
*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

Equanimity:

In the Dharma and in Your Brain

Spirit Rock Meditation Center

August 12, 2012

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www.WiseBrain.org www.RickHanson.net

Topics

- **Perspectives**
- **Self-Directed Neuroplasticity**
- **The Power of Mindfulness**
- **Taking in the Good**
- **Evolution and Equanimity**
- **Liking and Wanting**
- **The Avoiding System**
- **The Approaching System**
- **The Attaching System**
- **Eddies in the Stream**



Perspectives

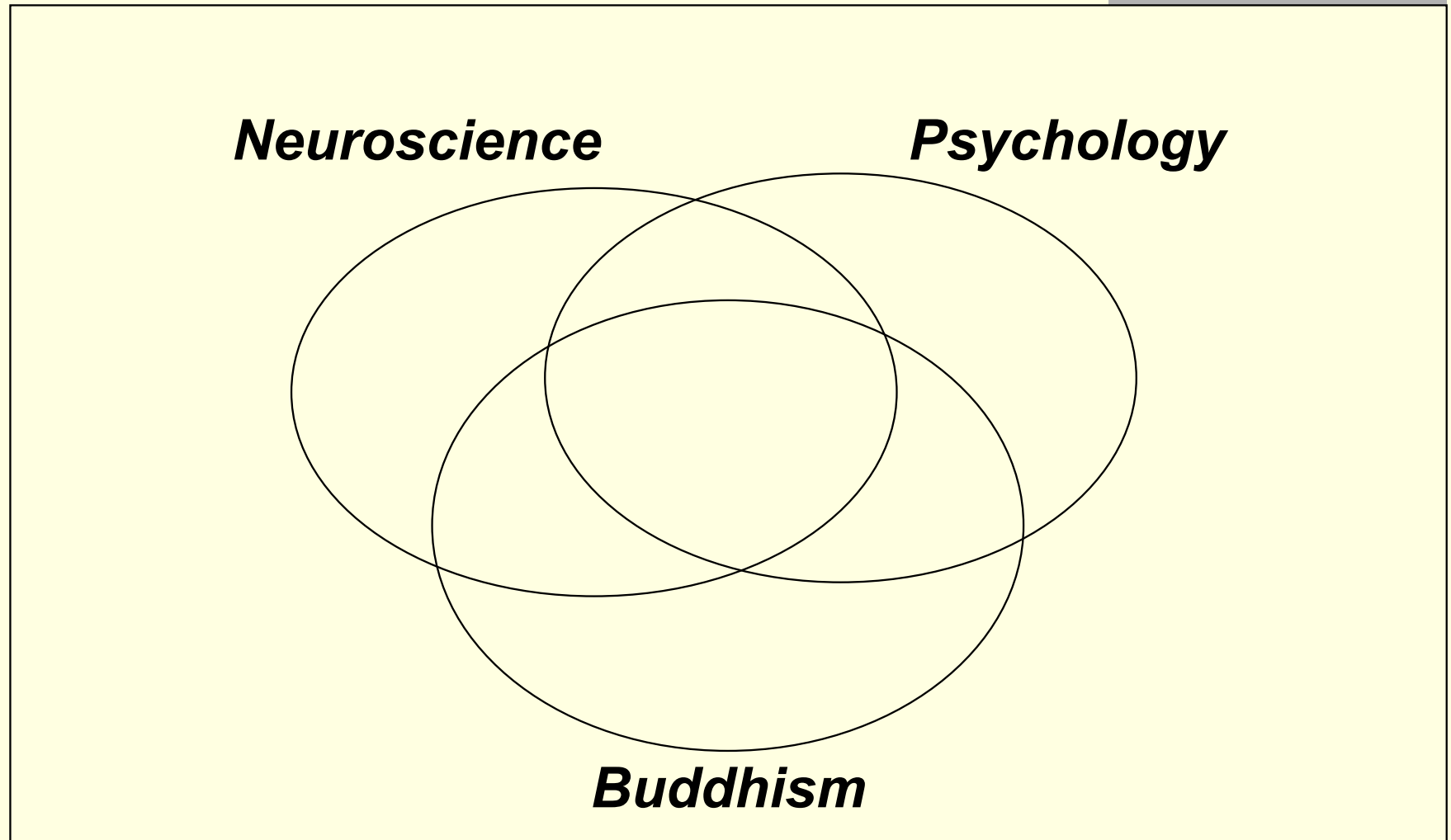
What Is Equanimity?

- Balance - not reacting to the fleeting stream of experience
- Steadiness - sustained through all circumstances
- Presence - engaged with the world but not troubled by it; guided by values and virtues, not reactive patterns

The ancient circuitry of the brain continually triggers reactions. Equanimity is the circuit breaker that prevents the craving (broadly defined) that leads to suffering.

Equanimity is thus at the center of Buddhist practice.

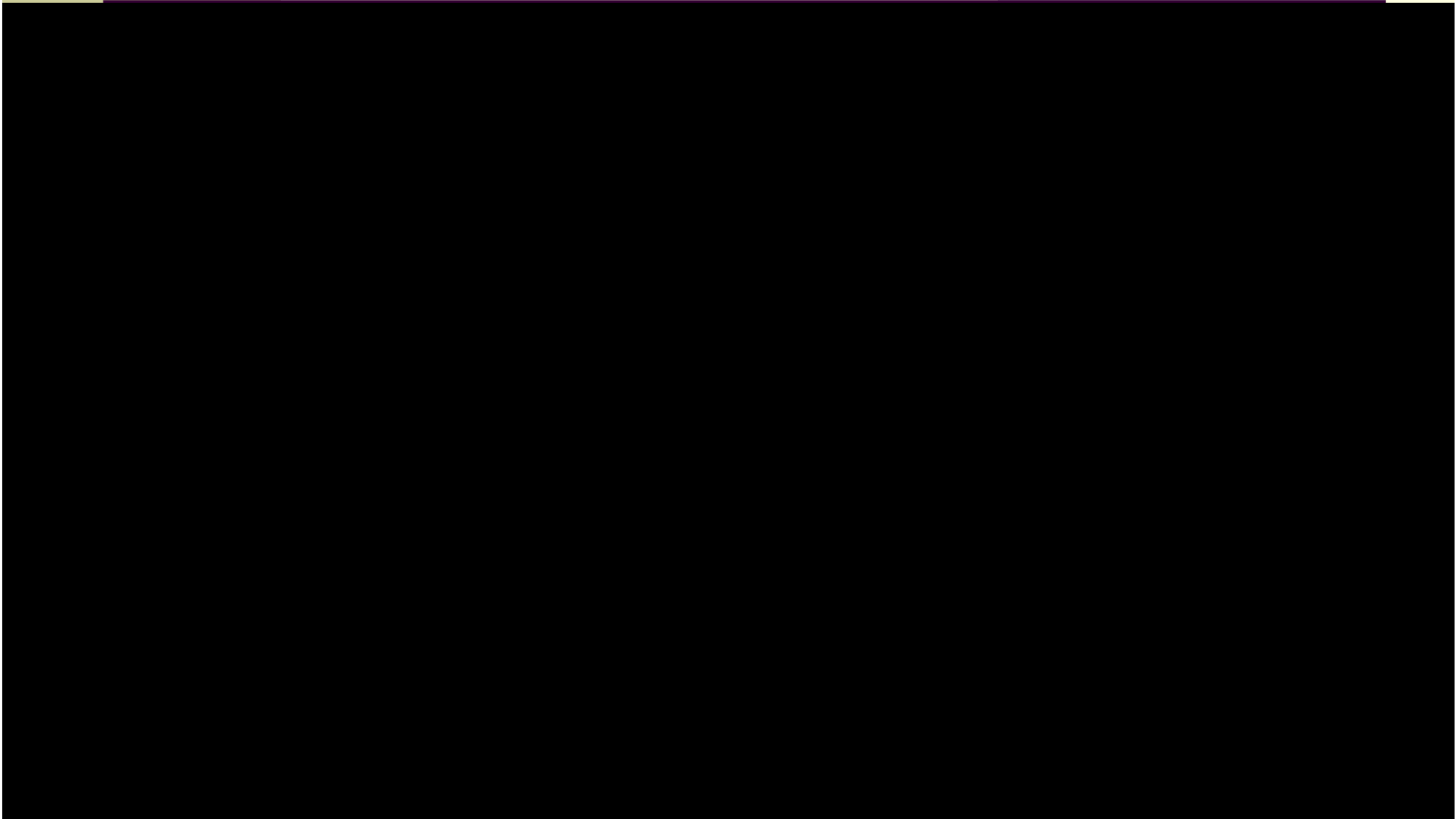
Common - and Fertile - Ground



We ask, "What is a thought?"

*We don't know,
yet we are thinking continually.*

Venerable Tenzin Palmo



Equanimity Skills

General

- Mindfulness
- Taking in the good
- Not reacting to the feeling tone
- Disenchantment

Specific

Avoiding harms

- Relaxation
- Feeling alright right now

Approaching rewards

- Feeling enoughness
- Gladness and gratitude

Attaching to others

- Feeling loved
- Feeling loving

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

Pema Chodren

Self-Compassion

- Compassion is the wish that someone not suffer, combined with feelings of sympathetic concern. Self-compassion simply applies that to oneself. It is not self-pity, complaining, or wallowing in pain.
- Self-compassion is a major area of research, with studies showing that it 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 focus of 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



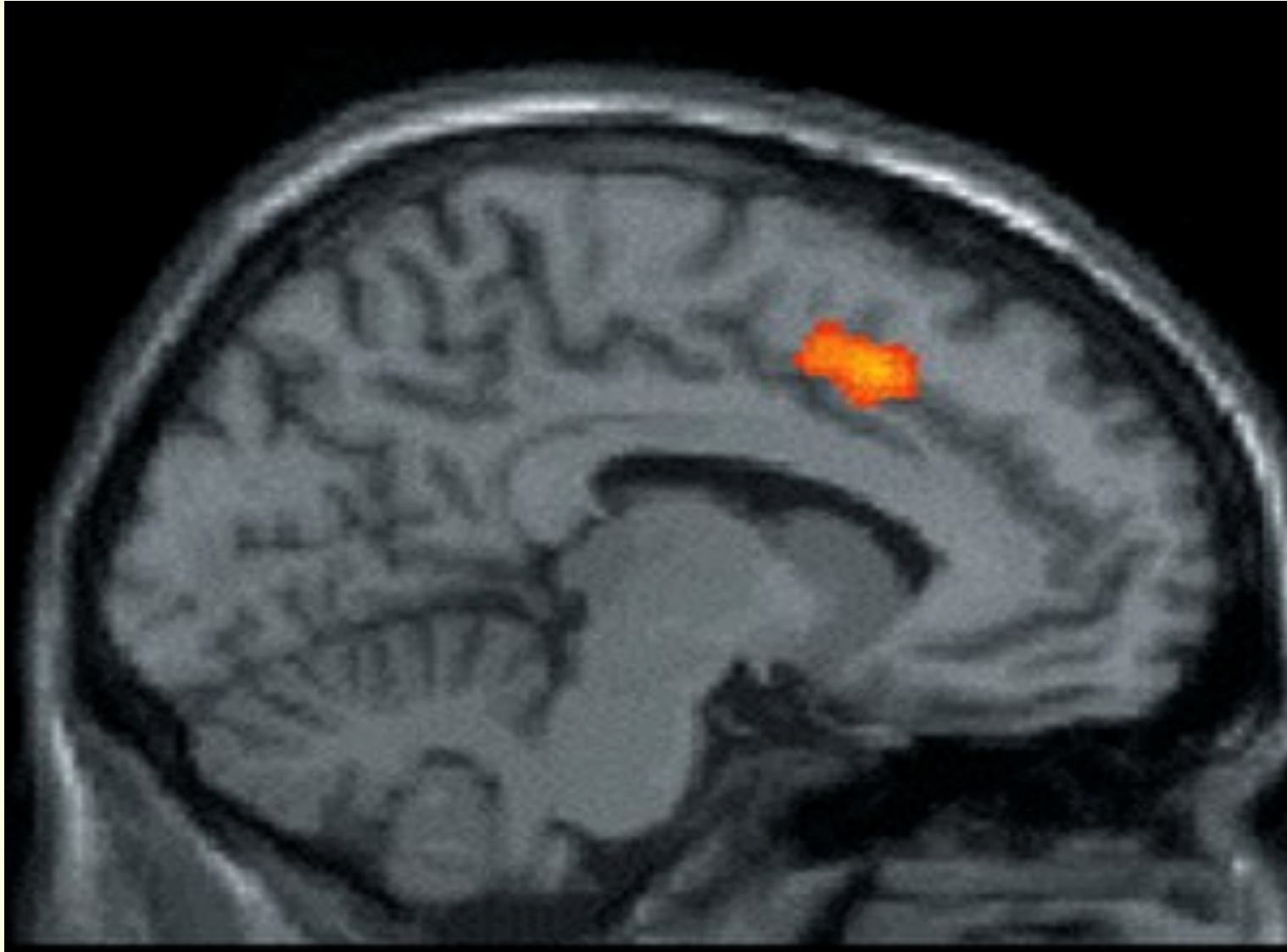
Self-Directed Neuroplasticity



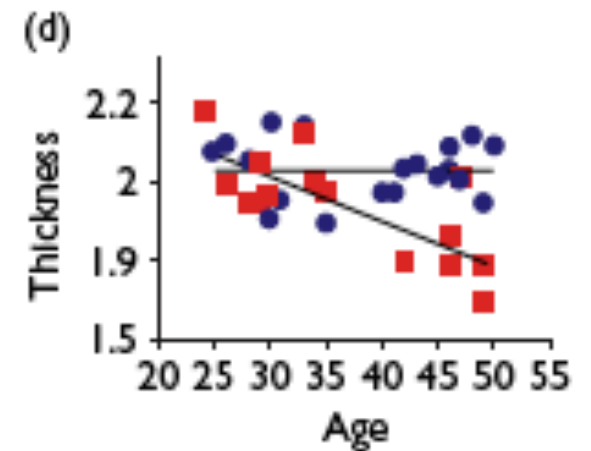
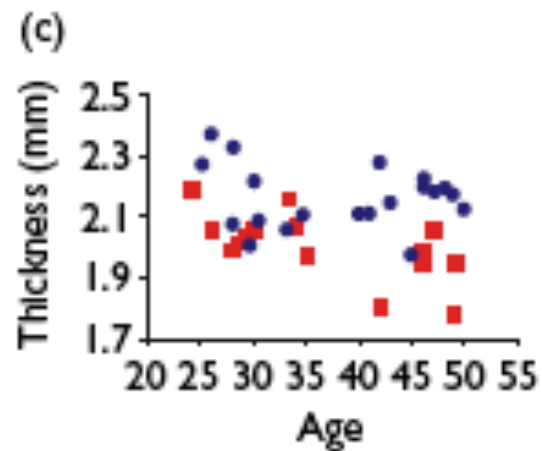
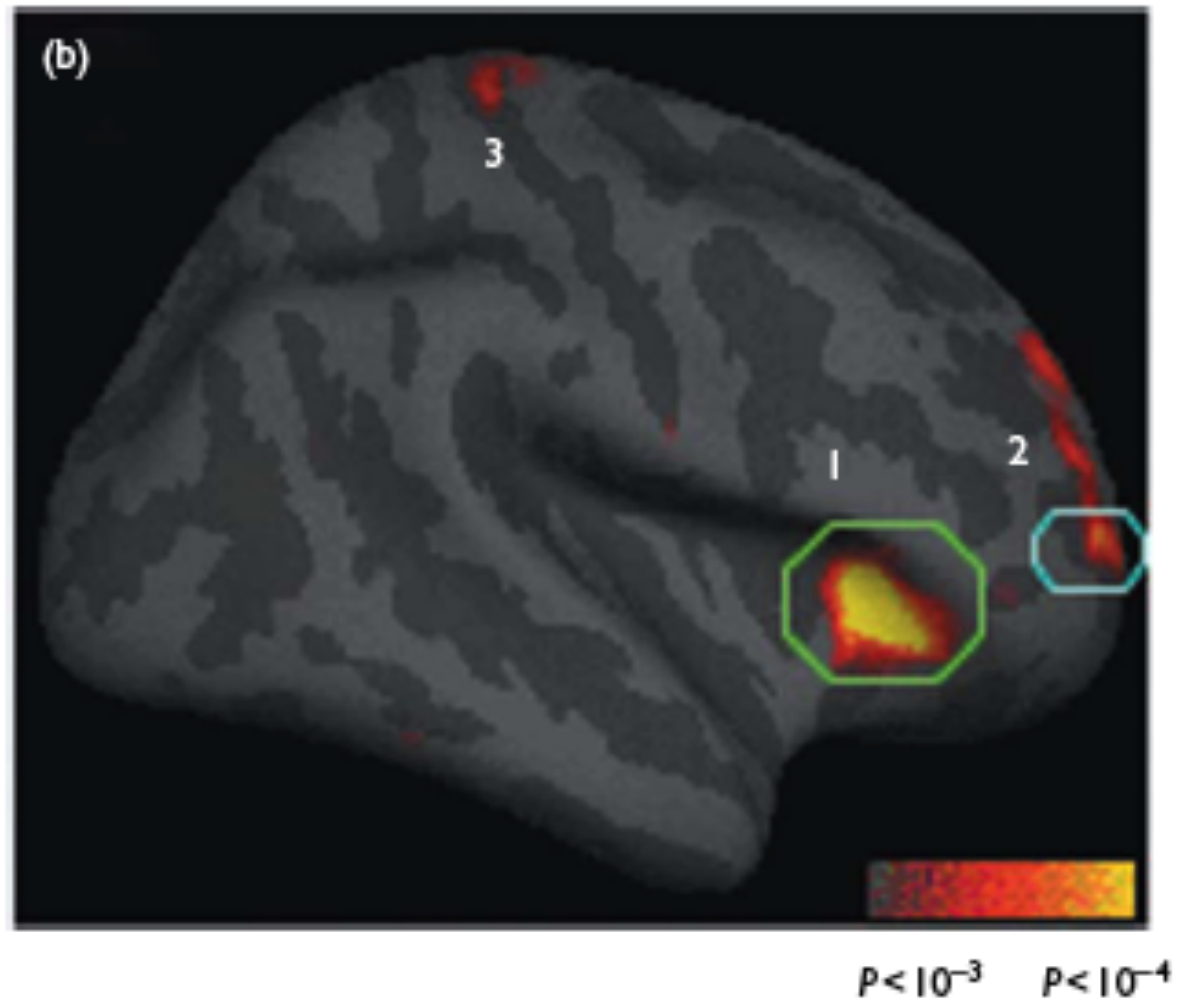
Mental States Become Neural Traits

- The nervous system represents, stores, operates upon, and communicates *information*. This is the “mind,” which is mainly outside awareness.
- How neural activity becomes conscious experience remains a mystery - but there is no doubt that mental and neural activity co-arise.
- As the mind changes, the brain changes - both temporarily and in lasting ways.

Tibetan Monk, Boundless Compassion



Lazar, et al. 2005.
Meditation
experience is
associated
with increased
cortical thickness.
Neuroreport, 16,
1893-1897.



Causes and Effects

Mental and physical phenomena arise, persist, and pass away due to causes.

Causes in the brain are shaped by the mental/neural states that are activated and then installed within it.

As causes, inner “poisons” (e.g., hatred, greed, heartache, delusion) cause suffering and harm.

As causes, **inner resources** (e.g., peace, happiness, love, wisdom) cause happiness and benefit.

Being With and Working With

- The great bird of practice has two wings: *being with* and *working with* the mind. Both involve mindfulness.
 - *Working with* reduces negative and increases positive.
 - In sum: Let be, let go, let in.
- *Being with* is fundamental, but it's incomplete:
 - As a state, it is not peace, happiness, love, or wisdom.
 - As a factor, it needs virtue, wisdom, compassion, etc.
 - *Being with* and *working with* are synergistic; they can co-arise without interfering with each other.
- And often we need to *work with* the mind to build up inner resources for *being with* it.

Cultivation Undoes Craving

- All life has goals. The brain continually seeks to avoid harms, approach rewards, and attach to others - even that of a Buddha.
- It is wholesome to wish for the happiness, welfare, and awakening of all beings - including the one with your nametag.
- We rest the mind upon positive states so that the brain may gradually take their shape. This disentangles us from craving as we increasingly rest in a peace, happiness, and love that is independent of external conditions.
- With time, even the practice of cultivation falls away - like a raft that is no longer needed once we reach the farther shore.



Know the mind.

Shape the mind.

Free the mind.




The Power of Mindfulness

The Power of Attention

- Attention is like a spotlight, lighting what it rests upon.
- Because neuroplasticity is heightened for what's in the field of focused awareness, attention is also like a vacuum cleaner, pulling its contents into the brain.
- Directing attention skillfully is therefore a fundamental way to shape the brain - and one's life over time.
- One of the many benefits of mindfulness training is the development of skillful attention.

*The education of attention
would be the education par excellence.*

William James



Taking in the Good

How to Take in the Good (TG)

1. Have a good experience.
 - You are already having one.
 - You deliberately recognize a good fact and let it become a good experience.
2. Extend the good experience in:
 - Time - for 10-20-30+ seconds
 - Space - in your body and feelings
 - Intensity - help it become stronger
3. Absorb the good experience by intending and sensing that is becoming a part of you, woven into the fabric of your brain and being.

Basics of Meditation

- Relax; find a 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

*Whose mind is like rock, steady, unmoved,
dispassionate for things that spark passion,
unangered by things that spark anger:*

*When one's mind is developed like this,
from where can there come suffering & stress?*

The Buddha, Udāna 4.34

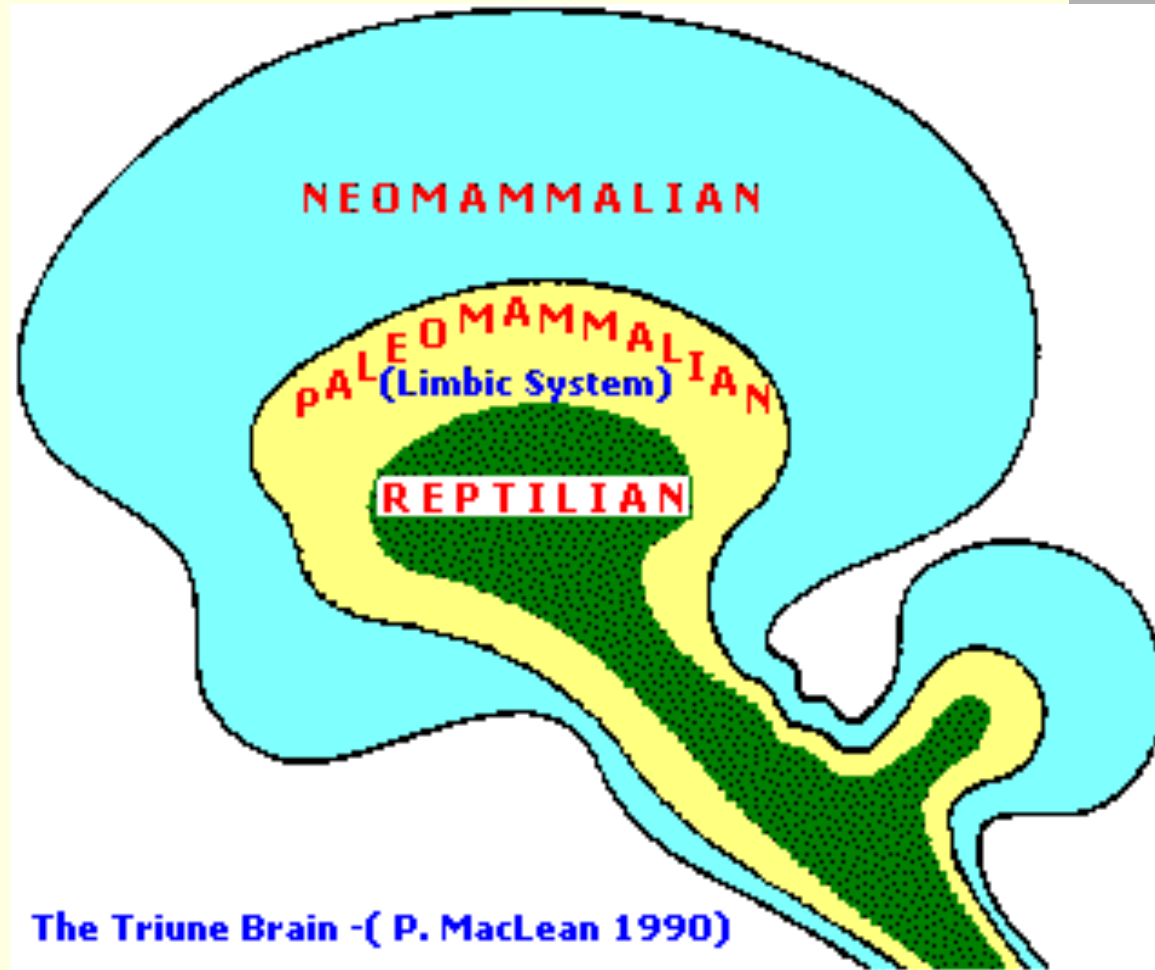
*Keep a green bough in your heart,
and a singing bird will come.*

Lao Tsu



Evolution and Equanimity

Evolutionary History



The Triune Brain

Three Stages of Brain Evolution

■ Reptilian:

- Brainstem, cerebellum, hypothalamus
- Reactive and reflexive
- **Avoid** hazards

■ Mammalian:

- Limbic system, cingulate, early cortex
- Memory, emotion, social behavior
- **Attain** rewards

■ Human:

- Massive cerebral cortex
- Abstract thought, language, cooperative planning, empathy
- **Attach** to “us”

Three Fundamental Motivational and Self-Regulatory Systems

■ Avoid Harms:

- Primary need, tends to trump all others
- Functional in first animals, in brainstem

■ Approach Rewards:

- Functional in first animals, in brainstem
- Elaborated via sub-cortex in mammals for emotional valence, sustained pursuit, etc.

■ Attach to Others:

- Functional in mammals and birds, in sub-cortex
- Very elaborated via cortex in humans for pair bonding, language, empathy, cooperative planning, compassion, altruism, etc.



"With all due respects, I find your disparaging remarks about the 'reptilian brain' unnecessary"



Adapting to Life

- Animals survive through three fundamental strategies. When these run into trouble, animals must adapt to changing conditions.
- But trouble often comes because each strategy contains *contradictions*, as the animal keeps trying:
 - To ***separate what is actually connected*** – in order to create a boundary between itself and the world
 - To ***stabilize what keeps changing*** – in order to maintain its internal systems within tight ranges
 - To ***hold onto fleeting pleasures and escape inevitable pains*** – in order to approach opportunities and avoid threats

The Homeostatic Home Base

When not disturbed by threat, loss, or rejection:

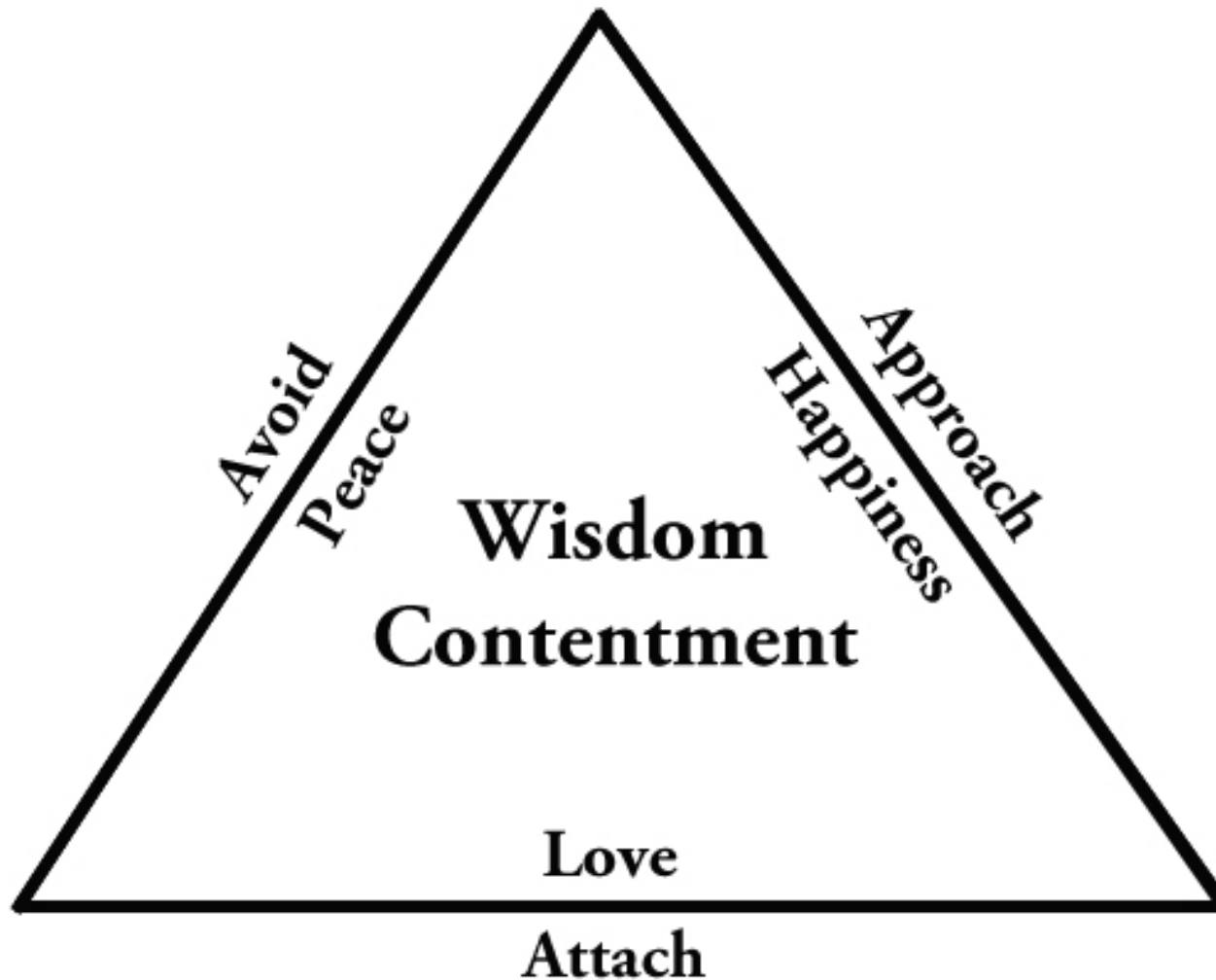
The body defaults to a sustainable equilibrium of refueling, repairing, and pleasant abiding.

The mind defaults to a sustainable equilibrium of:

- **Peace** (the Avoiding system)
- **Happiness** (the Approaching system)
- **Love** (the Attaching system)

This is the brain in its homeostatic ***Responsive*** mode.

The Responsive Mode



Key Benefits of Responsive Mode

- Fueling for Reactive mobilizations; recovery after
- Positive emotions, cognitions, and behaviors
- Positive cycles
- Promotes virtue and benevolence

*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

Unavoidable Disturbances

- Animals survive through three fundamental strategies. When these run into trouble, unpleasant alarm signals pulse through the nervous system.
- But trouble comes constantly: each strategy contains inherent contradictions, as the animal keeps trying:
 - To ***separate what is actually connected*** – in order to create a boundary between itself and the world
 - To ***stabilize what keeps changing*** – in order to maintain its internal systems within tight ranges
 - To ***hold onto fleeting pleasures and escape inevitable pains*** – in order to approach opportunities and avoid threats

Fired up for Survival

When disturbed by threat, loss, or rejection:

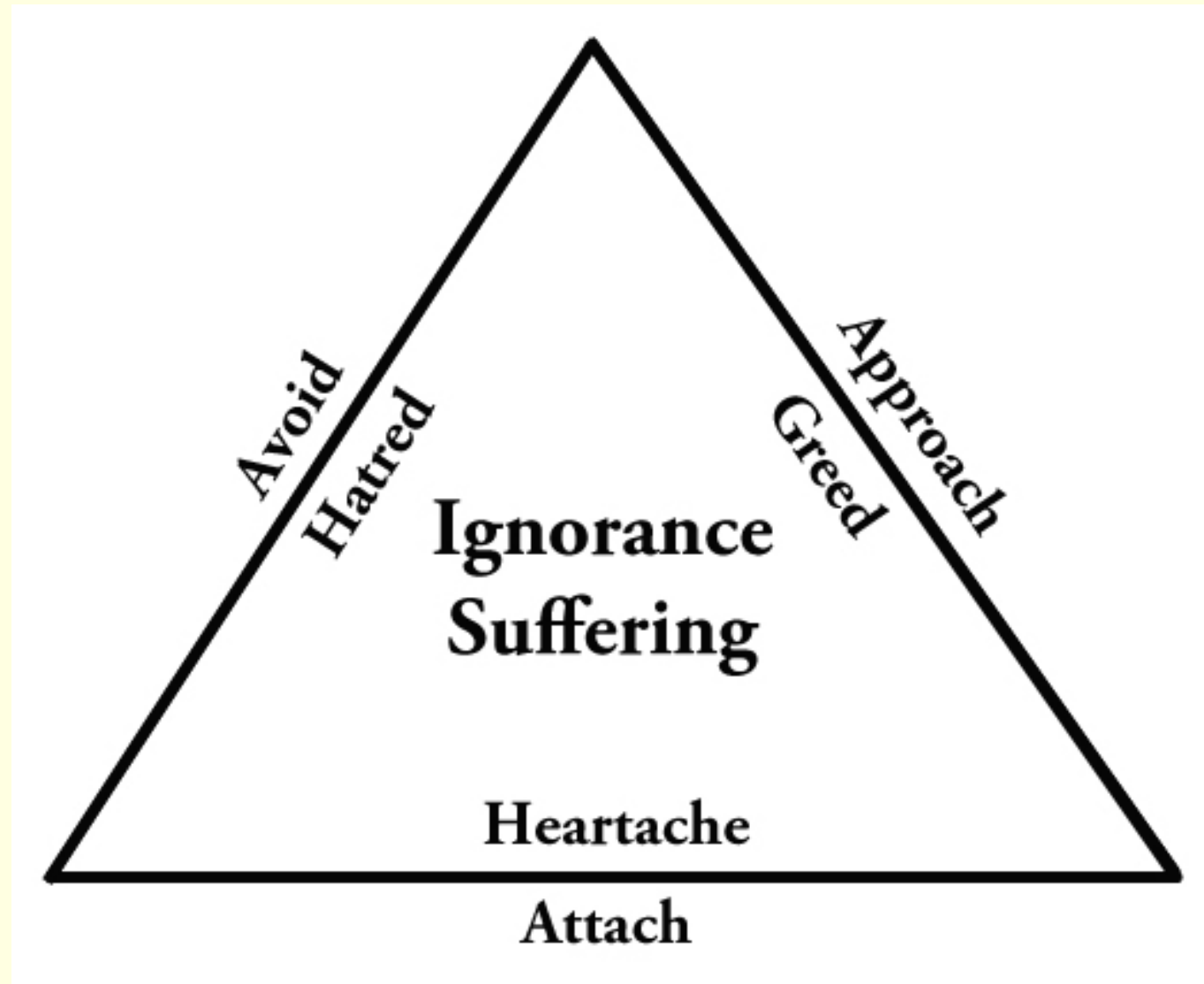
The body fires up into the stress response; resources are burned for immediate needs; long-term building is deferred; outputs exceed inputs; unsustainable.

The mind fires up into:

- **Hatred** (the Avoiding system)
- **Greed** (the Approaching system)
- **Heartache** (the Attaching system)

This is the brain in its allostatic **Reactive** mode.

The Reactive Mode



Evolution of the Negativity Bias

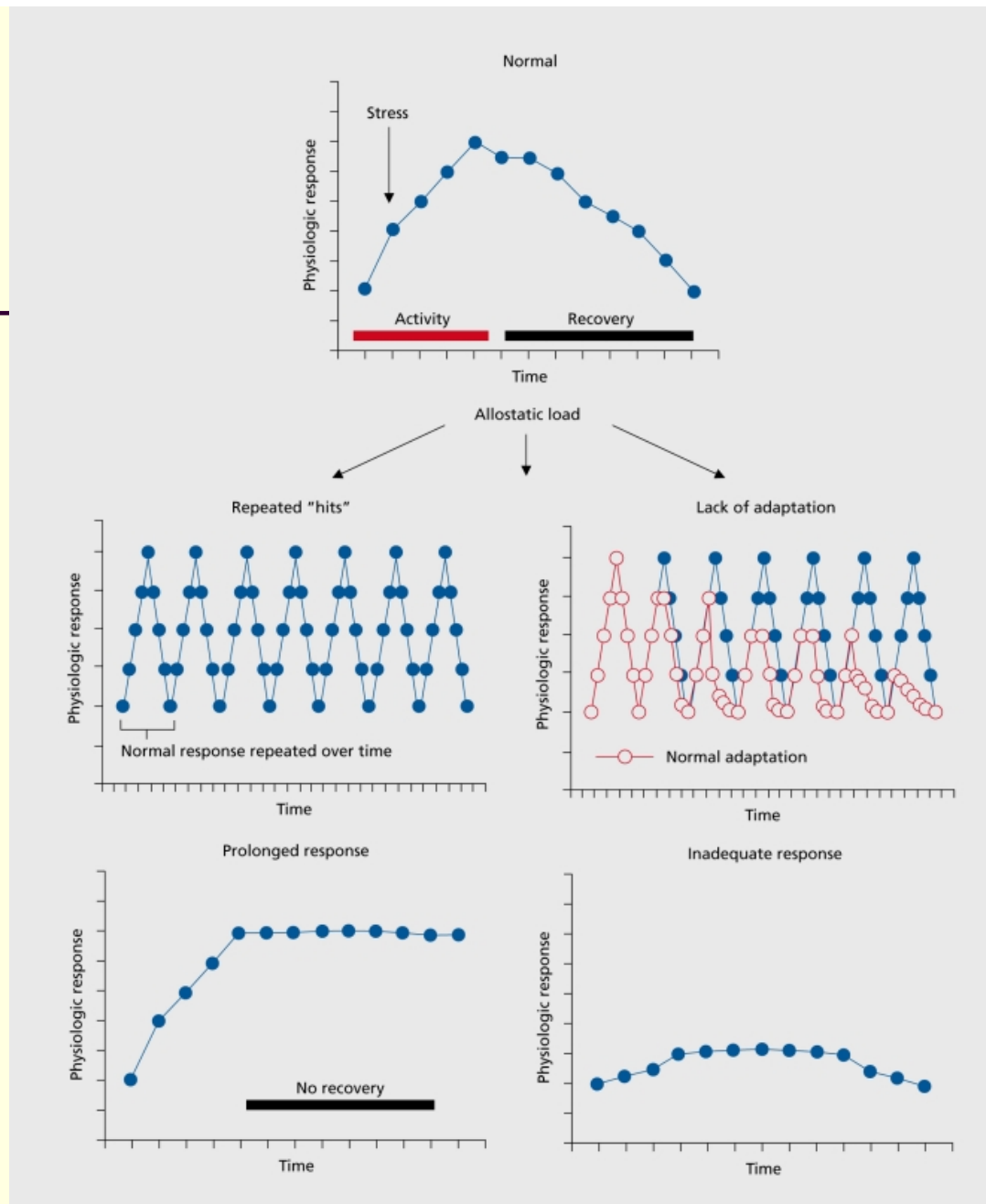
- **Harms** (“sticks”) - Predators, natural hazards, social aggression, pain (physical and psychological)
- **Rewards** (“carrots”) - Food, sex, shelter, social support, pleasure (physical and psychological)
- Avoiding “sticks” usually affects passing on genes more than approaching “carrots.”
 - Urgency - Usually, sticks must be avoided immediately while carrots allow a longer approach.
 - Impact - Often, the presence of a stick ends life while the absence of a carrot does not; if you fail to get a carrot today, you’ll likely have another chance tomorrow, but if you fail to avoid a stick today - whap! - no more carrots forever.

Negativity Bias: Some Consequences

- Negative stimuli get more attention and processing.
- Easy to create learned helplessness, hard to undo
- Negative interactions: more powerful than positive
- Negative experiences are internalized more efficiently into implicit memory than positive ones.
 - Like Velcro for the negative but Teflon for the positive
 - In life, therapy, meditation, and trainings, activated positive mental states routinely wash through the brain like water through a sieve without getting installed.

The First and Second Dart

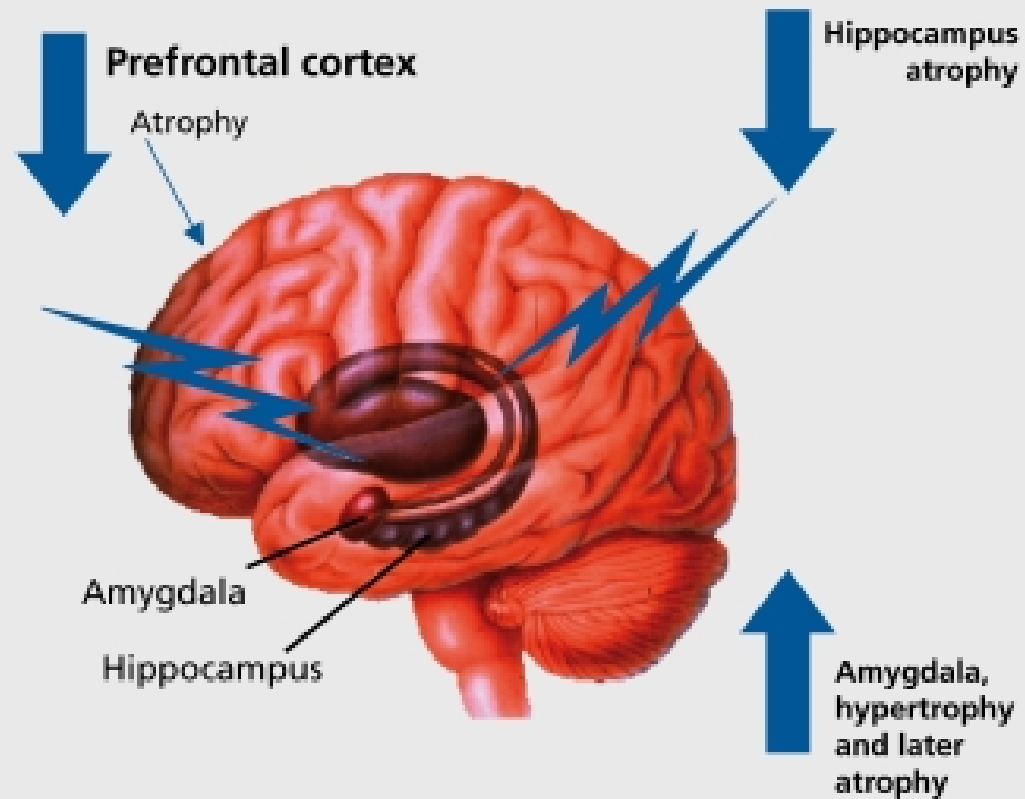
- The Buddha called unavoidable discomfort the “first dart.”
- Then we add our reactions to it, e.g., fear of pain, anger at hurt.
- Sometimes we react with suffering when there is no first dart at all, simply a condition there’s no need to get upset about.
- And sometimes we react with suffering to positive events, such as a compliment or an opportunity.
- The Buddha called these reactions “second darts” - the ones we throw ourselves.



Adaptive and maladaptive responses to challenges

Top panel: adaptive stress response. Lower panels: Top left - repeated stressors, no time for recovery. Top right - adaptation wears out. Bottom left - stuck in stress activation. Bottom right - inadequate stress response. ⁴⁶
 McEwen, 1998. New England Journal of Medicine, 338:171-179.

The brain under stress: structural remodeling

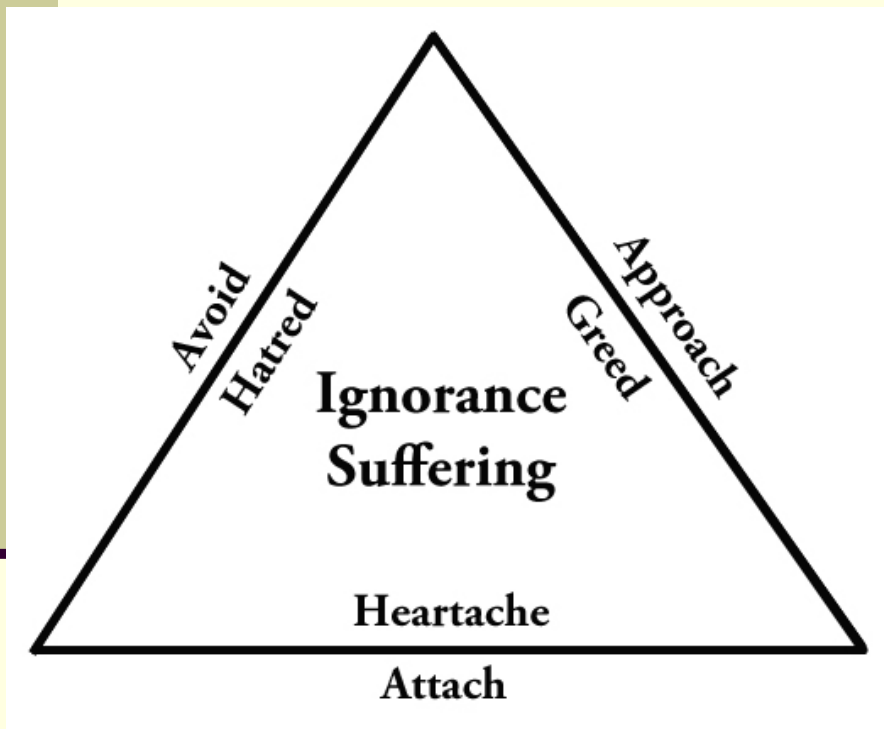


How stress changes the brain

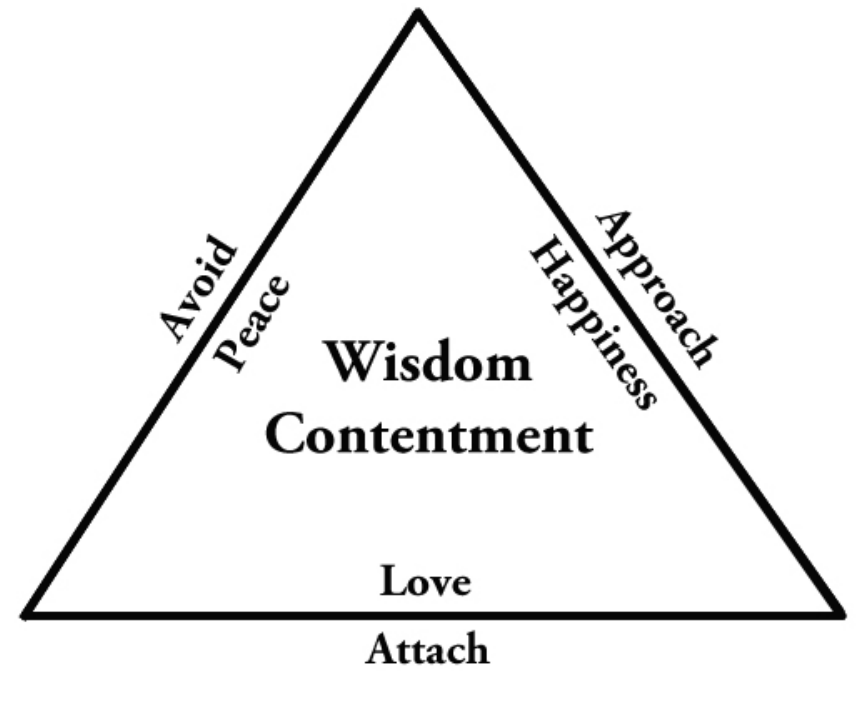
McEwen, 2006. Dialogues in Clinical Neuroscience, 8:367-381

Choices . . .

Or?



Reactive Mode



Responsive Mode



Liking and Wanting

Liking and Wanting

- Distinct neural systems for liking and wanting
- In the brain: feeling/hedonic tone --> enjoying (liking)
--> wanting --> pursuing
 - Wanting without liking is hell.
 - Liking without wanting is heaven.
- The distinction between *chandha* (wholesome wishes and aspirations) and *tanha* (craving)
- But beware: the brain usually wants (craves) and pursues (clings to) what it likes.

*It occurred to me: that whatever pleasure and joy there is in the world, this is the **gratification** in the world; that the world is impermanent, bound up with suffering, and subject to change, and this is the **danger** in the world; and that the removal and abandonment of desire and lust for the world is the **escape** from the world . . .*

So long as I did not directly know, as they really are, the gratification in the world as gratification, its danger as danger, and the escape from the world as escape, for so long I did not claim to have awakened to the unsurpassed perfect enlightenment.

The Buddha, Anguttara Nikaya, 3:101

With sensual pleasures as the cause, people indulge in misconduct of body, speech, and mind: a danger in the case of sensual pleasures, a mass of suffering visible in this present life . . . And what is the escape? It is the removal of desire and lust, the abandonment of desire and lust for sensual pleasures.

The Buddha, Majjhima Nikaya, 13

Practicing with Wanting

- Help *chandha* replace *tanha*; flowers crowd out weeds.
- Surround pleasant or unpleasant feeling tones with spacious awareness - the “shock absorber” - without tipping into craving.
- Regard wants as just more mental content. Investigate them. Watch them come and go. No compulsion, no “must.”
- Be skeptical of predicted rewards - simplistic and inflated, from primitive subcortical regions. Explore healthy disenchantment.
- Pick a key want and just don't do it.

I make myself rich by making my wants few.

Henry David Thoreau

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

*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



The Avoiding System

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 it₅₇

Not Harming

- The fundamental tenet of morality in Buddhism and other traditions
- Applies to oneself as well as others
- Precepts; Right Speech, Action, Livelihood
- The emphasis on abandoning ill will
- The distinction between moral action in the world and succumbing to anger and ill will
- The reframing of not-doing in active, doing terms

Feeling Alright Right Now

- Tuning into bodily signals that you're OK
- Recognizing protections
- Not afraid of paper tigers
- Feeling strong



The Approaching System

Feeling Already Full

- Sensing enoughness for the body
- Feeling buoyed and nurtured by the natural world
- Awareness of phenomena filling the mind
- Feeling filled by each moment's arisings even as they pass away.

Good Facts for Gladness and Gratitude

- The small pleasures of ordinary life
- The satisfaction of attaining goals or recognizing accomplishments - especially small, everyday ones
- Feeling grateful, contented, and fulfilled
- Recognizing your positive character traits
- Spiritual or existential realizations



The Attaching System



© Kalyan Varma

Feeling Cared About

- As we evolved, we increasingly turned to and relied on others to feel safer and less threatened.
 - Exile from the band was a death sentence in the Serengeti.
 - Attachment: relying on the secure base
 - The well-documented power of social support to buffer stress and aid recovery from painful experiences
- Methods:
 - Recognize it's kind to others to feel cared about yourself.
 - Look for occasions to feel cared about and take them in.
 - Deliberately bring to mind the experience of being cared about in challenging situations.

Understanding Inter-Being

- Nothing arises on its own; everything is connected to everything else.
- The world emerges from stardust.
- The body emerges from the world (sunlight lifts the cup) and from nature, joined with all life.
- The mind emerges in the body, culture, and family.

The Buddha's Words on Lovingkindness

Wishing: In gladness and in safety, may all beings be at ease.

Omitting none, whether they are weak or strong, the great or the mighty, medium, short, or small, the seen and the unseen, those living near and far away, those born and to-be-born: May all beings be at ease.

Let none through anger or ill-will wish harm upon another. Even as a mother protects with her life her child, her only child, so with a boundless heart should one cherish all living beings; radiating kindness over the entire world: spreading upwards to the skies, and downwards to the depths, outwards and unbounded, freed from hatred and ill-will.


One should sustain this recollection.

This is said to be the sublime abiding.

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.*



Eddies in the stream

*Blissful is passionlessness in the world,
The overcoming of sensual desires;
But the abolition of the conceit I am --
That is truly the supreme bliss.*

The Buddha, Udāna 2.11

To study the Way is to study the self.

To study the self is to forget the self.

*To forget the self is
To be enlightened by all things.*

Dogen

*For one who clings motion exists, but for one who does not
cling there is no motion.*

Where no motion is, there is stillness.

Where stillness is, there is no craving.

Where no craving is, there is neither coming nor going.

*Where no coming or going is there is neither arising nor
passing away.*

*Where neither arising nor passing away is, there is neither
this world, nor a world beyond nor a state between.*

This verily, is the end of suffering.

“Bahiya, you should train yourself thus.”

In reference to the seen, there will be only the seen. To the heard, only the heard. To the sensed, only the sensed. To the cognized, only the cognized.

When for you there will be only the seen in reference to the seen, only the heard in the heard, only the sensed in the sensed, only the cognized in the cognized, then, Bahiya, there's no you in that.

When there's no you in that, there's no you there. When there's no you there, you are neither here nor yonder nor between the two.

This, just this, is the end of all suffering.

“Taking the Fruit as the Path”

Peace

Happiness

Love

Penetrative insight

joined with calm abiding

utterly eradicates

afflicted states.

Shantideva

Great Books

See www.RickHanson.net for other great books.

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See www.RickHanson.net for other scientific papers.

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