
The Loving Brain

Healing and Treating Trauma, Addictions, and Related Disorders

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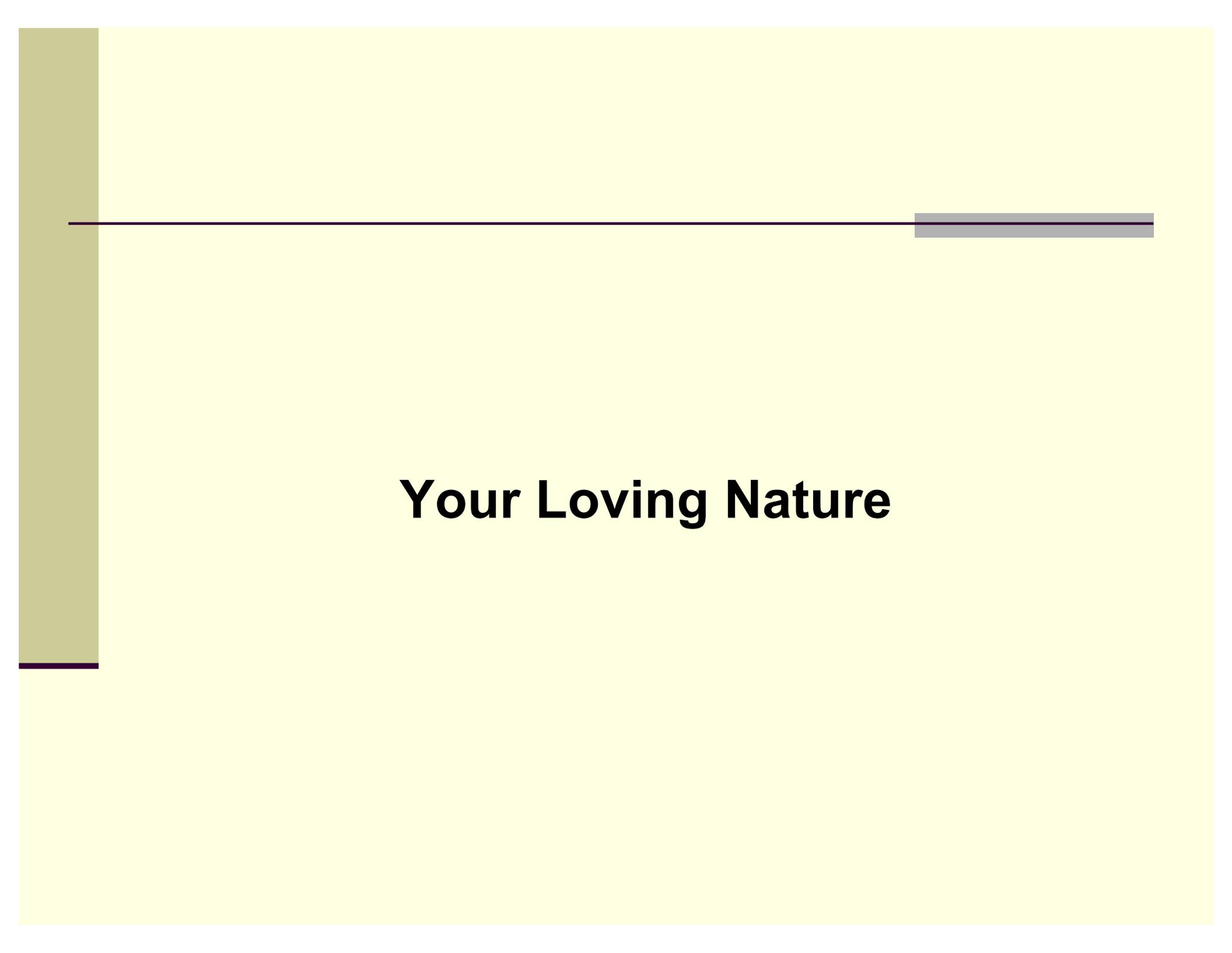
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Topics

- **Your loving nature**
- **Two wolves in the heart**
- **On your own side**
- **Empathy**
- **Compassion and lovingkindness**



Your Loving Nature

Nerve cells form complete circuits that carry and transform information.

Electrical signaling represents the language of mind.

All animals have some form of mental life that reflects the architecture of their nervous system.

Eric R. Kandel, 2006



All sentient beings developed through natural selection in such a way that pleasant sensations serve as their guide, and especially the pleasure derived from sociability and from loving our families.

Charles Darwin





The Social Brain

- Social capabilities have been a primary driver of brain evolution.
- Reptiles and fish avoid and approach. Mammals and birds *attach* as well - especially primates and humans.
- Mammals and birds have bigger brains than reptiles and fish.
- The more social the primate species, the bigger the cortex.
- Since the first hominids began making tools ~ 2.5 million years ago, the brain has roughly tripled in size, much of its build-out devoted to social functions (e.g., cooperative planning, empathy, language). The growing brain needed a longer childhood, which required greater pair bonding and band cohesion.







Oxytocin

- It promotes bonding between parents and children - and between mates and friends, keeping kids alive
- In women, it triggers the let-down reflex in nursing, and tend-and-befriend behaviors during stress.
- In both sexes, it dampens the stress response; it feels pleasurable, relaxed, a “rightness.”
- It is stimulated by:
 - Physical contact (especially skin to skin)
 - Moving together harmoniously (e.g., dancing)
 - Warm feelings of rapport or love; devotion
 - Imagination of these
 - Nipple stimulation
 - Orgasm



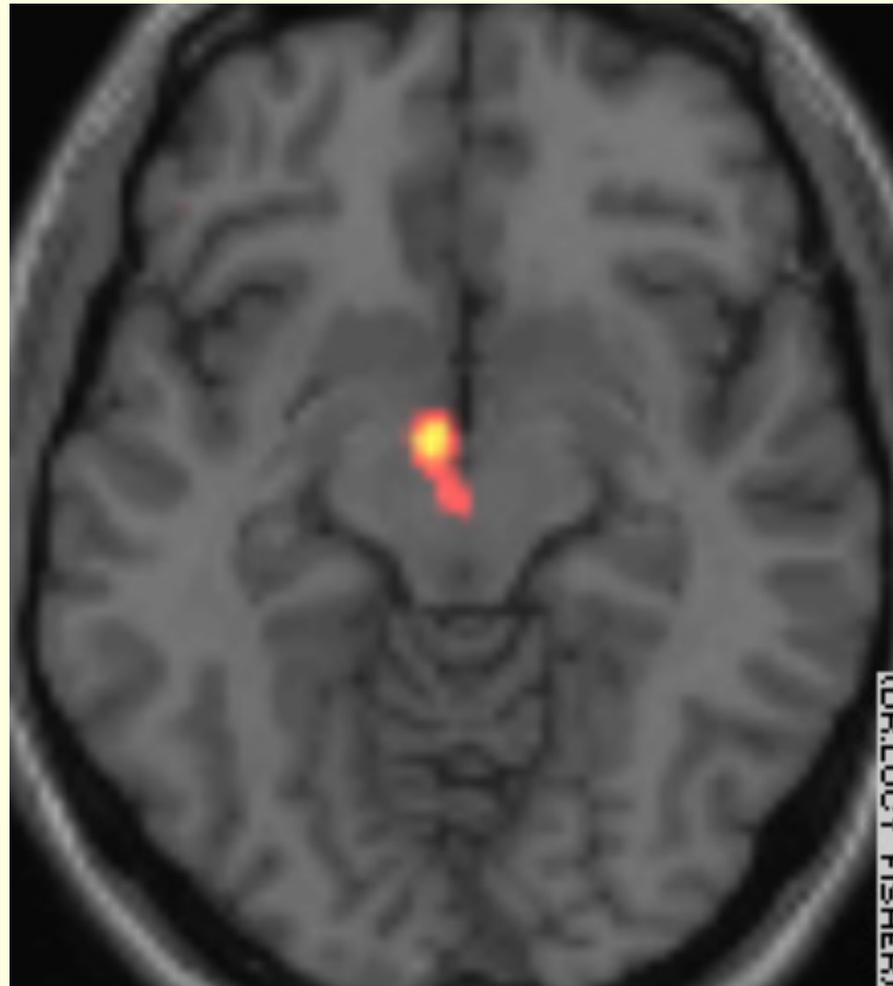




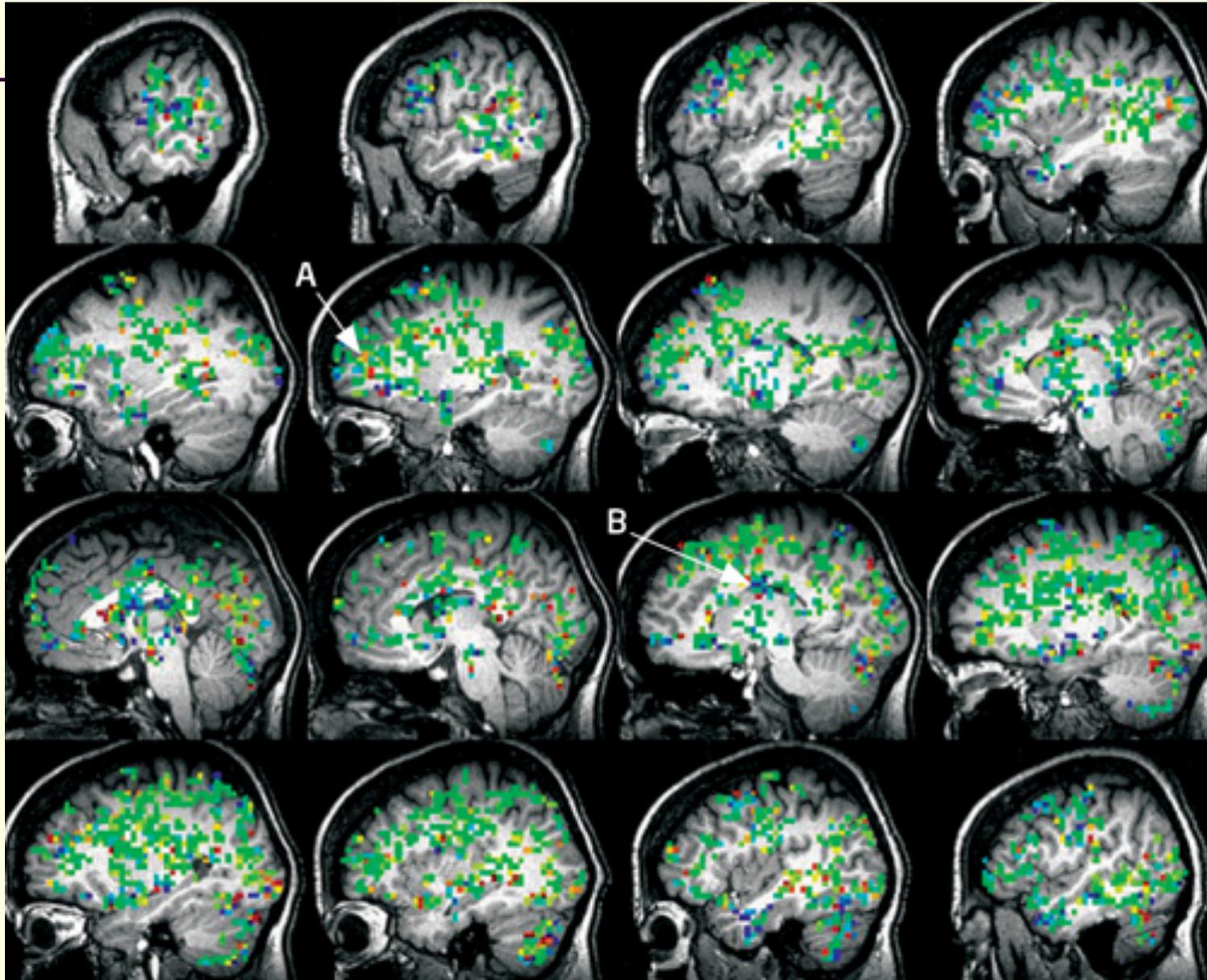


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Rewards of Love



Orgasm in a Woman's Brain

























*In the cherry blossom's shade
there is no thing
as a stranger*

Issa



If there is anything I have learned about [people], it is that there is a deeper spirit of altruism than is ever evident.

Just as the rivers we see are minor compared to the underground streams, so, too, the idealism that is visible is minor compared to what people carry in their hearts unreleased or scarcely released.

(Hu)mankind is waiting and longing for those who can accomplish the task of untying what is knotted, and bringing these underground waters to the surface.

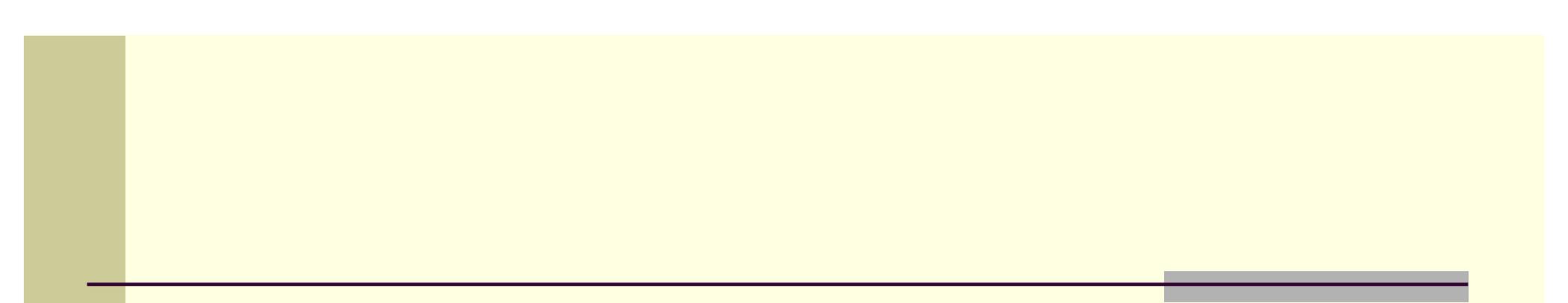
Albert Schweitzer











Two Wolves in the Heart

Us and Them

- Core evolutionary strategy: within-group cooperation, and between-group aggression.
- Both capacities and tendencies are hard-wired into our brains, ready for activation. And there is individual variation.
- Our biological nature is much more inclined toward cooperative sociability than toward aggression and indifference or cruelty. We are just very reactive to social distinctions and threats.
- That reactivity is intensified and often exploited by economic, cultural, and religious factors.
- Two wolves in your heart:
 - Love sees a vast circle in which all beings are “us.”
 - Hate sees a small circle of “us,” even only the self.

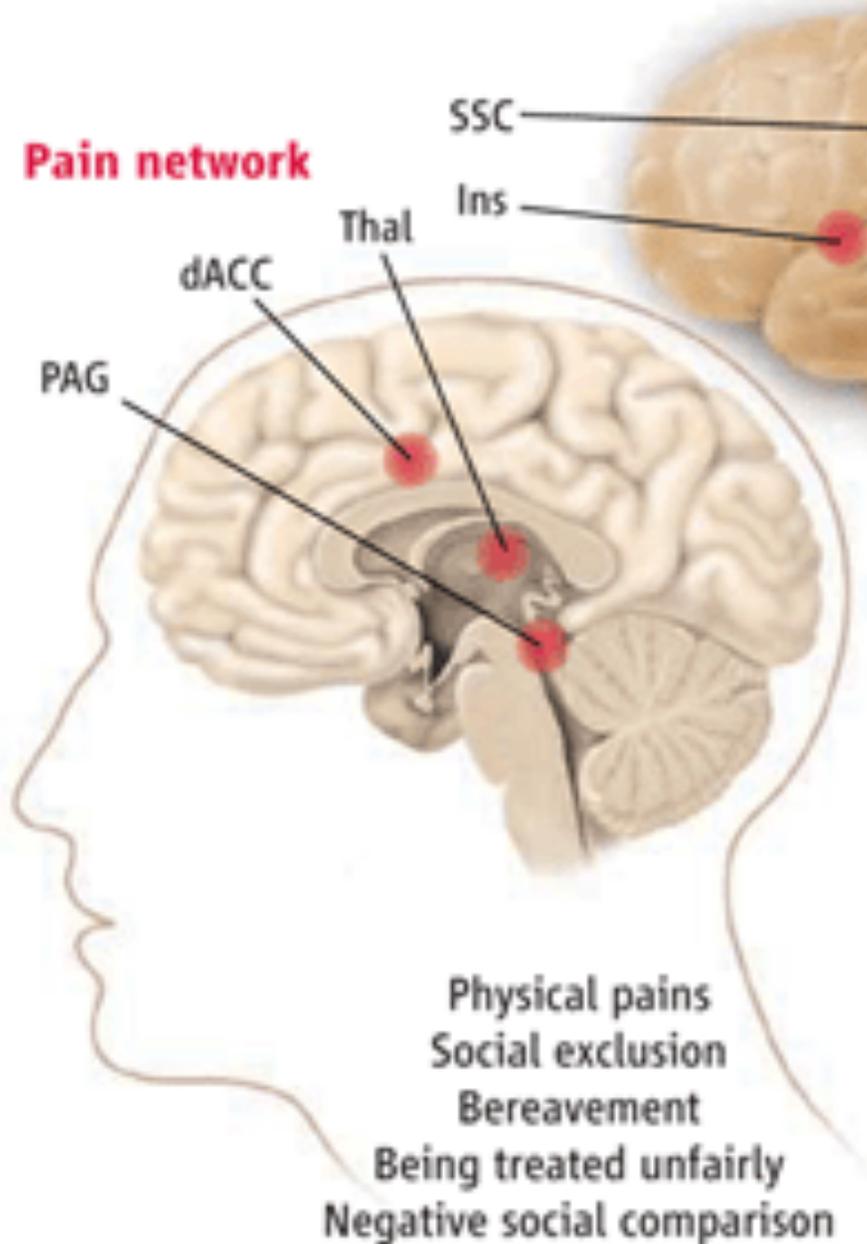
Which one will you feed?

*In between-family fights, the baboon's 'I'
expands to include all of her close kin;
in within-family fights,
it contracts to include only herself.*

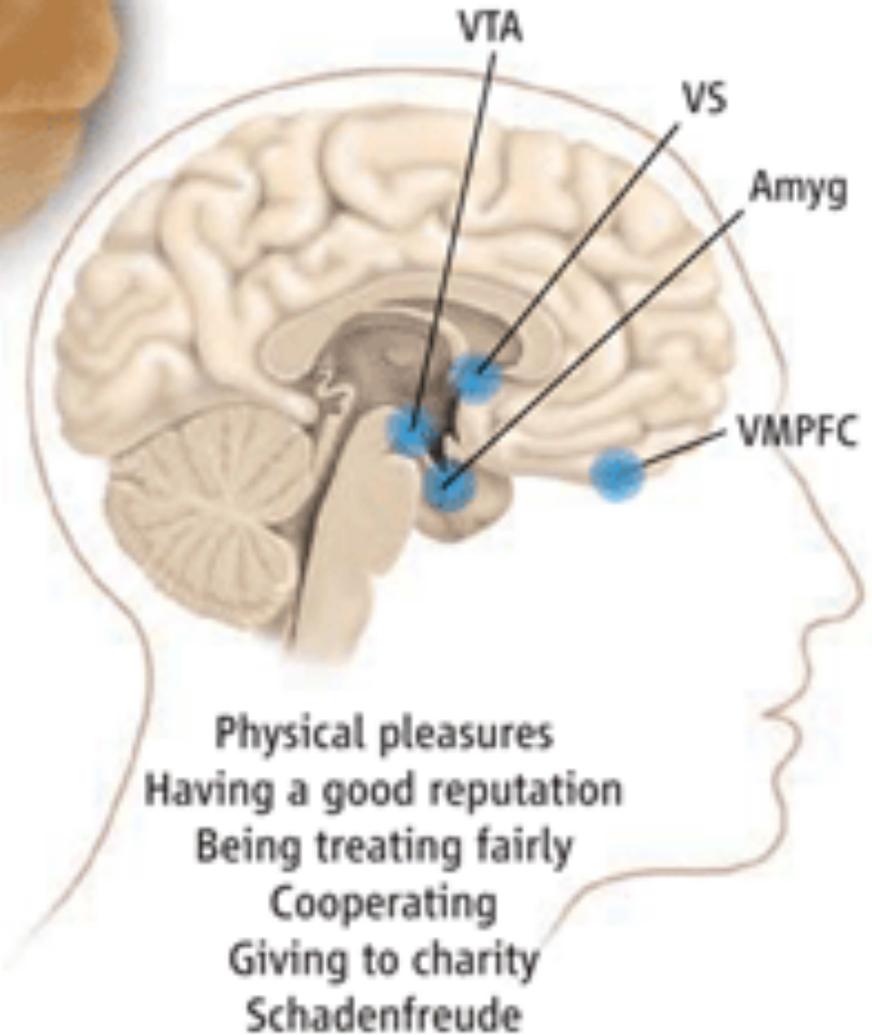
*This explanation serves for baboons
as much as for the Montagues and Capulets.*

Dorothy Cheney and Robert Seyfarth

Pain network

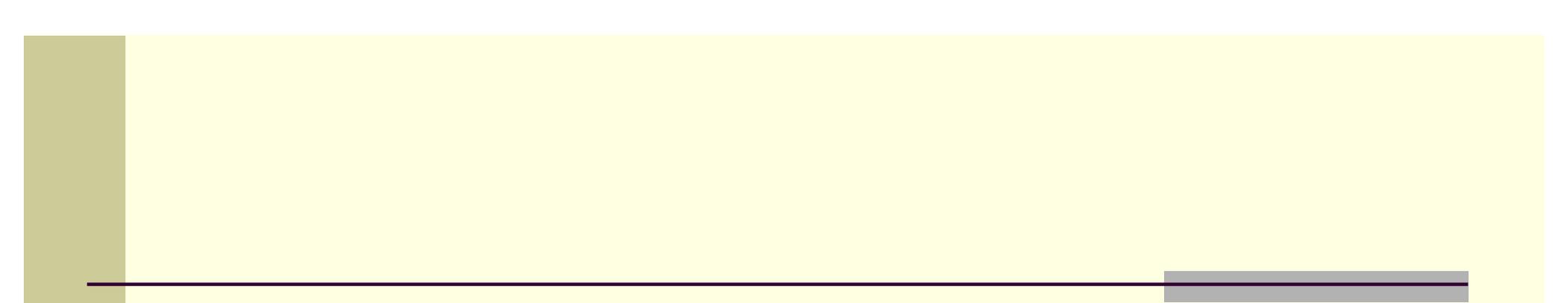


Reward network



Pain network: Dorsal anterior cingulate cortex (dACC), insula (Ins), somatosensory cortex (SSC), thalamus (Thal), and periaqueductal gray (PAG).

Reward network: Ventral tegmental area (VTA), ventral striatum (VS), ventromedial prefrontal cortex (VMPFC), and amygdala (Amyg).



On Your Own Side

Self-Compassion

- Compassion is the wish that a being not suffer, combined with sympathetic concern. Self-compassion simply applies that to oneself. It is not self-pity, complaining, or wallowing in pain.
- Studies show that self-compassion buffers stress and increases resilience and self-worth.
- But self-compassion is hard for many people, due to feelings of unworthiness, self-criticism, or “internalized oppression.” To encourage the neural substrates of self-compassion:
 - Get the sense of being cared about by someone else.
 - Bring to mind someone you naturally feel compassion for
 - Sink into the experience of compassion in your body
 - Then shift the compassion to yourself, perhaps with phrases like: “May I not suffer. May the pain of this moment pass.”

“Anthem”

*Ring the bells that still can ring
Forget your perfect offering
There is a crack in everything
That's how the light gets in
That's how the light gets in*

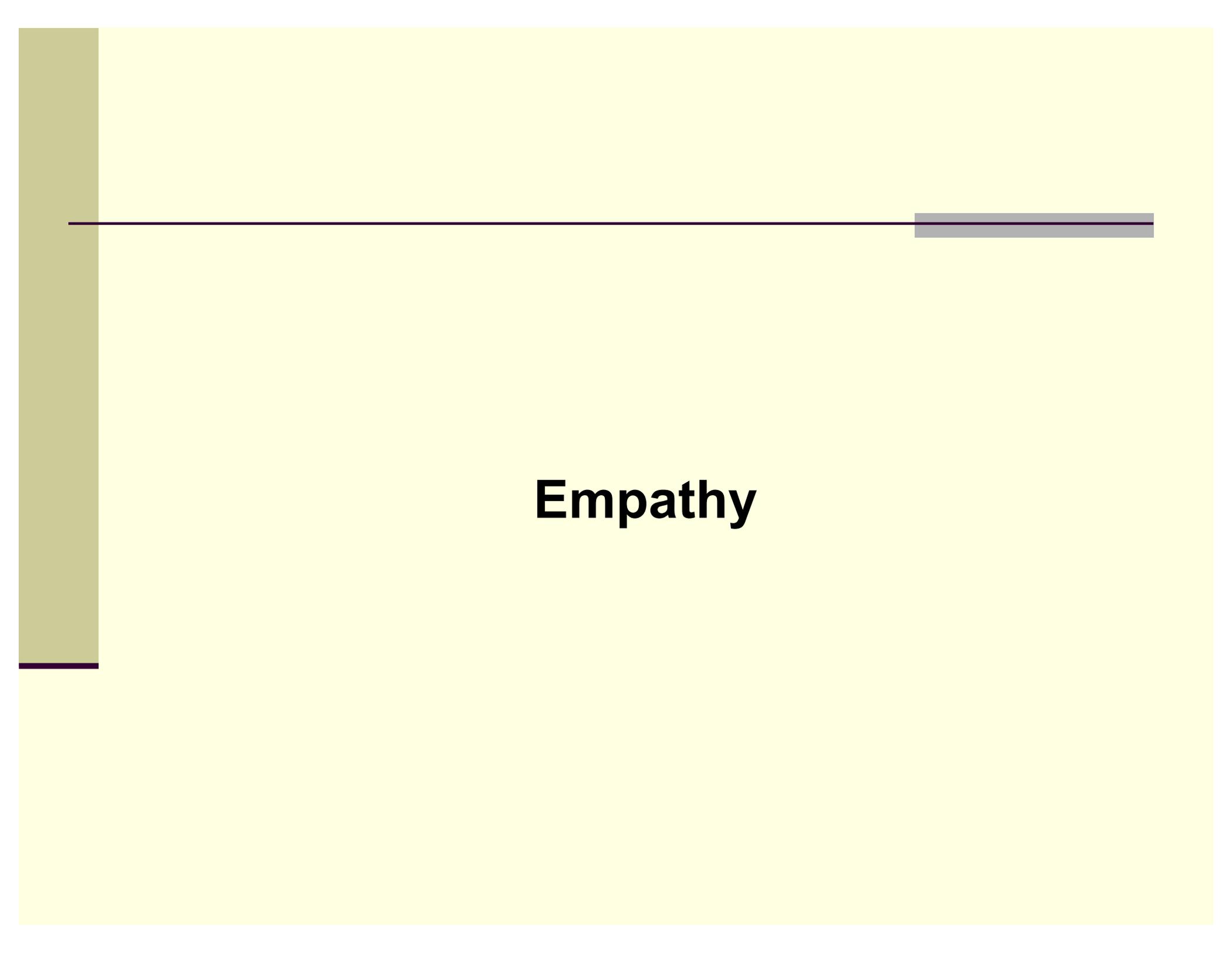
Leonard Cohen

*If one going down into a river,
swollen and swiftly flowing,
is carried away by the current --
how can one help others across?*

The Buddha

*The good life, as I conceive it, is a happy life.
I do not mean that if you are good you will be happy;
I mean that if you are happy you will be good.*

Bertrand Russell



Empathy

What Is Empathy?

- It is sensing, feeling, and understanding how it is for the other person. In effect, you *simulate* his or her inner world.
- It involves (sometimes subtly) all of these elements:
 - Bodily resonance
 - Emotional attunement
 - Conceptual understanding
- Empathy is usually communicated, often tacitly.
- We can give empathy, we can receive it, and we can ask for it.

*If we could read the secret history
of our enemies,
we should find in each [person's] life
sorrow and suffering enough
to disarm any hostility.*

Henry Wadsworth Longfellow

Neural Substrates of Empathy

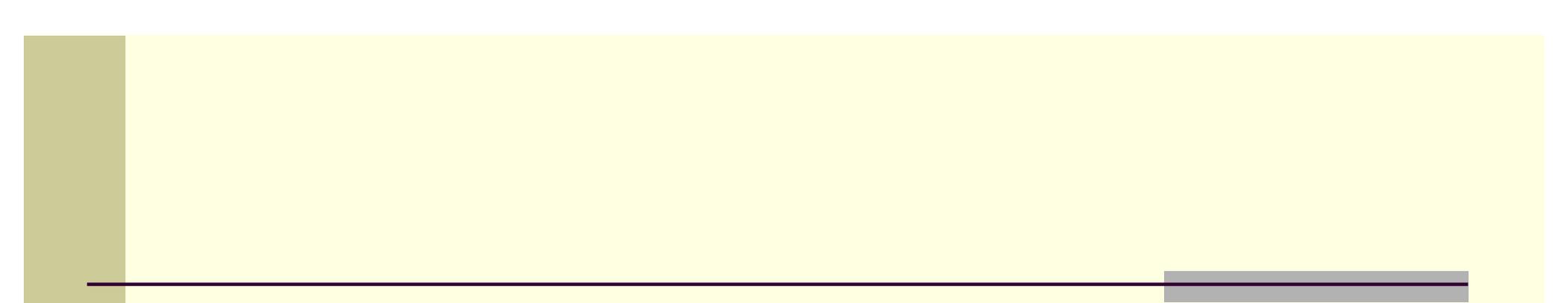
- Three *simulating* systems:
 - Actions: “mirror” systems; temporal-parietal
 - Feelings: resonating emotionally; insula
 - Thoughts: “theory of mind”; prefrontal cortex
- These systems interact with each other through association and active inquiry.
- They produce an automatic, continual re-creation of aspects of others’ experience.

Empathy Skills

- Pay attention.
- Be open.
- Read emotion in face and eyes.
- Sense beneath the surface.
- Drop aversion (judgments, distaste, fear, anger, withdrawal).
- Investigate actively.
- Express empathic understanding:
 - Reflect the content
 - Resonate with the tone and implicit material
 - Questions are fine
 - Offer respect and wise speech throughout

Reflections about Empathy

- You're more likely to get empathy if you're:
 - Open, present
 - Honest, real, authentic
 - Reasonably clear
 - Responsible for your own experience
 - Taking it in when you feel felt
- Empathy can be negotiated:
 - Name it as a topic in the relationship
 - Follow NVC format: "When X happens, I feel Y, because I need Z. So I request _____."
 - Stay with it.



Compassion and Lovingkindness



The Wisdom of Connection

A human being is a part of a whole, called by us "universe," a part limited in time and space. He experiences himself, his thoughts and feelings as something separated from the rest... a kind of optical delusion of his consciousness.

This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest to us.

Our task must be to free ourselves from this prison by widening our circle of compassion to embrace all living creatures and the whole of nature in its beauty.

Albert Einstein

Lovingkindness Practice

- Types of wishes

- Safety
- Health
- Happiness
- Ease

- Types of beings

- Self
- Benefactor
- Friend
- Neutral
- Difficult

- Continually “omitting none” in all directions



So that all cubs are our own . . .

All beings are our clan . . .

All life, our relatives . . .

The whole earth, our home . . .

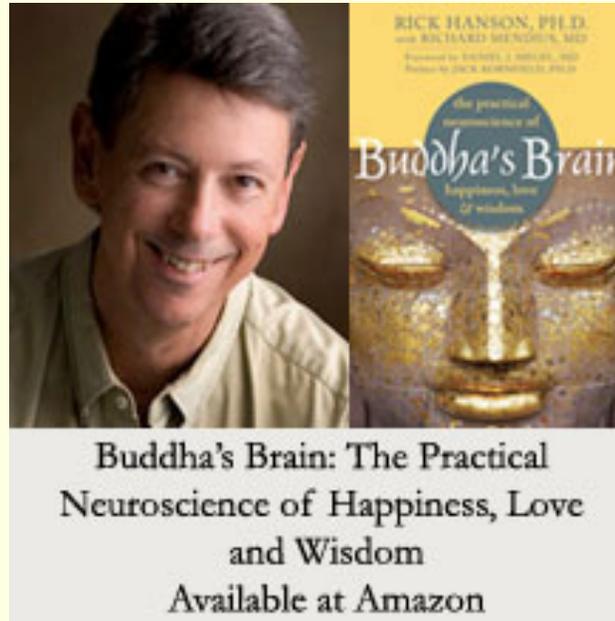
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