

# Reaching for Hope: the Interpersonal Neurobiology of Empathy in Early Conflict Management

Offered by Sarah Peyton

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# How Early is “Early Conflict Management?”

- The history and expectations the parties bring to the table
- The subcortical response the parties have to the mediator and to each other (in milliseconds)
- An initial sense of mutual understanding

# Learning Outcomes for Today:

1. The ability to identify where the clients are in their self-regulation process.
2. The ability to identify the blocks to mutual understanding.
3. A familiarity with empathy from a Nonviolent Communication perspective.
4. Some working experience in feeling the shift to safety.
5. Some tools to move conflict resolution forward.

# Outline

1. Mirror Neurons, Subcortical Resonance and the Quality of our Presence
2. Our Brain and Emotional Regulation
3. Naming Experience using Needs Based Language
4. Bringing in the Hemispheres
5. Our Sense of Safety and the Vagal Nerve
6. Naming the Us/Them Problem
7. Open Time for Questions

# Interpersonal Neurobiology



# What is IN?

- The study of how our brains react, learn, and affect one another in relationship
- Includes the fields of psychology, developmental psychology, attachment research, psycho-biology, cognitive and social neuroscience and complexity theory

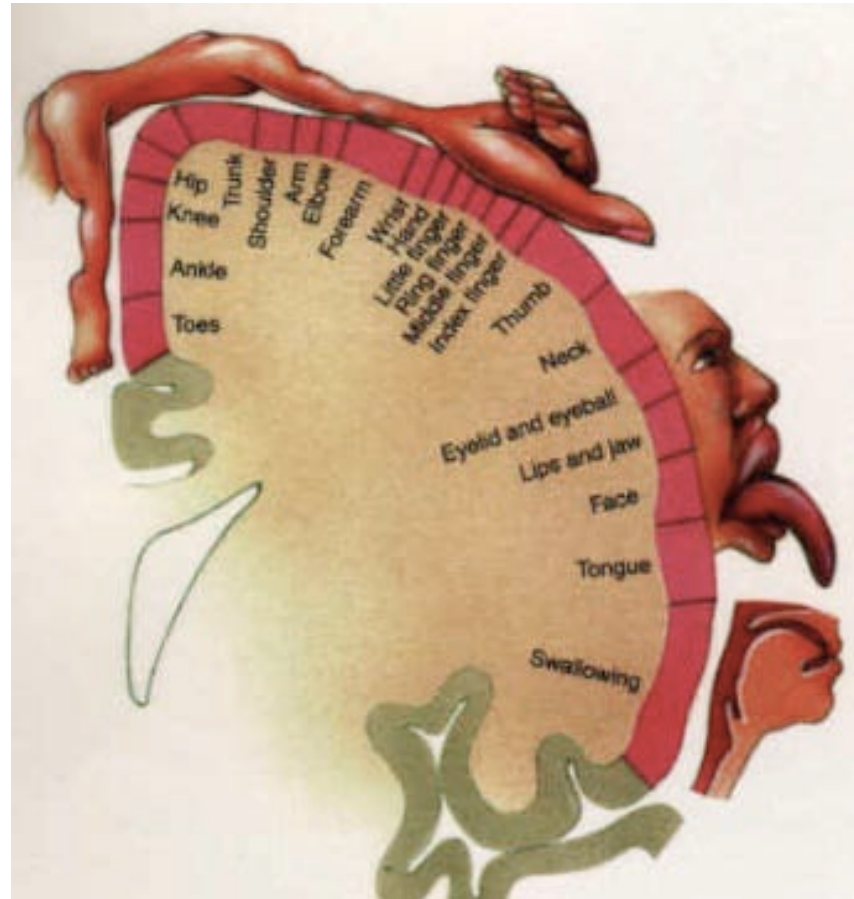
# The effect of our mirror neurons



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# Mirror neurons are interwoven into the structure of the motor cortex





# Allowing us to interpret intention in gross



# And fine movements



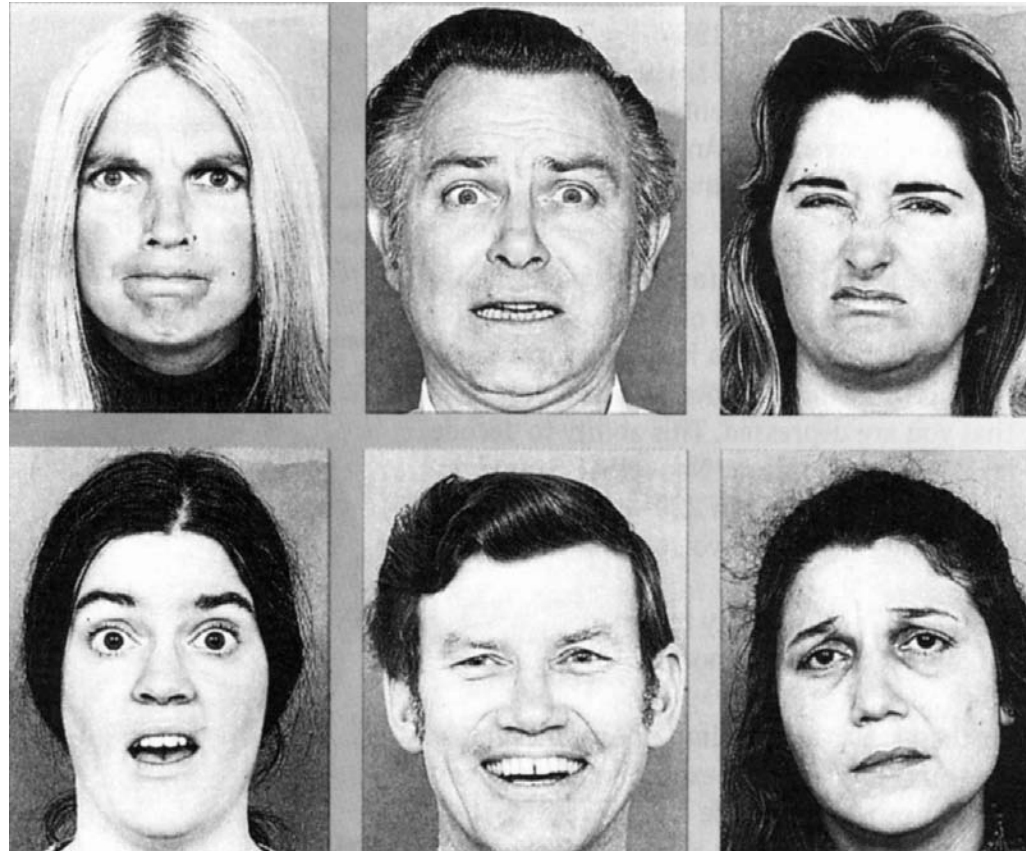
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# Including in the muscles of the face



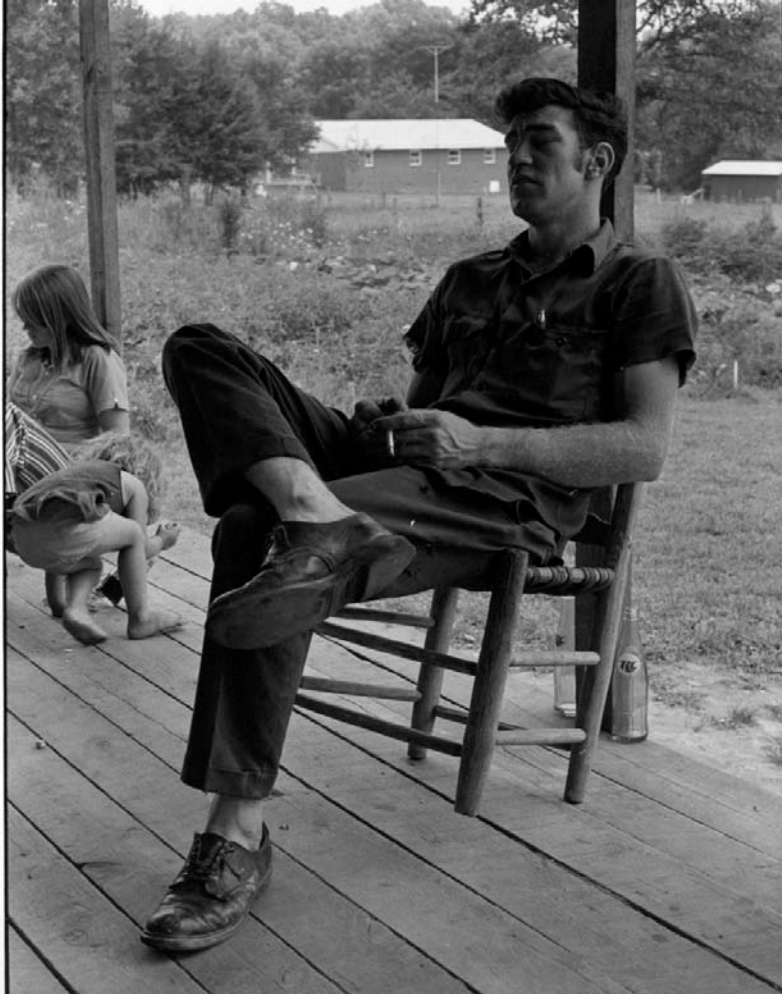
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This shows us how we understand the emotion of facial expressions,





# Posture,



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And gesture.



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We also form first impressions



More quickly than cortical  
responses will permit

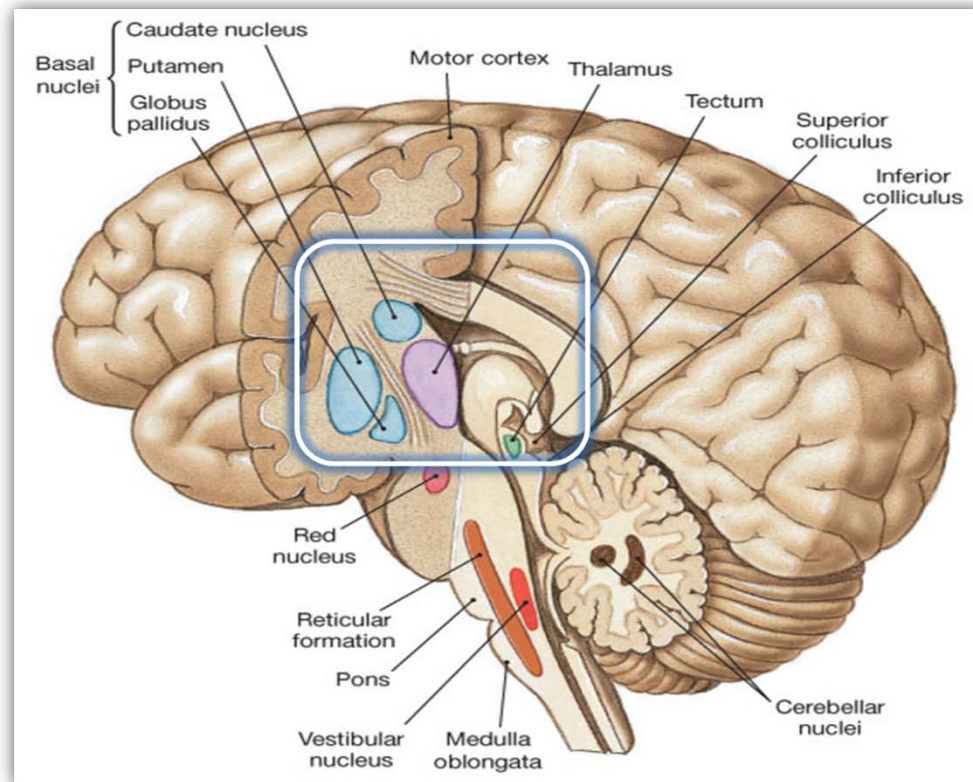


# In a matter of milliseconds



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# When the speed of our reactions shows we are reacting on a subcortical level



We call this subcortical resonance.



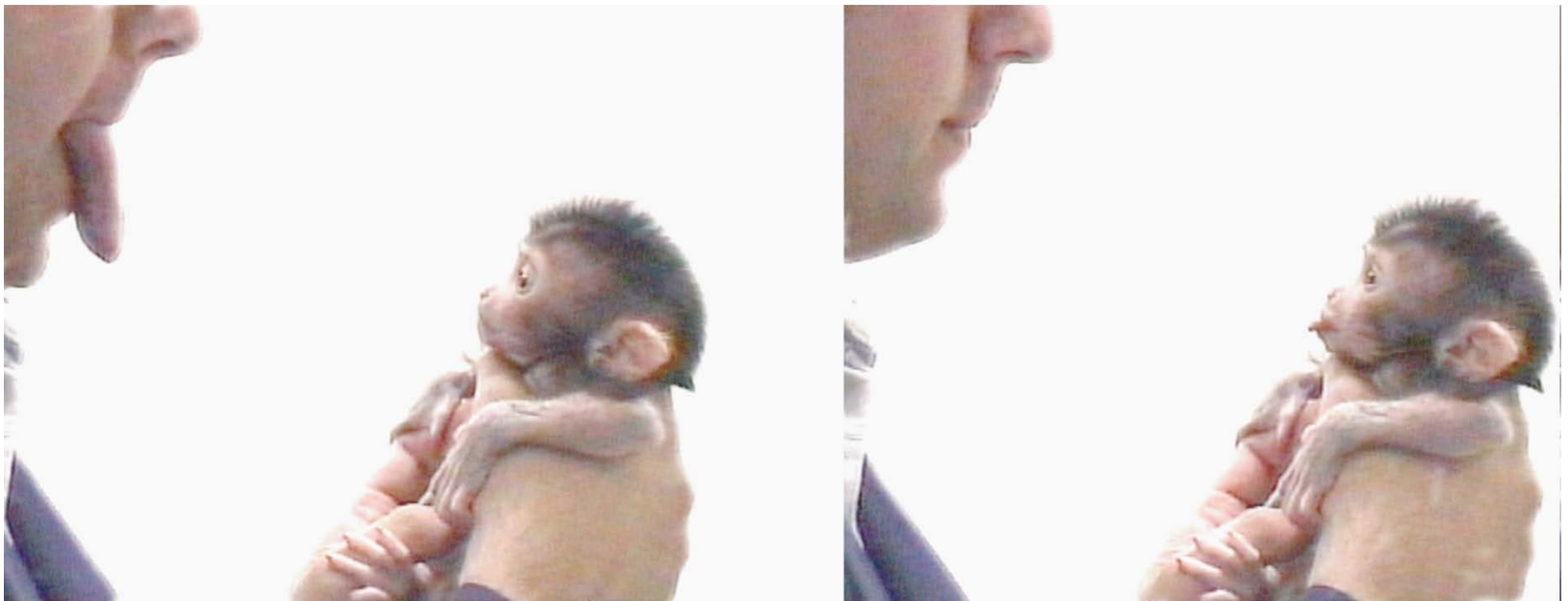
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It is seen in the speed of pupil  
dilation or contraction

- (eye picture)



# Mirror neurons and subcortical resonance make emotions contagious



And mirror neurons can bring  
calm to the table



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If we see either party as an enemy, it changes the intersubjective space

- The nonverbal and subcortical
- Microexpressions

# Practice

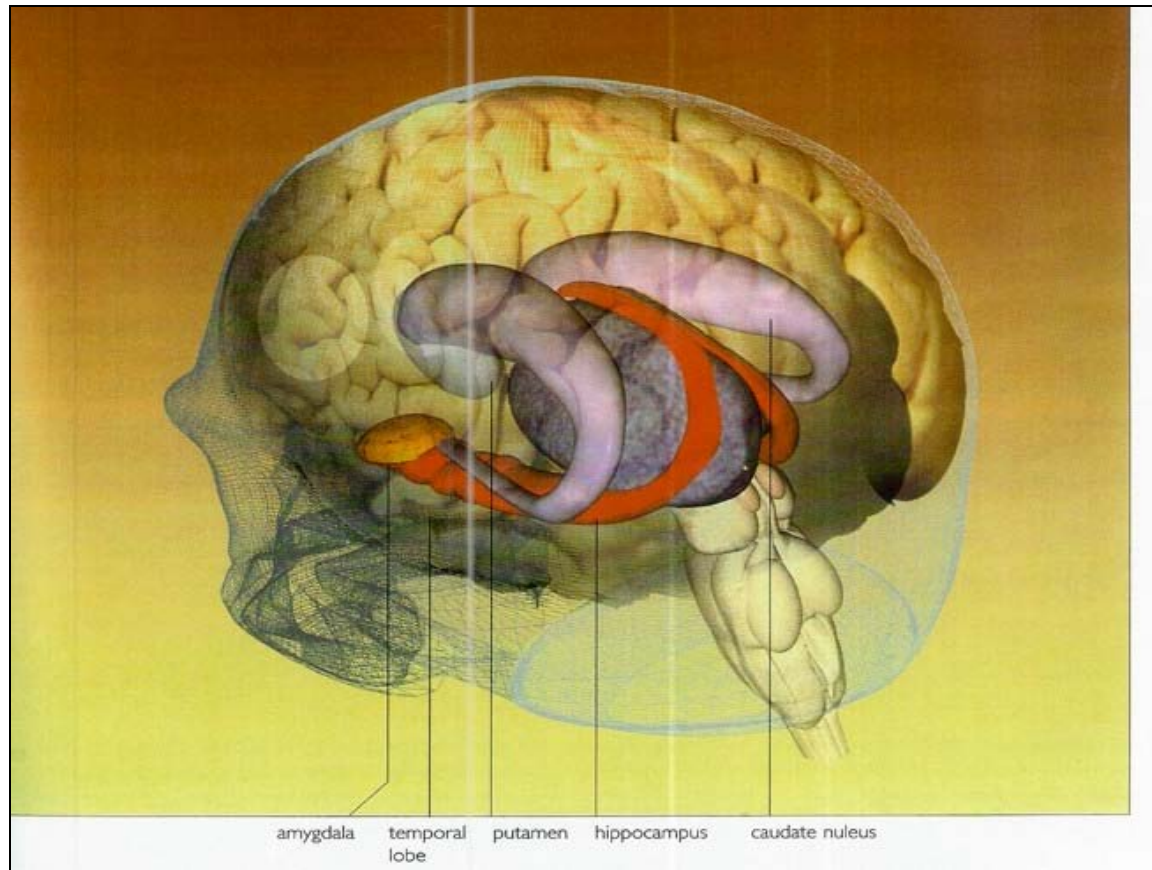
- Close your eyes and allow yourself to sink into the different impressions you have formed of the people closest to you or easiest for you to see in the room.
- Open your eyes and let your gaze move over a line of people. Notice your body and how it reflects your impressions as you glance from person to person.



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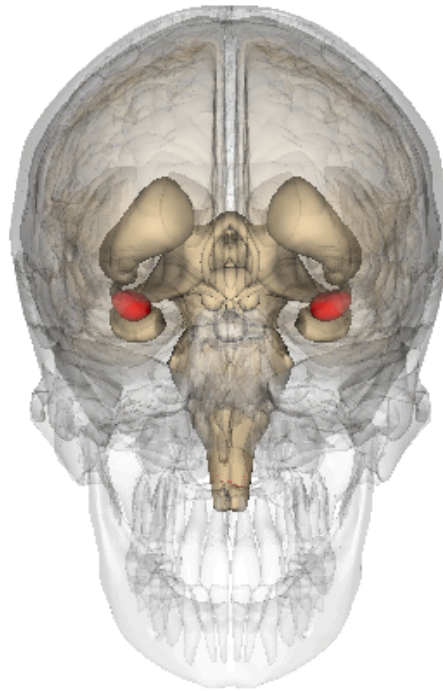
# What Does Conflict Look Like in Our Brain?

# Our Limbic System lies deep within our Brain



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Where our amygdalae run us with  
the power of our emotions



MIDDLE PREFRONTAL CORTEX



Place your thumb in the middle of your palm as in this figure.

CEREBRAL CORTEX



Now fold your fingers over your thumb as the cortex is folded over the limbic areas of the brain.

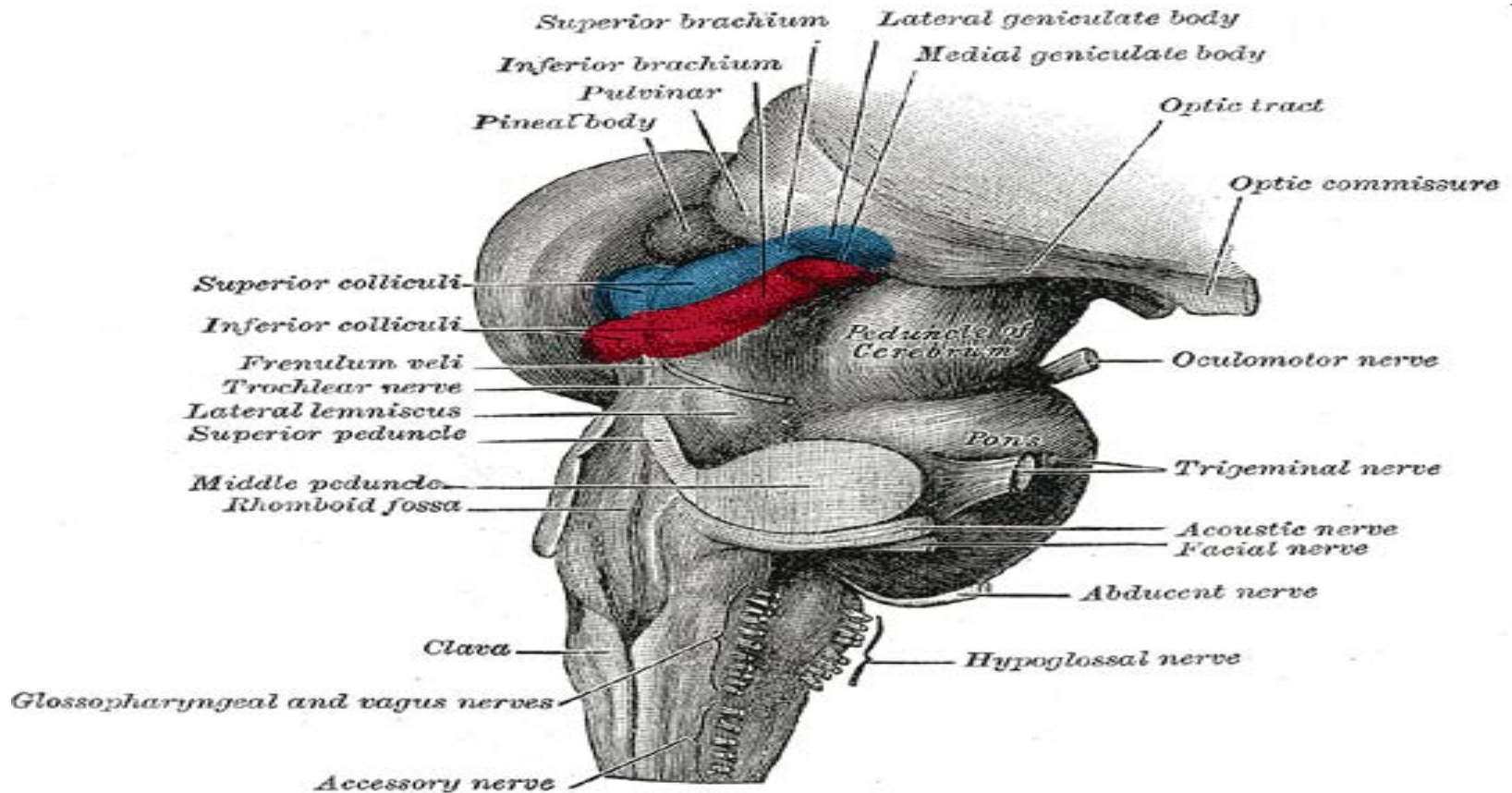
In the Brain in the palm of our hand,  
our wrist is our Spinal Cord:



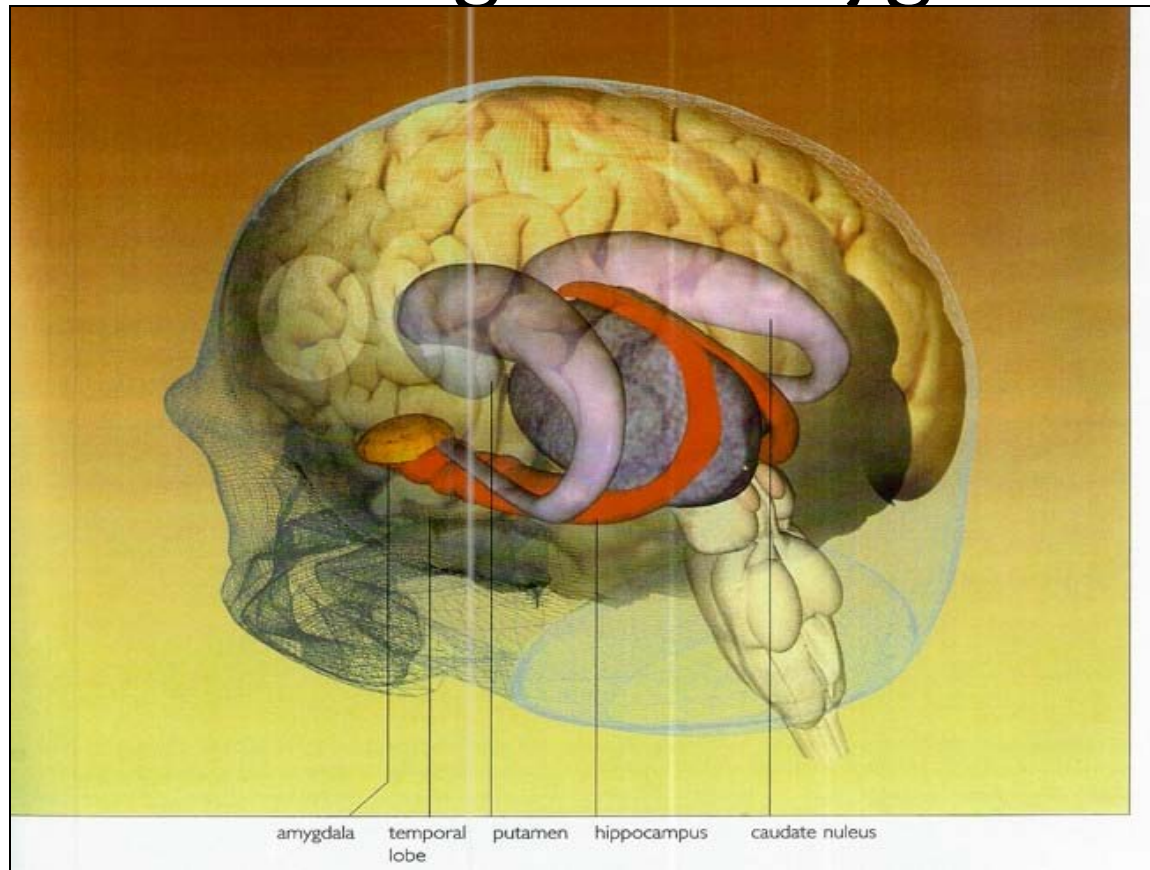


# In the brain in the palm of our hand, our palm is our BRAINSTEM:

Heart rate, breathing, blood pressure, alertness, sleepiness

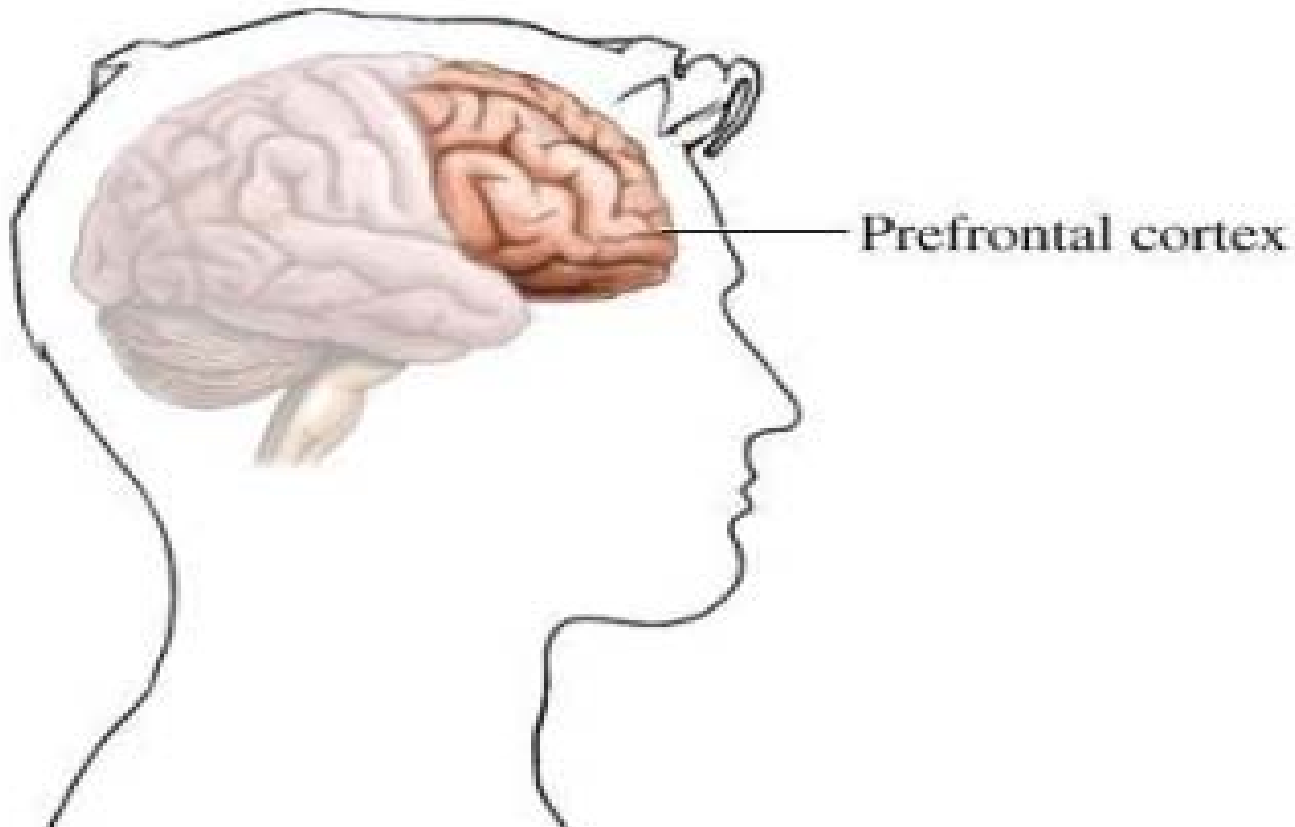


In the Brain in the Palm of our Hand,  
our thumb is the Limbic System,  
containing the Amygdala



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And our fingertips are our Prefrontal Cortex (PFC):



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MIDDLE PREFRONTAL CORTEX



Place your thumb in the middle of your palm as in this figure.

CEREBRAL CORTEX



Now fold your fingers over your thumb as the cortex is folded over the limbic areas of the brain.

When the Amygdala is on alert, it flips our lids  
(no flow of energy or information to or from  
the PFC)



Until we calm, soothe and regulate ourselves, bringing our PFC fully on line.



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Or are invited to calm by others



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# Functions of the Prefrontal Cortex

- Regulation of body systems
- Attuning to others
- Balancing emotions
- Modulating fear
- Responding flexibly
- Exhibiting insight and empathy
- Paying attention to the body's wisdom
- Morality, questions of integrity

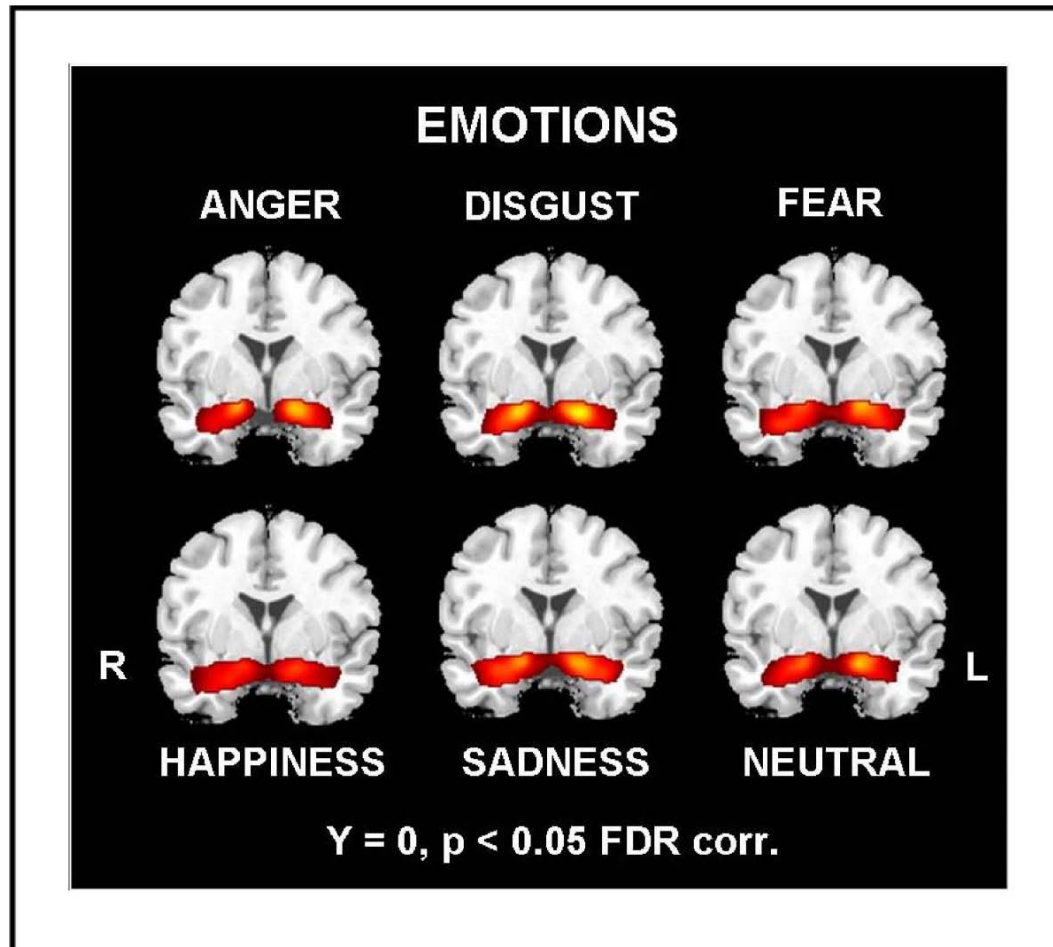


The prefrontal cortex names our experience with resonance and self-compassion. It also looks at others in this light.

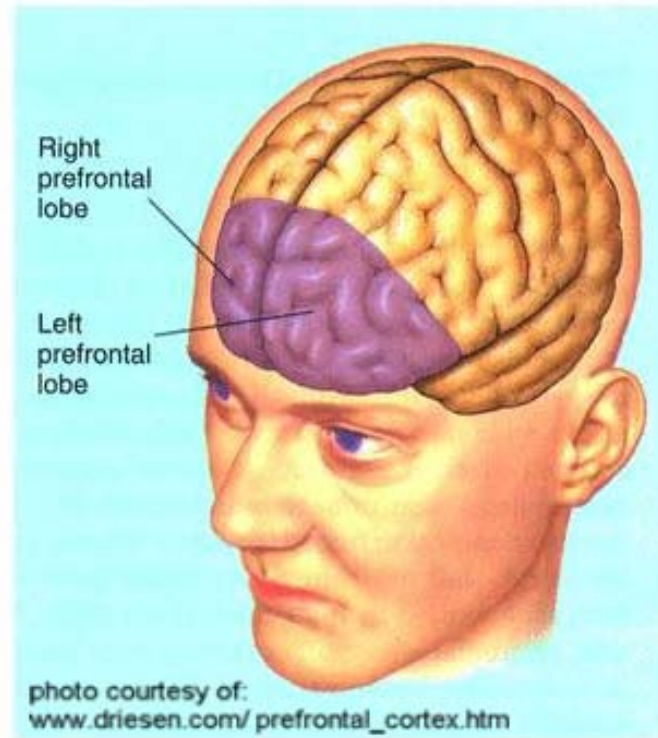


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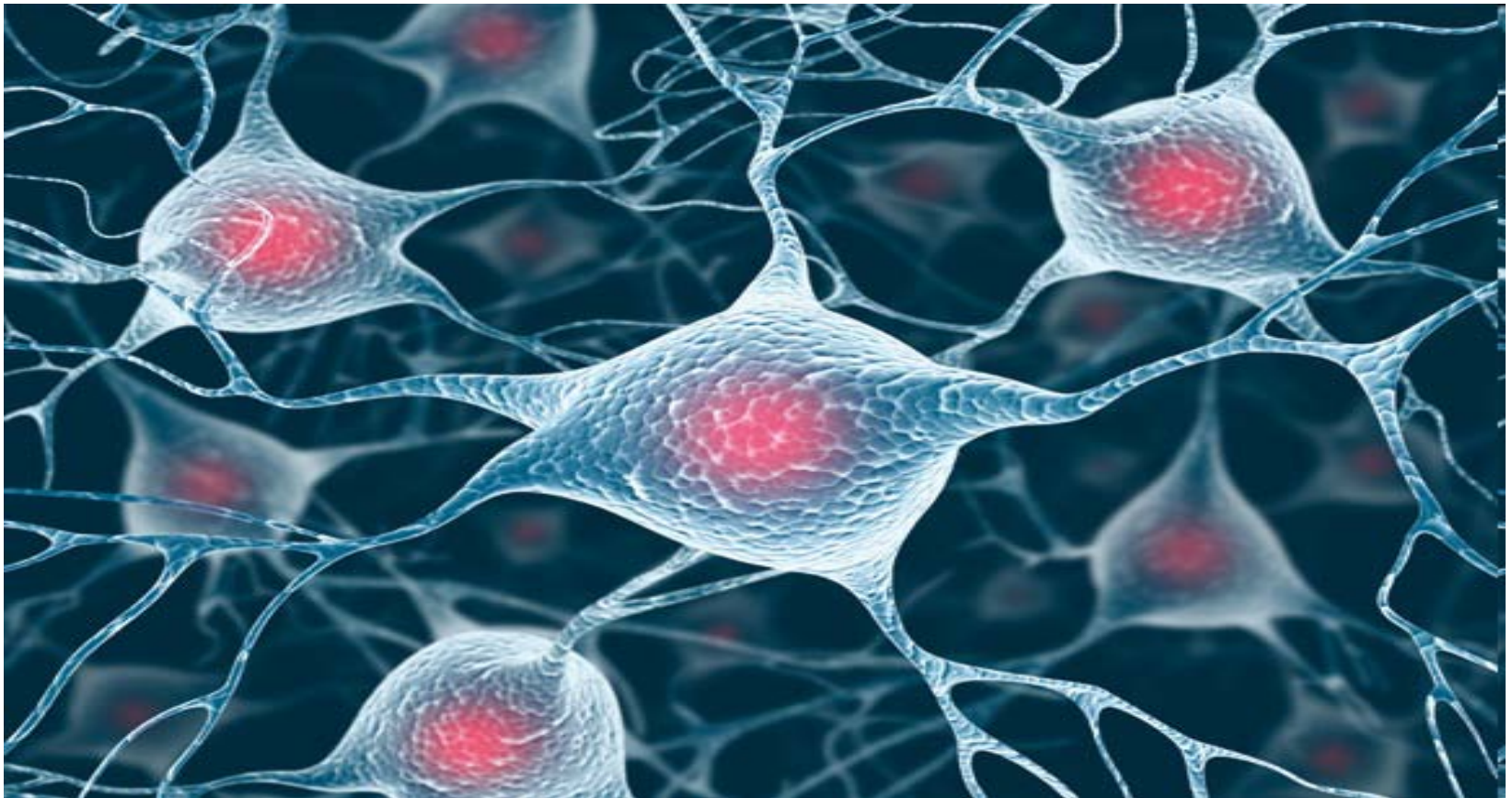
It keeps our amygdalae from ruling us with our emotions, including anger, fear or sadness.



The Prefrontal Cortex is what we need to activate to move forward in conflict resolution



# The Good News about Emotion and Amygdala Activation: it makes the brain neuroplastic



# How we change and heal: 5 kinds of neuroplasticity

- Strengthening connections between neurons
- The growth of new dendrites
- New connections between neurons
- The growth of new neurons
- Alterations of synaptic efficiency related to:
  - Neurotransmitter availability
  - Receptor density
  - Neurohormones and neuromodulators
  - Supportive glial cell availability

# Practice –Using Metalanguage About the Brain to Invite Self- Understanding

- In your dyad, imagine that you are taking some time at the beginning of a session to explain how the amygdala, when upset and unacknowledged, takes the brain's energy and throws up roadblocks to resolution.



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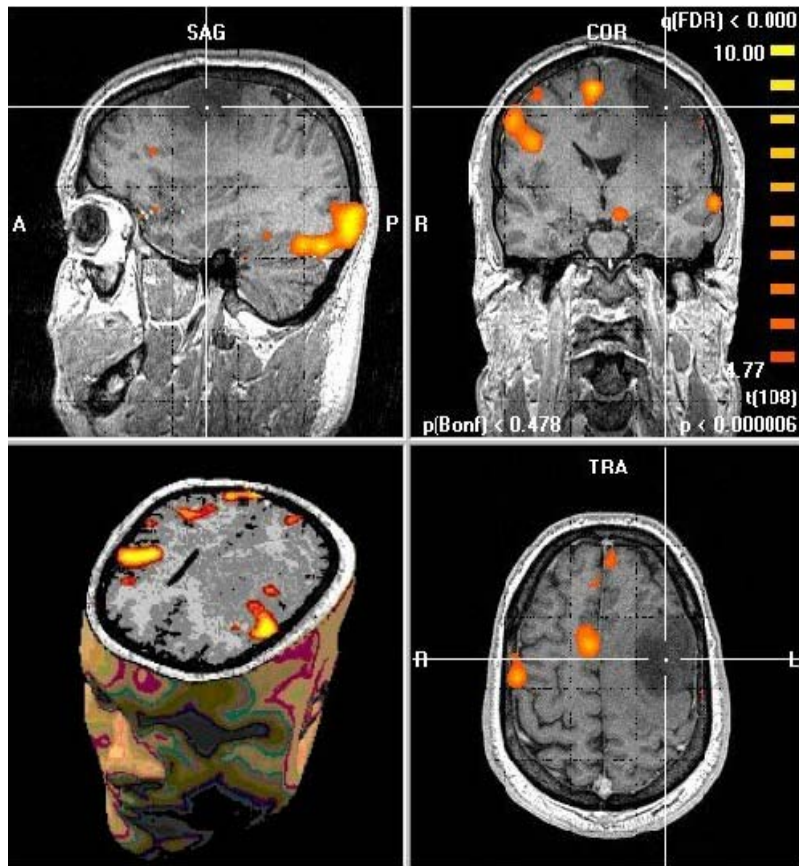
# Why is Naming Experience Effective?



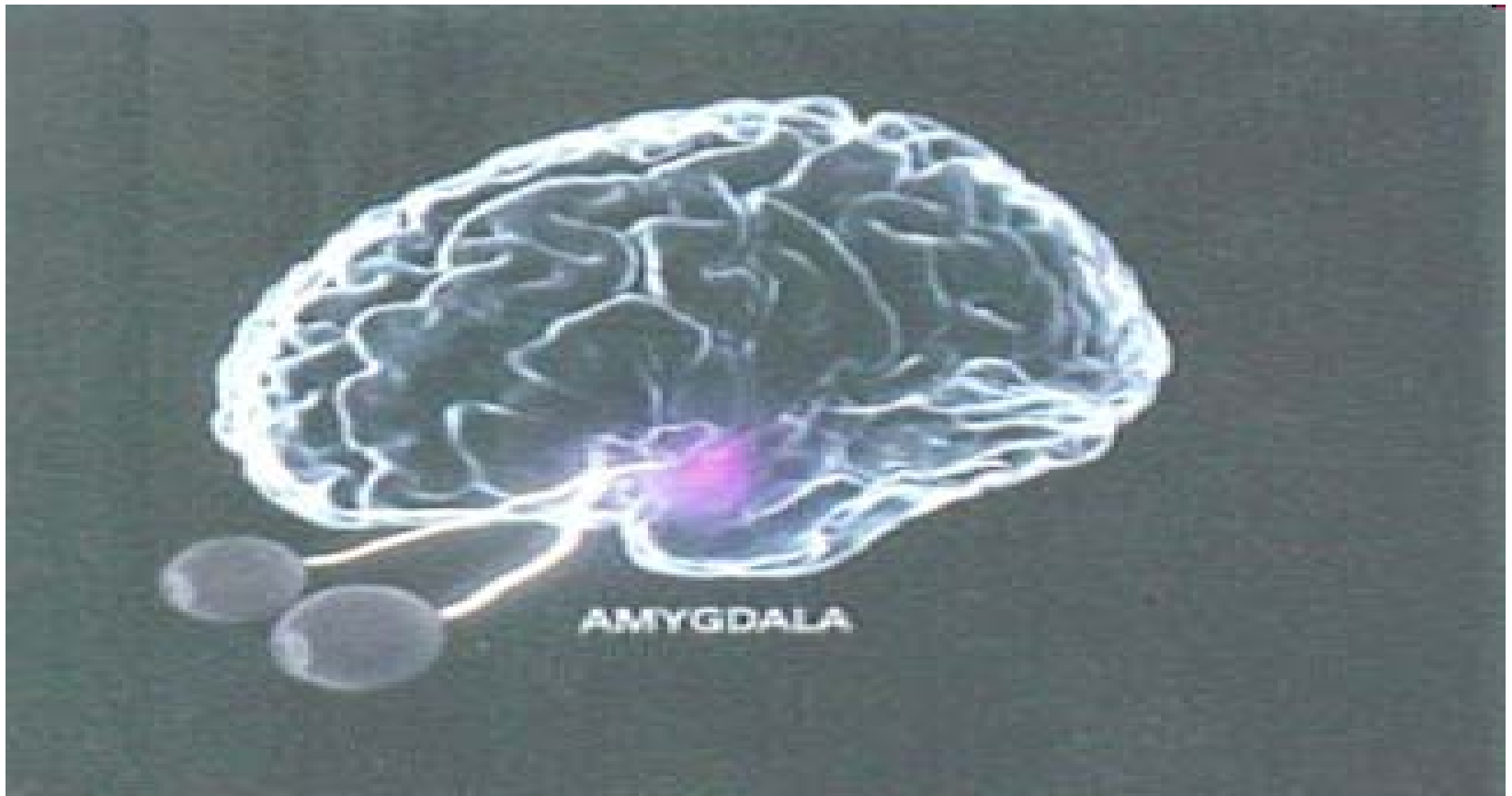
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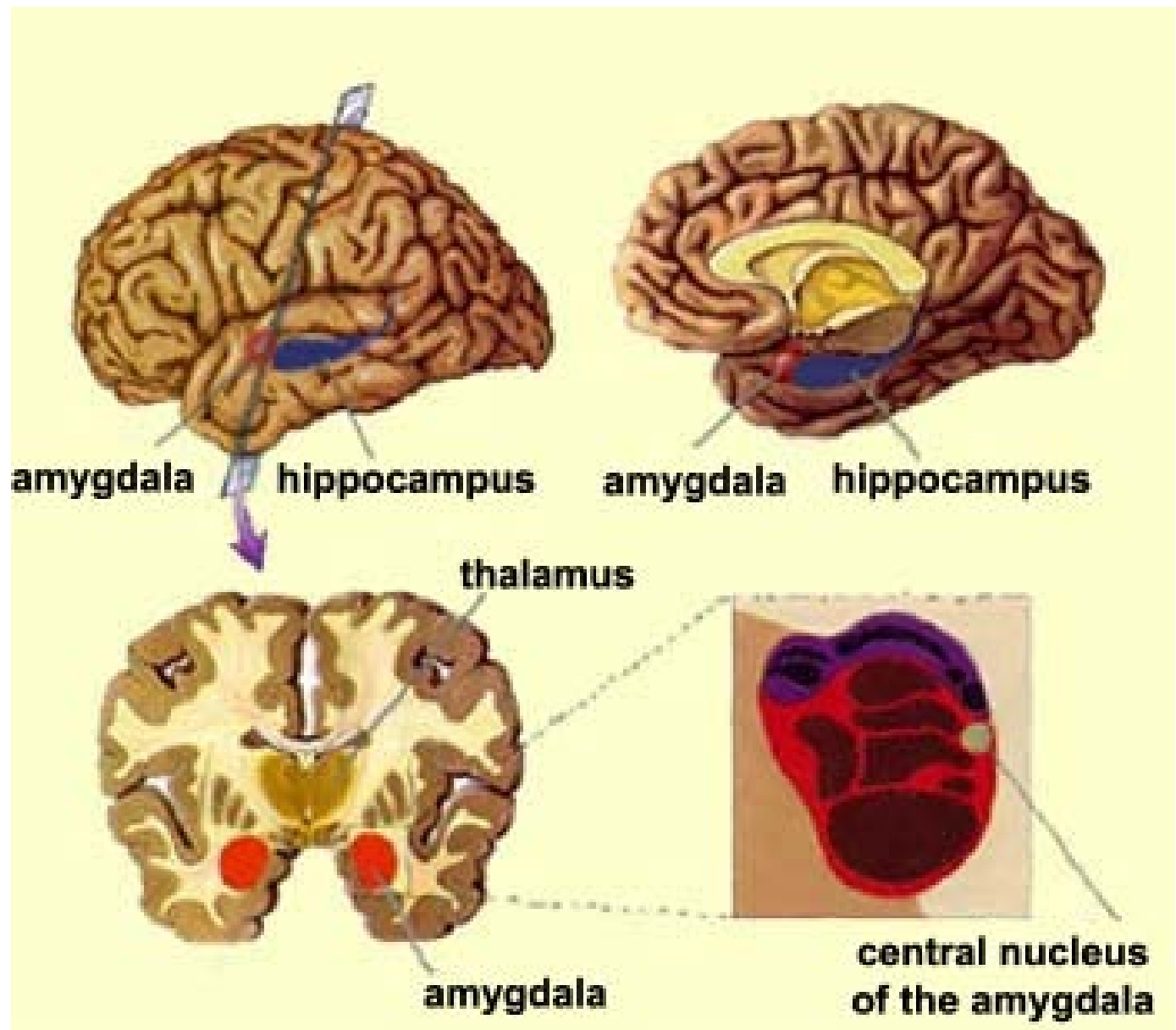


# Matthew D. Lieberman, Ph.D, UCLA



# Different Emotions Run Through Different Areas of the Amygdala





When the correct emotion is named, the amygdala is calmed



# And needs...

## What is the deeper value?

Ease, Flow, Balance	Self-acceptance Understanding	Faith, Trust, Hope
Love, family	Meaning/ Purpose	Compassion/ Empathy
Play, Fun, Humor Celebration	Predictability, Dependability	Partnership/ Mutuality
Intimacy, Connection	Peace, Beauty Harmony	Independence, Choice, Freedom
To Matter and Belong	Creativity, Self- Expression	Exploration, Discovery

# Beyond Strategy

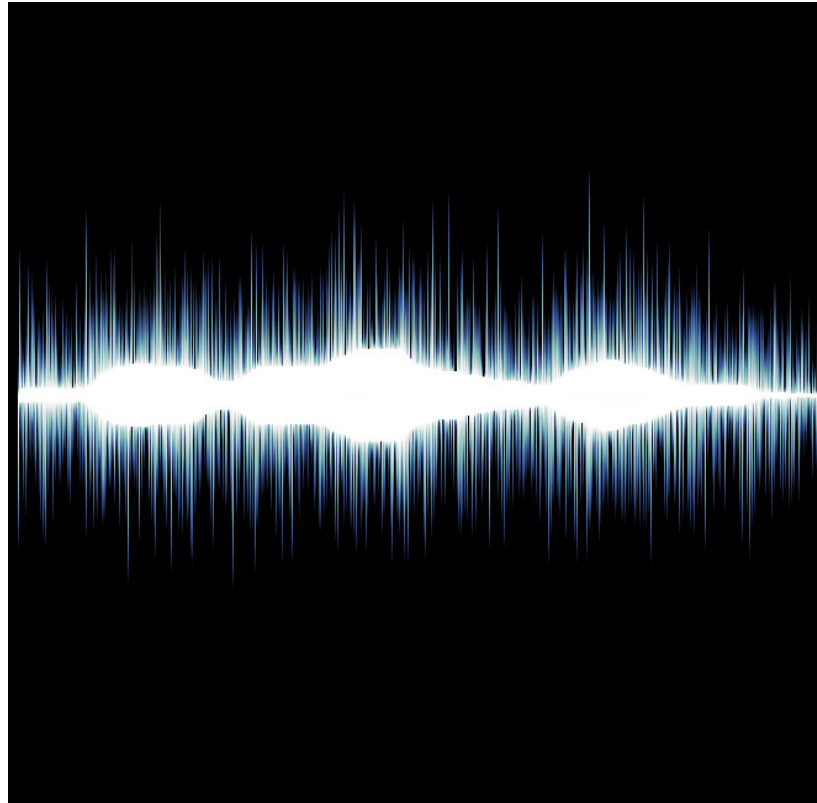


That calms the emotional system  
and balances the hemispheres



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Needs language allows us to  
capture resonance in words



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# Practice – Referencing Needs and Values

- Making a list of needs and values
- Experiencing the resonance that needs words capture
- Introducing empathy using needs language
  - Demo
  - Empathy circle
- Small group practice in naming what's important in conflict
- Transforming an enemy image with needs language



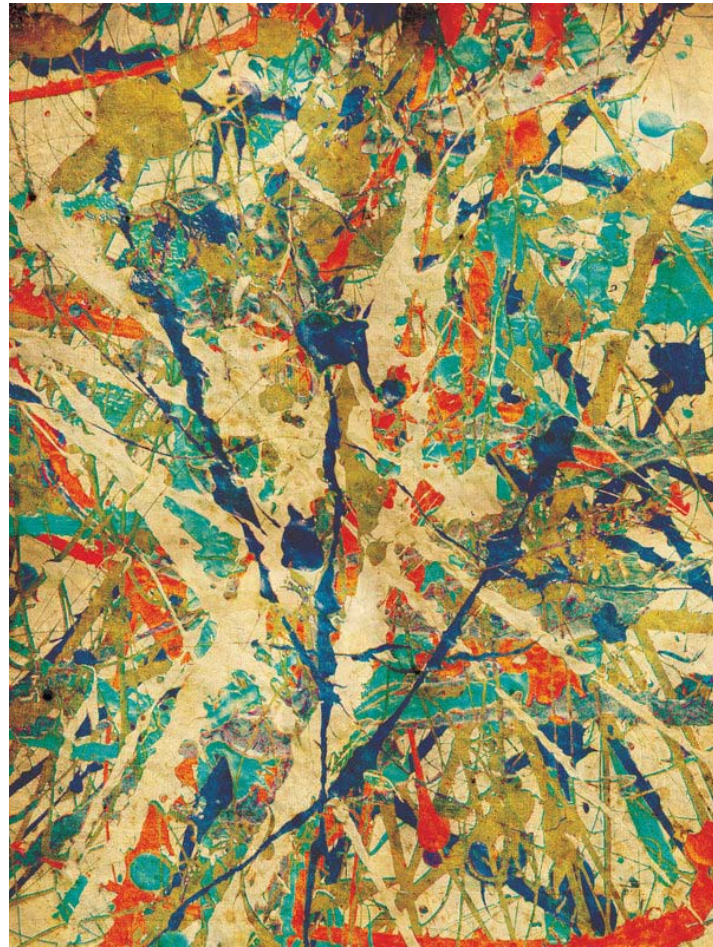
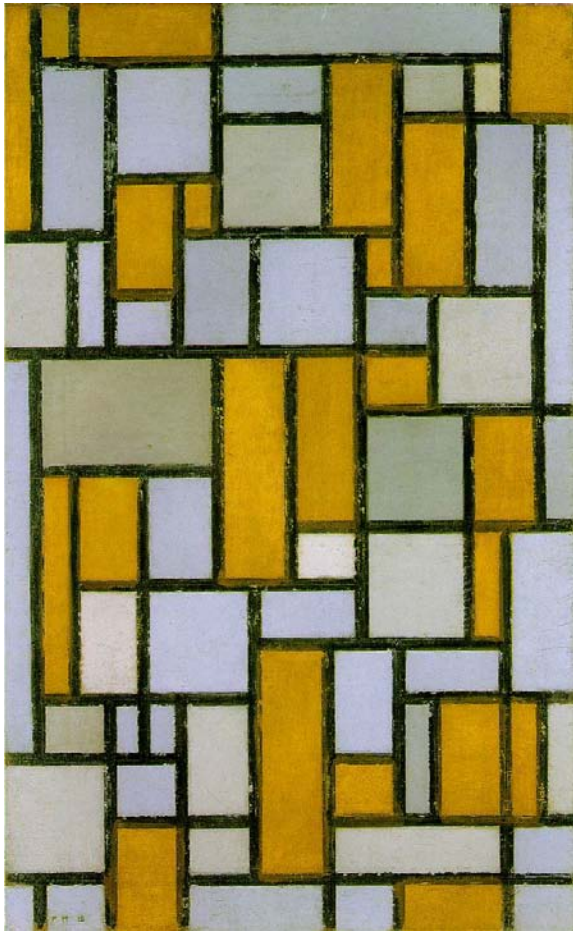
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What do we mean when we say that using  
needs words balances the hemispheres?



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# Our hemispheres are structurally different



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These two structures lead to the two different ways in which each of us are capable of viewing the world:

**Left Hemisphere:**

Attention to detail

Precision

Narrow view

World as to-do list,  
mechanism

What are the tools?

Representation

Preconceptions

Top-down processing

**Right Hemisphere:**

Attention to environment

Comprehensiveness

Big picture view

Who are the people  
involved? What is the  
social picture?

Presence

Openness

Bottom-up processing

Our left amygdala holds emotions  
that are named and within our  
window of tolerance



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When we are outside our window of tolerance,  
and dealing with as yet unnamed emotions, our  
right amygdala is running the show.



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# The importance of the mediator's window of tolerance



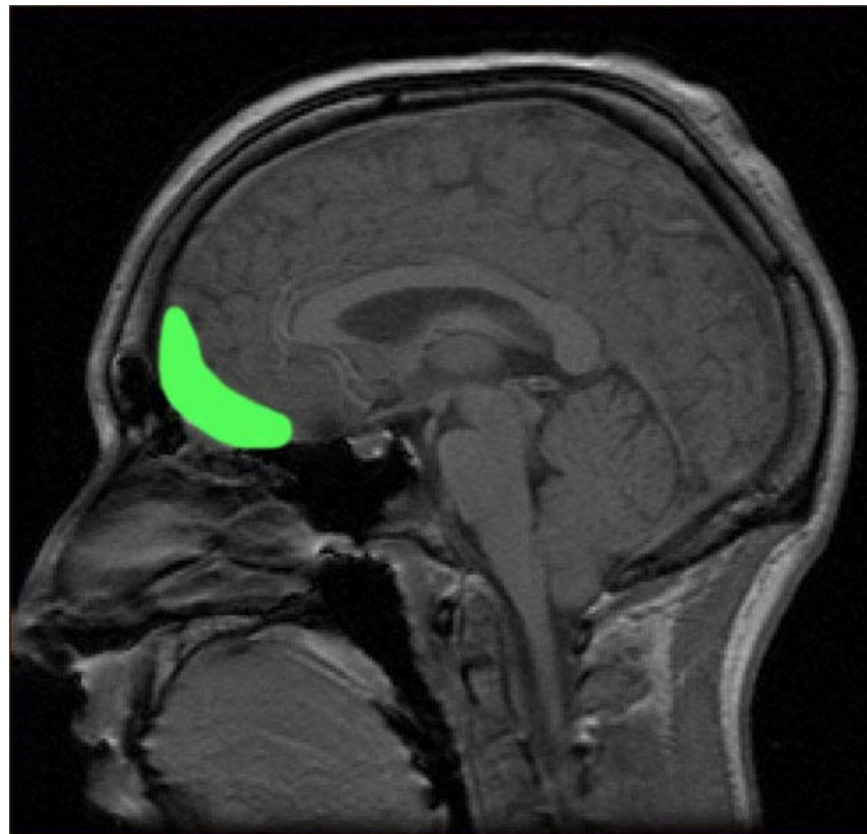
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When the mediator loses connection with the high right hemisphere, so do the parties.

- Moving into disconnection, emotional overwhelm, discouragement, silence, giving up, or trying to problem solve before connection is created

So the mediator needs to bring  
their right orbitofrontal cortex  
back to life



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By calming and soothing the  
emotional system



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And then, since we are made to regulate one another, the mediator can serve as the room's right OFC

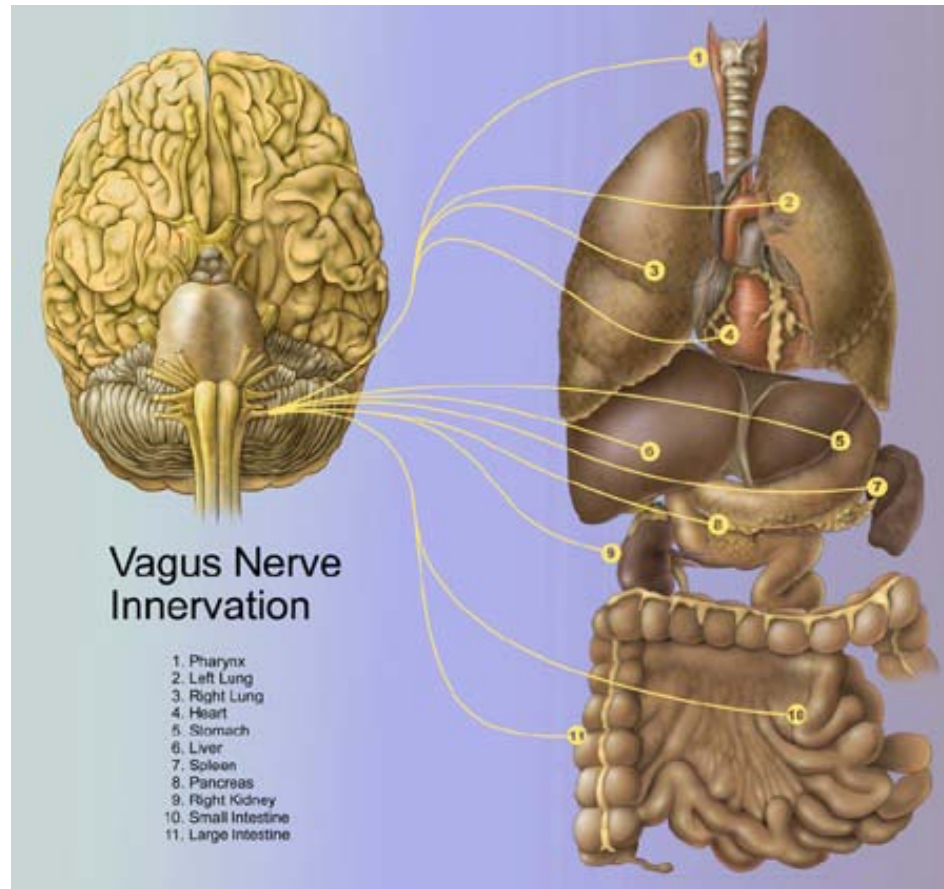


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# How Safety is Perceived in the Body: The Vagal Nerve Complex



# Safety...

- Our nervous system is continuously evaluating:

“Do I feel safe?”

Our amygdala tracks our sense of safety, and is the gear shifter for our nervous system



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# Moving us between fight, flight and freeze

## The 3 Channels of the Vagal Nerve

1. Social Engagement and Self Connection
2. Fight or Flight
3. Freeze

# Safety: Social Engagement and Self-Connection

- Ventral vagal channel
- Parasympathetic, fully myelinated
- We listen and see differently

# Threat: Fight or Flight

- Sympathetic channel
- Fully myelinated
- We superimpose hostility on neutrality

# Giving up: Freeze

- Dorsal vagal channel
- Parasympathetic, not myelinated
- Confusion, hopelessness, shame, overwhelm

# Safety motivates the gear shifter

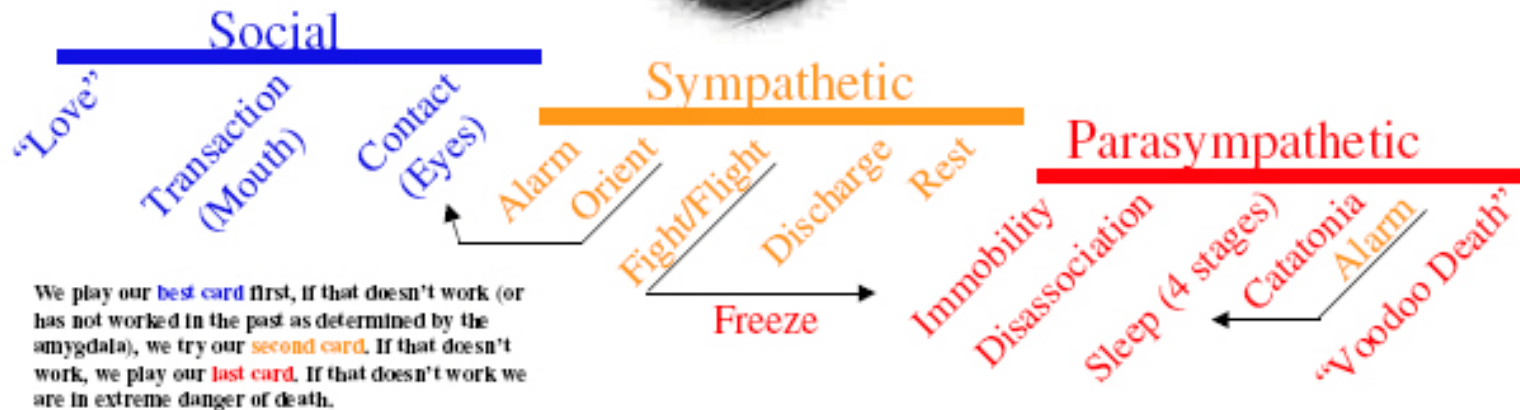
This system is fully hierarchical. The less safe we feel, the farther down the ladder we move, and the safer we feel, the more we move into social engagement and self-connection.

# Theory of Dissolution

“The higher nervous system arrangements inhibit (or control) the lower, and thus, when the higher are suddenly rendered functionless, the lower rise in activity.”



–John Hughlings Jackson (1835-1911)  
 Father of English Neurology  
 Quoted by Stephen Porges 11/01



# As facial mobility



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# And prosody





Invite others into a neuroception  
of safety.



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# Step One – Self-Connection

- When we are calm and self-connected, we offer an invitation to safety in the first 14 milliseconds
- Are we bringing our own stress into the room?
- Are we nervous about the process?
- Are we seeing all participants as human?

# Step Two – Curiosity about Others

We wonder where our clients are in the regulation process, in relationship to history and to one another in the present moment.

# Signs that parties do not feel safe

- Frozen facial expressions
- Flat voice
- Averted gaze
- Collapsed posture
- Expressions of hopelessness
- Criticism, blame
- Moralistic judgment
- Prejudices and “-isms”

# Defusing in-group and out-group thinking by naming experience



And inviting the parties to see one  
another as human



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# The Mediating Parties as a Complex System

- A small amount of clear communication may not just bring us back into a regulated state, it may create a huge breakthrough in integration and possibility.
- In complex systems, you cannot predict the effect of small improvements in the flow of energy and information (integration).

# Using our Mirror Neurons for Good

“Be the peace you want  
to feel in the room.”



# How do we get all brains in the room on board?

1. Self-empathy (our PFC)
2. Naming any group affiliations
3. Inviting the step into humanity
4. Naming experience for others
5. Inviting mutual acknowledgment of needs or values



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# Appendices

# The Mind's Domains of Integration

1. Integration of Consciousness: Presence
2. Vertical Integration: The Embodied Mind
3. Bilateral Integration
4. Memory Integration
5. Narrative Integration
6. State Integration
7. Temporal Integration
8. Interpersonal Integration
9. "Transpirational" Integration

# Key Concepts of IPNB

- a. Every person's mind, including mine, is hard-wired to reach for integration and connection.
- b. Rigidity and chaos are expressions of places where my mind is not in full expression of its capacity to be integrated – flexible, adaptive, coherent, energized and stable.
- c. My brain is neuroplastic, and always learning. I can change my implicit experience into explicit experience and transform rigidity and chaos into integration. *(see next slide)*

# Key Concepts of IPNB cont.

- *c. (continued)* I can transform old neural networks into new relationships with the world. States become traits with practice. When I focus energy and information flow in an integrative practice (being aware of my awareness, paying attention to my intention) I strengthen the integrative fibers of the brain, shifting my baseline response to approach instead of withdrawal, improving my immune system and my blood pressure, increasing my empathy and my relationships with others.

# Key Concepts of IPNB Cont.

- d. The more integrated I am, the more able I am to see behind words or action to the reach for integration and connection, and to have mindsight into the experience of others – attuning to their internal experience, and respecting their ability to be distinct from me, thus making our interpersonal connection more flexible, adaptive, coherent, energized and stable.

# Foundational Ideas of NVC

- a.* Everything that people do is an attempt to meet needs, in other words, we are always and only reaching for life.
- b.* When I understand this, I know that no matter what a person is expressing, it is an attempt to enrich life.
- c.* I do not want to have my needs met at the expense of others' needs, that is, I want to value another's needs as I do my own.



# Foundational Ideas of NVC, cont.

- d. I know that when my needs are seen empathically and when I see another's need empathically, that it stimulates natural compassion. We then want to contribute to each other's well-being.
- e. All attacks, criticism, etc. are tragic expressions of needs.

# NVC

- (for Grok cards) [www.cnvc.org](http://www.cnvc.org)

# IN Resources

- Books by Daniel Siegel, Bonnie Badenoch, Louis Cozzolino
- The Norton series on Interpersonal Neurobiology
- Dr. Dan Siegel's website for presentations and info: <http://www.drdansiegel.com/>
- PSU's IN (IPNB) certificate program: <http://www.ceed.pdx.edu/ipnb/>
- Dr. Allan Schore's website: <http://allanschore.com/>

# Bibliography 1.

- BOOKS ON THE BRAIN:

- 

- [The Neurobiology of "We": How Relationships, the Mind, and the Brain Interact to Shape Who We Are \(Sounds True Audio Learning Course\)](#) by Daniel J. Siegel (Audio CD - May 1, 2008)

- 

- [The Neuroscience of Human Relationships: Attachment And the Developing Social Brain](#) by Louis Cozolino (Hardcover - Nov 17, 2006)

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- [The Mindful Brain: Reflection and Attunement in the Cultivation of Well-Being](#) by Daniel J. Siegel (Hardcover - April 1, 2007)

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- [The Developing Mind: How Relationships and the Brain Interact to Shape Who We Are](#) by Daniel J. Siegel (Paperback - Oct 22, 2001)
- [The Mind and the Brain: Neuroplasticity and the Power of Mental Force](#) by Jeffrey M. Schwartz and Sharon Begley (Paperback - Oct 14, 2003)
- [Being a Brain-Wise Therapist: A Practical Guide to Interpersonal Neurobiology \(Norton Series on Interpersonal Neurobiology\)](#) by Bonnie Badenoch (Paperback - Jul 17, 2008)
- **BRAIN RESEARCH:**
- Matthew Lieberman: <http://www.scn.ucla.edu/papers.html>