
*Indeed, the sage who's fully quenched
Rests at ease in every way;
No sense desire adheres to him or her
Whose fires have cooled, deprived of fuel.*

*All attachments have been severed,
The heart's been led away from pain;
Tranquil, he or she rests with utmost ease.
The mind has found its way to peace.*

The Buddha

1

Equanimity:

In the Dharma and in Your Brain

Spirit Rock Meditation Center

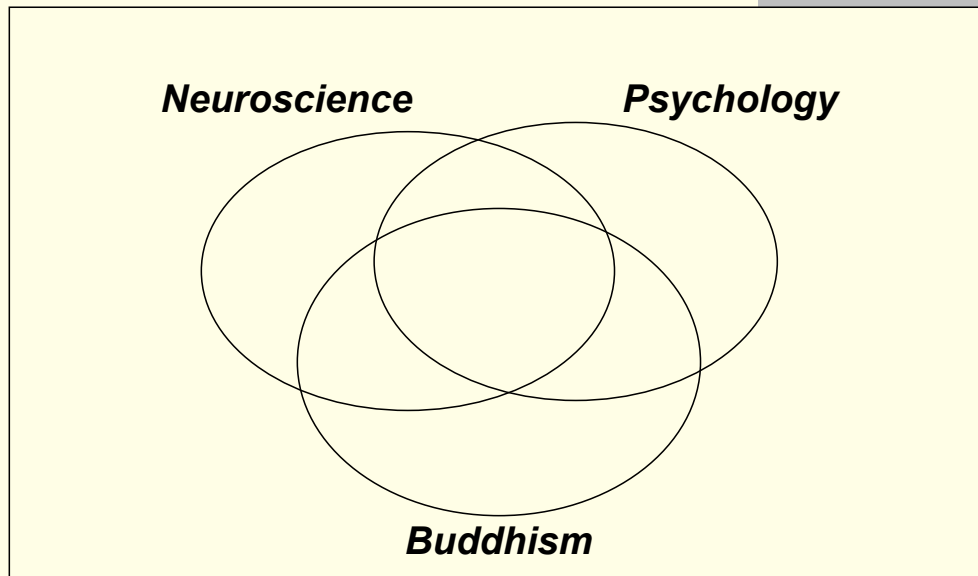
May 17, 2009

Rick Hanson, Ph.D. Rick Mendius, M.D.

www.WiseBrain.org

2

Common - and Fertile - Ground



3

"We ask, 'What is a thought?'
We don't know,
yet we are thinking continually."

- Ven. Tenzin Palmo

4

A Few Disclaimers

- On the frontiers of science
- Neuropsychology is no replacement for contemplative wisdom.
- It's OK to focus more on psychology, neurology, or contemplation today.
- Within the frame of the Buddhist contemplative tradition, particularly its Theravadan wing
- Adapt this to your own needs and practices.
- There are lots of important perspectives besides the ones you'll hear today.

5

Plan for the Day

- Context
- Foundations of Meditation
- Mind/Brain Integration
- Equanimity in Buddhist Thought and Practice
- Urgent Care
- Lunch
- Survival Reaction Machinery in the Brain and Body
- Equanimity in the Brain
- Understanding. Intention. Steadiness of Mind.
- Spacious Awareness. Tranquility and Contentment

6

Basics of Meditation

- Relax
- Posture that is comfortable and alert
- Simple good will toward yourself
- Awareness of your body
- Focus on something to steady your attention
- Accepting whatever passes through awareness, not resisting it or chasing it
- Gently settling into peaceful well-being

7

Foundations of Meditation

- Setting an intention - “top-down” frontal lobes, “bottom-up” limbic system
- Relaxing the body - parasympathetic nervous system
- Feeling safer - inhibits amygdala/ hippocampus vigilance circuits
- Evoking positive emotion - dopamine, norepinephrine
- Absorbing the benefits - primes memory circuits throughout the brain

8

Know the mind.

Shape the mind.

Free the mind.

9

The Mind/Brain System

- “Mind” = flow of information within the nervous system; mainly forever unconscious
- Apart from hypothetical transcendental factors, your mind *is* what your brain *does*. **The brain is the *necessary and proximally sufficient* condition for the mind.**
- As brain changes, mind changes. As mind changes, brain changes. Mental activity - the flow of information - maps to neural activity, the flow of matter and energy.
- Therefore, you can use your mind to change your brain to change your mind - to benefit your whole being and every other being you touch.

10

Mental Activity Sculpts Neural Structure

- What flows through your mind sculpts your brain. Immaterial experience leaves material traces behind.
- “Neurons that fire together wire together.”
 - Neuronal “pruning” - Natural selection in the brain
 - Changes in excitability of individual neurons due to activity
 - Increased blood flow
 - Strengthen existing synapses
 - Building new synapses; from *in utero* to your deathbed
 - Observable thickening of cortical layers
- Your experience matters. Both for how it feels in the moment and for the lasting residues it leaves behind, woven into the fabric of your being.

11

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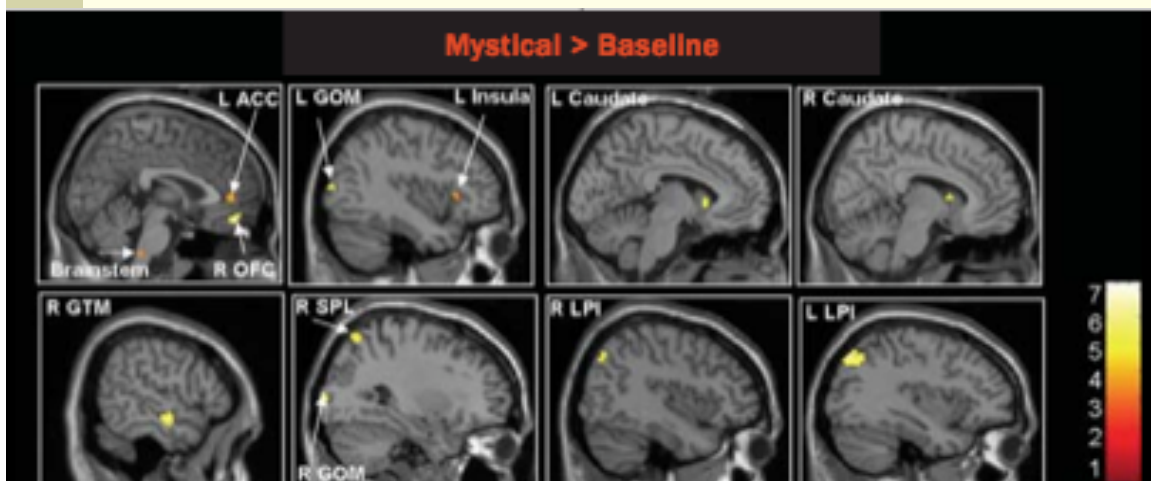
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“Ardent, Diligent, Resolute, and Mindful”



13

Nuns in Prayer



14

Equanimity in Buddhism

- The feeling tone of experience
- Tone -> Craving -> Clinging -> Suffering
- Equanimity is the circuit breaker
 - Stops the flow of second darts
 - Bringing spaciousness and stability
 - Not indifference and apathy
- One of the Brahmaviharas and Paramis
- Central to the 4th Jhana
- Enables us to handle the Eight Worldly Winds

15

When the uninstructed worldling experiences a painful feeling, she sorrows, grieves, and laments; she weeps beating her breast and becomes distraught. She feels two feelings - a bodily one and a mental one.

Suppose they were to strike a man with a dart, and then strike him immediately afterward with a second dart, so that the man would feel a feeling caused by two darts.

So too, when the uninstructed worldling experiences a painful feeling, she feels two feelings - a bodily one and a mental one.

The Buddha, SN 36:6

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Equanimity in Buddhism

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Urgent Care

- Notice you are upset
- Self-compassion
- Get on your own side

18

*The root of Buddhism is compassion,
and the root of compassion is compassion for oneself.*

Pema Chodren

19

Urgent Care

- Notice you are upset
- Self-compassion
- Get on your own side

20

*In the deepest forms of insight,
we see that things change so quickly
that we can't hold onto anything,
and eventually the mind lets go of clinging.*

*Letting go brings equanimity.
The greater the letting go, the deeper the equanimity.
In Buddhist practice, we work to expand
the range of life experiences in which we are free.*

U Pandita

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A Serenity Prayer

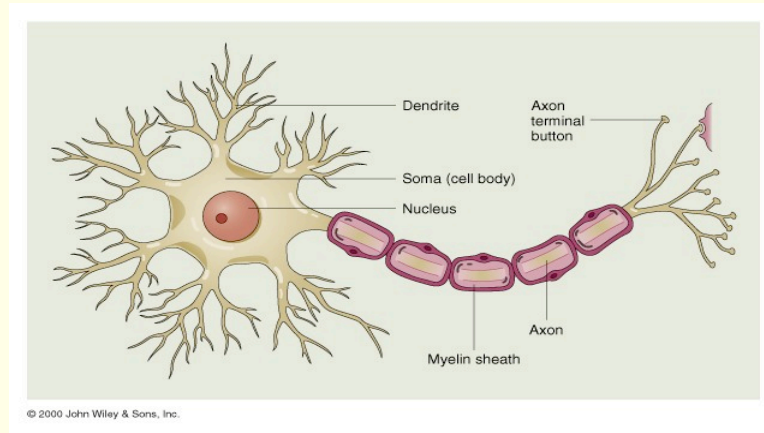
*May I find the serenity to accept the things that cannot be changed,
the courage to change the things which should be changed,
and the wisdom to distinguish the one from the other.*

*Living one day at a time,
Enjoying one moment at a time,
Accepting hardship as a pathway to peace,
Taking this imperfect world as it is,
Not as I would have it,
Trusting in my refuges,
May I be reasonably happy in this life,
And supremely happy forever some day.*

Adapted from the Serenity Prayer, by Reinhold Niebuhr (1892-1971)

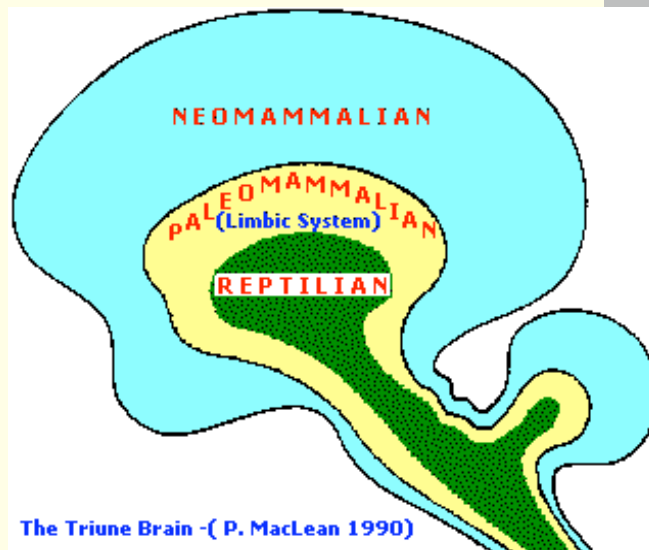
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One Simple Neuron . . .



23

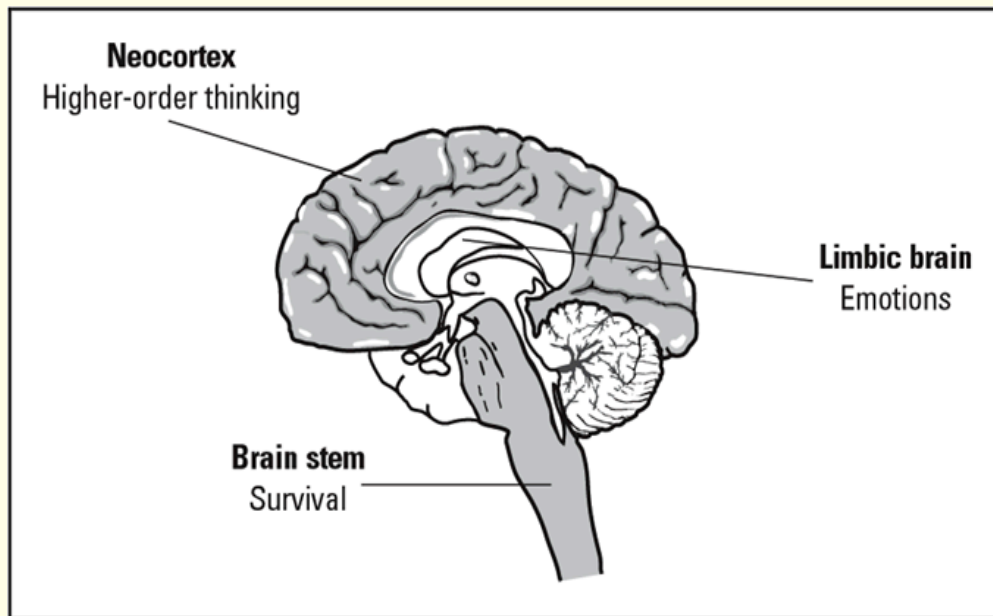
Evolutionary History



The Triune Brain

24

Circuits of Reactive Responses



The Negativity Bias

- In evolution, threats had more impact on survival than opportunities. So sticks are more salient than carrots:
 - Amygdala is primed to label experiences negatively
 - Amygdala-hippocampus system flags negative experiences prominently in memory
 - The brain is like velcro for negative experiences and teflon for positive ones.
- Consequently, negative trumps positive:
 - Easy to create learned helplessness, hard to undo
 - People will do more to avoid a loss than get a gain.
 - Takes five positive interactions to undo a negative one
- Negative experiences create vicious cycles.

The Anatomy of Reactivity

- Incoming stimuli processed by limbic system
 - Central switchboard
 - Primed to go negative: anxious combativeness

- Snap judgments [influenced by memory via hippocampus]:
 - Pleasant → Approach (mate with or eat)
 - Unpleasant → Avoid (flee from, fight with, freeze, or appease)
 - Neutral → Ignore, forget, move on

- Reacts before frontal lobes can process perception

- Can lead ancient, visceral reactions to hijack modern, reasoning mind (especially with history of trauma)

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The Great Simulation Machine

- Perceptual experience is a simulation of reality - selective, integrated, blanks filled in
- The brain uses that built-in machinery to run its own simulations of what could be happening over there, or might happen in the future, or did happen in the past. Often in the background; also in dreams. Uses a portion of the same circuits that would activate if you actually had that experience.
- These help the animal learn from its experiences and ready itself for the future. (And build understanding of others: empathy echoes)
- But they also prime us for over-reactions, infused with implicit references to a “self.”
- These firing patterns - “riffs on my life” - create wiring patterns, inclining the mind for better or worse.

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Points of Intervention

- In your environment:
 - Do whatever you can that is wise, virtuous, etc.
 - But you have limited influence over your environment
 - And only “local” effects

- In your inner world:
 - Much more influence
 - Changes are with you wherever you go

- Working internally with the frontal lobe/limbic circuits:
 - Train limbic to be less reactive
 - Increase top-down control

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Equanimity in the Brain

- Understanding and intention

- Steadiness of mind

- Expansive awareness

- Dampening SNS/HPA arousal and vicious cycles

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Understanding

- Equanimity is rooted in insight:
 - Wise View: The Four Noble Truths
 - Impermanence
 - Dependent arising; emptiness of absolute self-nature
- Recognizing the consequences of craving
- Acceptance of imperfectible nature of life

31

Mindfulness of Appraisals

- What do we focus on, what do we pick out of the larger mosaic?
- What meaning do we give the event? How do we frame it?
- How significant do we make it? (Is it a 2 on the Ugh scale . . . Or a 10?)
- What intentions do we attribute to others?
- What are the embedded beliefs about other people? The world? The past? The future?

32

*The worst things in my life
never actually happened to me.*

Oscar Wilde

33

*Wisdom is . . . all about understanding the underlying
spacious and empty quality of the person and of all
experienced phenomena.*

*To attain this quality of deep insight, we must have a
mind that is quiet and malleable.*

*Achieving such a state of mind requires that we first
develop the ability to regulate our body and speech
so as to cause no conflict.*

Venerable Ani Tenzin Palmo

34

Intention

- Wise Intention: Non-harming, non ill will, and renunciation
 - The “bliss of blamelessness” promotes equanimity; a kind of fearlessness

- Renounce identification with mental reactions
 - Upsets arise within the perspective of “I.”
 - What is the sense of “I” that is running at the time? Strong? Weak? Mistreated?
 - Are you taking things personally?
 - How does the sense of self change over the course of the upset (often intensifying)?

35

Steadiness of Mind

- Daily meditation

- Concentration practices

- Attention to the neutral

36

Spacious Awareness

- Open space of awareness
 - Supported by mid-line neural substrate
- Contents of mind come and go like clouds moving through the sky
- Feeling tones are just more clouds
- No cloud ever harms or taints the sky

*Trust in awareness, in being awake,
rather than in transient and unstable conditions.*

Ajahn Sumedho

37

Cooling the Fires

- Regard stressful activation as an affliction
- Lots of methods for stimulating the parasympathetic nervous system to down-regulate the SNS:
 - Big exhalation
 - Relaxing the body
 - Yawning
 - Fiddling the lips
- Get in the habit of rapidly activating a damping cascade when the body activates.
- Regard bodily activation as just another compounded, “meaningless,” and impermanent phenomenon; don’t react to it³⁸

If you let go a little, you will have a little happiness.

If you let go a lot, you will have a lot of happiness.

If you let go completely, you will be completely happy.

Ajahn Chah

39

How to Take in the Good

1. Help positive events become positive experiences.
2. Extend the experience in *time* and *space*:
 - Savor it.
 - Encourage it to expand in your body.
3. Sense that the positive experience is soaking into your brain and body - registering deeply in emotional memory.

40

Key Points about Memory

- Schematic storage of selected features
- Recollections are re-built, not re-called.
- The emergent brain/mind pattern of the memory also associates to whatever else is in awareness, especially if it is emotionally salient.
- When the memory goes back into storage, it takes with it the other emotionally salient associations.
- Therefore, you can gradually imbue memories with positive emotional associations.
- Explicit, episodic memory will not change, but implicit, emotional memory can.

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Neutralizing Painful Experiences

- There is a place for negative experiences. But they also often have harmful effects.
- When you are having a positive experience:
 - Sense the current positive experience sinking down into old pain, and soothing and replacing it.
- When you are having a negative experience:
 - Bring to mind a positive experience that is its antidote.
- In both cases, have the positive experience be big and strong, in the forefront of awareness, while the negative experience is small and in the background.
- You are not resisting negative experiences or getting attached to positive ones. You are being kind to yourself and cultivating wholesomeness of mind.

42

Contentment

- Not wanting the present moment to be any other than what it is.
- Halfway between happiness and tranquility
- Gratitude

*The Great Way is easy.
For one with no preferences.*
Third Zen Patriarch

43

*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

44

*Penetrative insight
joined with calm abiding
utterly eradicates
afflicted states.*

Shantideva

45

***May you know love, joy,
wonder, and wisdom,
in this life,
just as it is.***

Thank you!

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