TO A NEGATIVE OR THREATENING THING THAN TO A POSITIVE, SAFE THING



Jon Baylin

15

Hippocampus

- Develops later and is involved in explicit or conscious memory of experiences; puts things in context of time and place in collaboration with amygdala and other structures - > autobiographical memory
- It's the memory index, deciding where things get stored in the brain. Also involved in the retrieval of those memories. Chronic stress interferes with transferring short term to long term memory
- Impairment can impact almost all aspects of development
- Biased to left and top processing which allows social approach and integrated meaning making vs amygdala, which biased to right and down, social avoidance and fight, flight or freeze.
- Good care strengthens the connection between amygdala and hippocampus

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Anterior Cingulate Cortex

- Bridge between thinking and feeling
- Strong connection to amygdala, therefore helps regulate fear
- Strong connection to insula so allows for empathy. Involved in "caring about". Transforms single brains into social organs
- Under high stress, uncouples the fronto-limbic circuit and move to self-defense
- Very sensitive to auditory information: prosody vs content (damage to ACC often leads to mutism)
- First year of life is about nurturing the ACC

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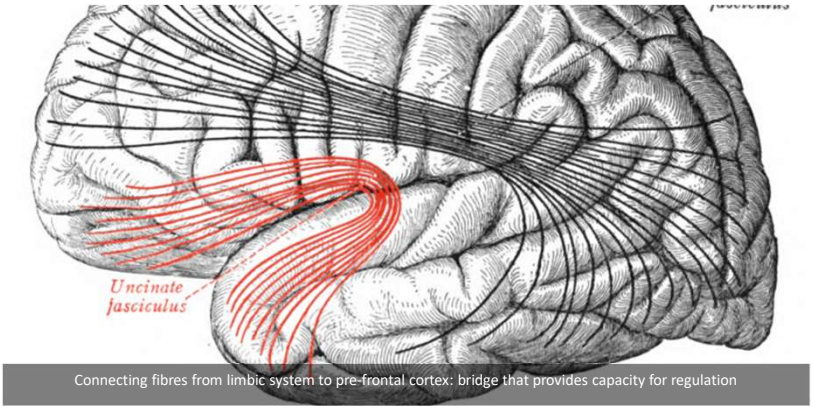
UNCINATE FASCICULUS



Connecting fibres from limbic system to pre-frontal cortex: bridge that provides capacity for regulation

- Neglect creates very underdeveloped UF on LEFT side of brain, which is related to social approach. Very developed on RIGHT, which is connected to harm avoidance

18

Psychopathy

- Genetically driven: Smaller, less reactive amygdala and underdeveloped Right UF where as kids with neglect the opposite
- Trauma: Right very activated both in UF and Amygdala because of fear.
- Lack of empathy? Blocked vs. not present. Blocked makes kids look asocial

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Cortex

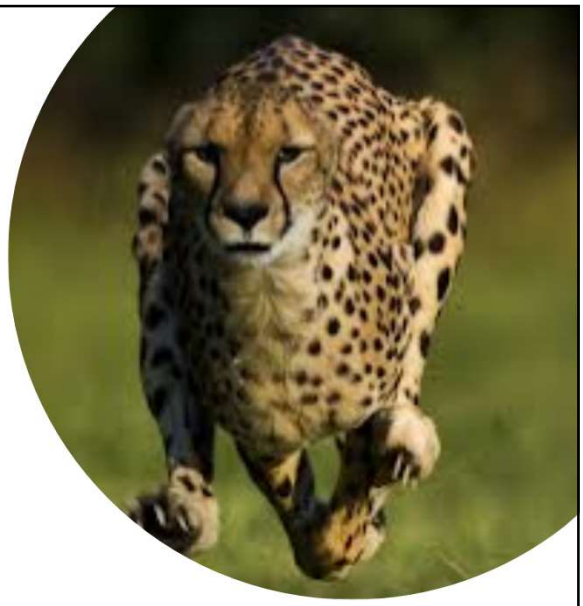
- Regulates complex functions such as speech, abstract thinking, planning, decision making
- The most plastic region
- Orbitofrontal cortex is convergence zone between cortex and subcortical regions. Stress→ less synaptic connections →less integration -→increased vulnerability to learning and mental health problems

20

- Cortex requires a great deal of energy to make
- it work

- Attachment figure makes

it work better for longer



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Secure attachment

Bodily regulation	Attuned Communication	Balanced Emotions
Soothing fear	Flexibility	Insight
Empathy		

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In school securely attached students will

- Move freely between independent & group work
- Have fun and reciprocal relationships with adults and peers
- Can repair relationships following conflict
- Can ask for help
- Tend to be popular
- Will respond well when given incentives or consequences

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AVOIDANT (15-20%)

- Behaviour skews away from attachment and more towards autonomy and exploration
- Upon separation, attachment system is deactivated and child looks unconcerned
- Upon reunion, hyper independent, mot much attention to mum, no capacity to seek comfort or proximity
- Physiologically highly aroused

25

In school children with avoidant attachments will

- Often fly under the radar because they don't make a fuss or ask for help
- They like to please
- May be perfectionistic or anxious
- Occasionally "crack" under pressure and are uncharacteristically angry.

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AMBIVALENT

”strife is better than loneliness”

Irish proverb

27

Ambivalent (5-12%)

- Behaviour skewed in favour of attachment: amplify distress so can’t ignore them
- So preoccupied with attachment that can’t explore or be independent
- Separation causes intense distress
- Reunion: very difficult to console, can’t find comfort in mum’s presence

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In school ambivalent kids…

- Are often disruptive, reactive and have difficulty settling their bodies
- Seem to always want your attention
- Can be intimidating and aggressive
- Avoid challenges that threaten to overwhelm anyway they can
- Do best in one-on-one environments

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Disorganized

- Lack of organized strategy: neither a SNS or PNS response
- Behaviour can look bizarre and makes no sense

(e.g. interacting only as a cat)

Easily dysregulated by small amounts of stress, even positive events/emotions disorganize them

- 7% of population: 80% of foster care kids

30

In school……

Become dysregulated quickly and move through both hyper-aroused and hypo-aroused states: rage, lying, minimization, blame

Resist being taught because can't trust adults

Peer interactions are often conflictual

Can't access regular education

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DEVELOPMENTAL DOMAINS IMPACTED BY DEVELOPMENTAL TRAUMA

- 1. ATTACHMENT: Difficulties with trusting others, perspective taking, social isolation, empathy.
- 2. BIOLOGY: Difficulties identifying and regulating physical states, somatic problems, problems with balance and coordination.
- 3. AFFECT REGULATION: Difficulties identifying, regulating, and communicating emotional states.
- 4. DISSOCIATION: Variable access to states of consciousness, impaired memory for events occurring in particular states.
- 5. BEHAVIORAL CONTROL: Poor impulse control, self-destructive, difficulty self- soothing, oppositional behaviors, reenactments of past traumas.
- 6. COGNITION: Difficulties in attention, lack of curiosity, learning difficulties, speech/language problems, processing novel information, reflective functioning.
- 7. SELF-CONCEPT: Lack of continuity in sense of self, negative self-concept and high level of shame, poor body image.

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repercussions

- Hypervigilance
- Safety Blindness
- Heightened need for control
- Resisting Authority
- Self-provisioning

33

repercussions

- Suppression of social emotions and reflective functioning
- Suppression of empathy
- Suppression of guilt, shame, remorse
- Suppression of curiosity and wonderment
- Suppression of reality testing

34

Intersubjectivity: existing between conscious minds; shared by more than one conscious mind.

Attunement

Joint attention

Congruent intent (both have same intent to understand inner life vs to "fix" a problem)

35

Joint attention

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THE AGE OF DISCONNECTION
We are more wired than ever.
But are we truly connected?
© Tetra Images/Corbis
Missed opportunities

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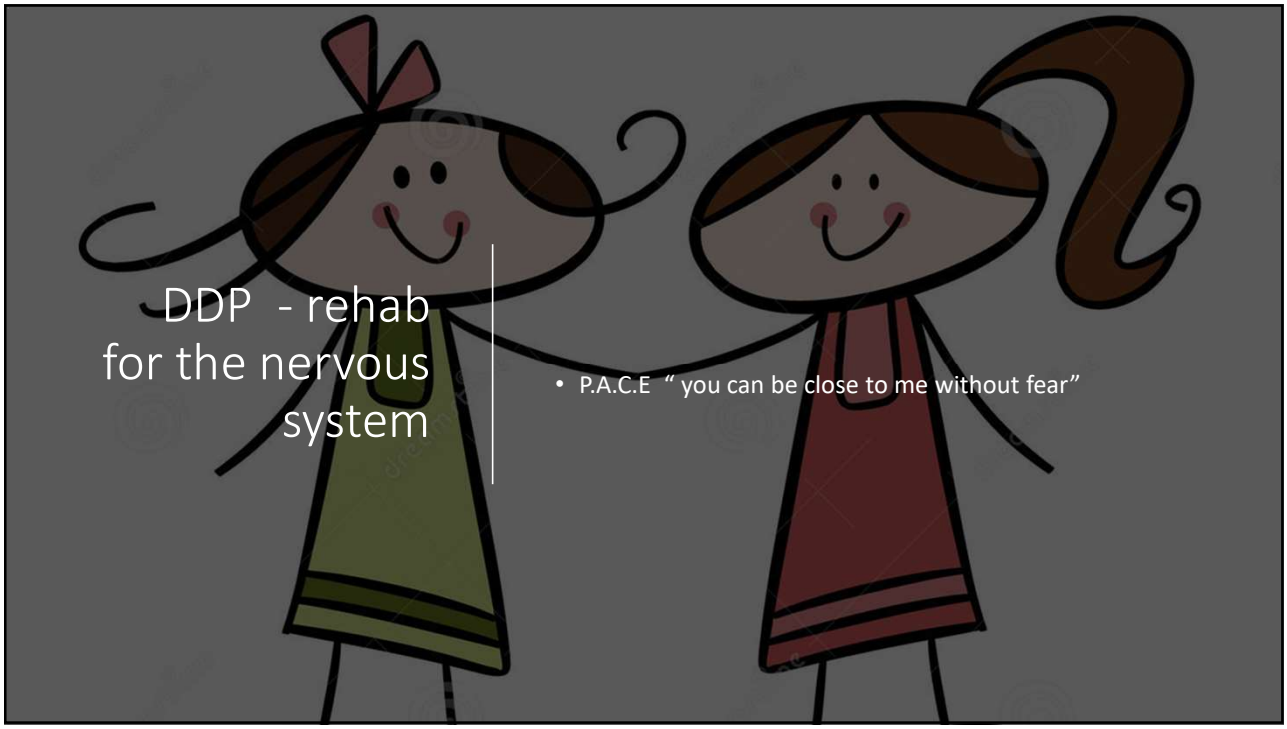
DDP - rehab for the nervous system
• P.A.C.E " you can be close to me without fear"

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Creating emotional safety

PLAYFULNESS

ACCEPTANCE

CURIOSITY

EMPATHY

39

Playfulness

- One of main functions of play circuitry is to help construct social brains (Panksepp)
- Balance between stressful and light
- Can't be in shame or fear if giggling
- Child often needs to learn how to play as well as access other emotions
- Play can be disorganizing so need therapist to help co-regulate
- If you can play, there is hope and sense that problems can be overcome

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Acceptance

- Never talk a kid out of what they are feeling/experiencing
- Don't have to accept the action (e.g. kicking you), but accept the wish to kick you
- No judgment
- Behaviour is always less important than the relationship. Focus on the experience not the event.

41

Curiosity

- "What's that about?" What's going on that is causing feeling or experience
- "I wonder if……." (thoughts, perceptions. Motives, wishes, feelings)
- "Let's figure it out!" don't have to be right
- Delight in the discovery

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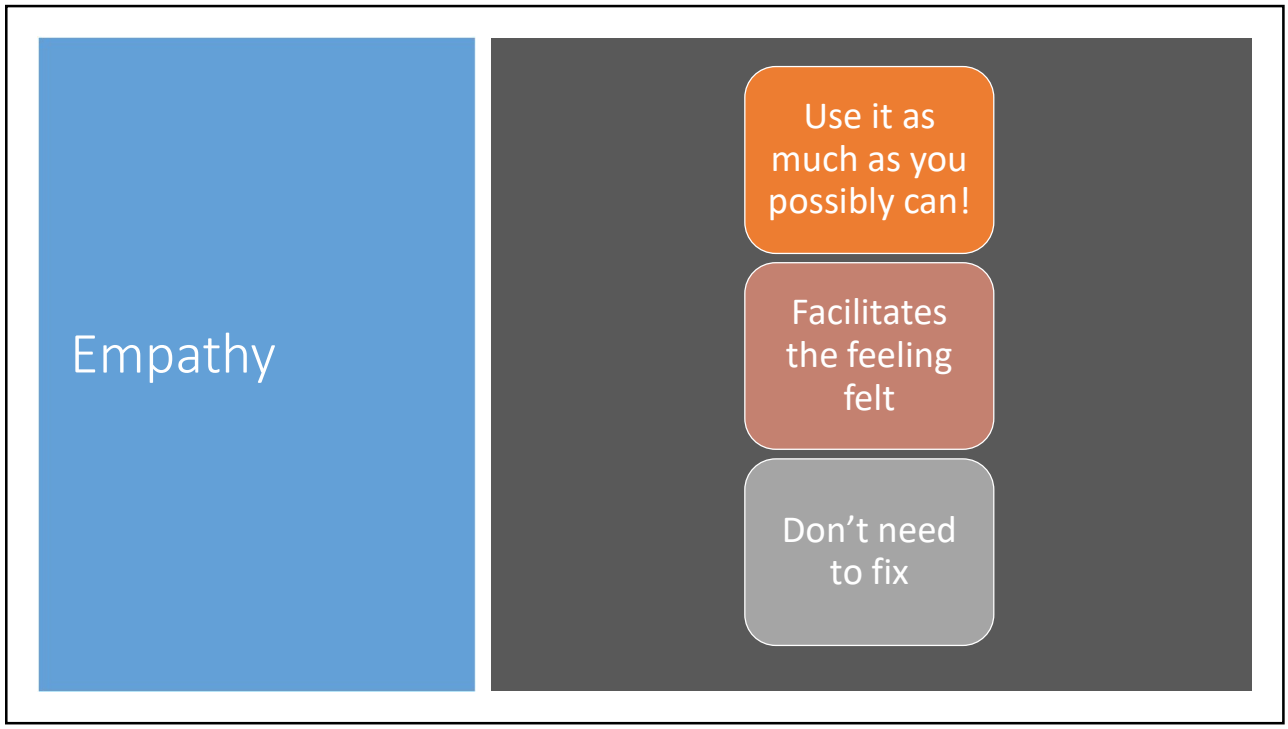
Empathy
Use it as much as you possibly can!
Facilitates the feeling felt
Don’t need to fix

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