

Buddha Nature Brain

***From Hatred, Greed, and Heartache
To Peace, Happiness, and Love***

BuddhaFest

Washington, D.C. June 17, 2012

Rick Hanson, Ph.D.

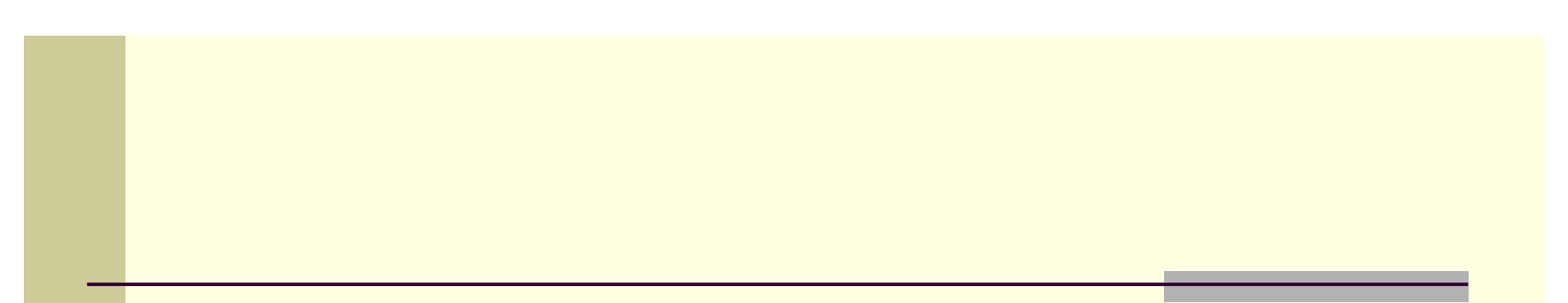
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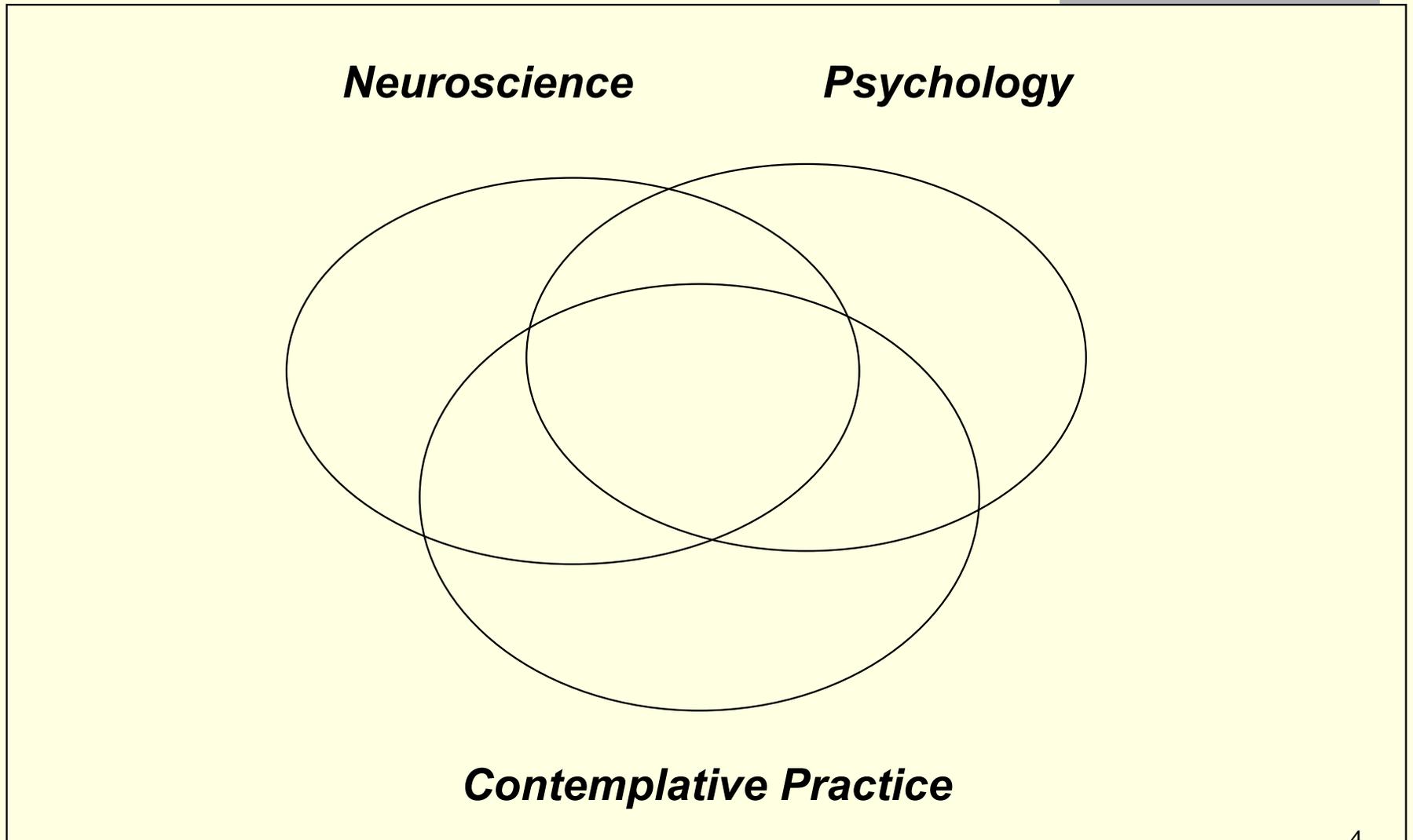
Topics

- **Perspectives**
- **Using your mind to change your brain**
- **The Responsive mode**
- **The Reactive mode**
- **The negativity bias**
- **Inner resources**
- **Taking in the good**
- **Taking the fruit as the path**



Perspectives

Common - and Fertile - Ground



Do not go by oral tradition, by lineage of teaching, by hearsay, by a collection of texts, by logic, by inferential reasoning, by reasoned cognition, by the acceptance of a view after pondering it, by the seeming competence of a speaker, or because you think, “this . . . is our teacher.”

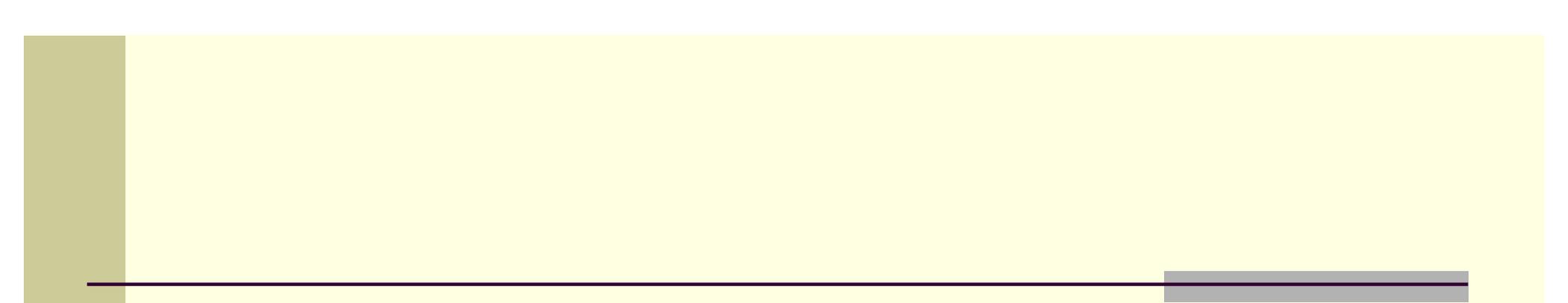
But when you know for yourselves, “these things are wholesome, these things are blameless; these things are praised by the wise; these things, if undertaken and practiced, lead to welfare and happiness,” then you should engage in them.

We ask, "What is a thought?"

We don't know,

yet we are thinking continually.

Venerable Tenzin Palmo



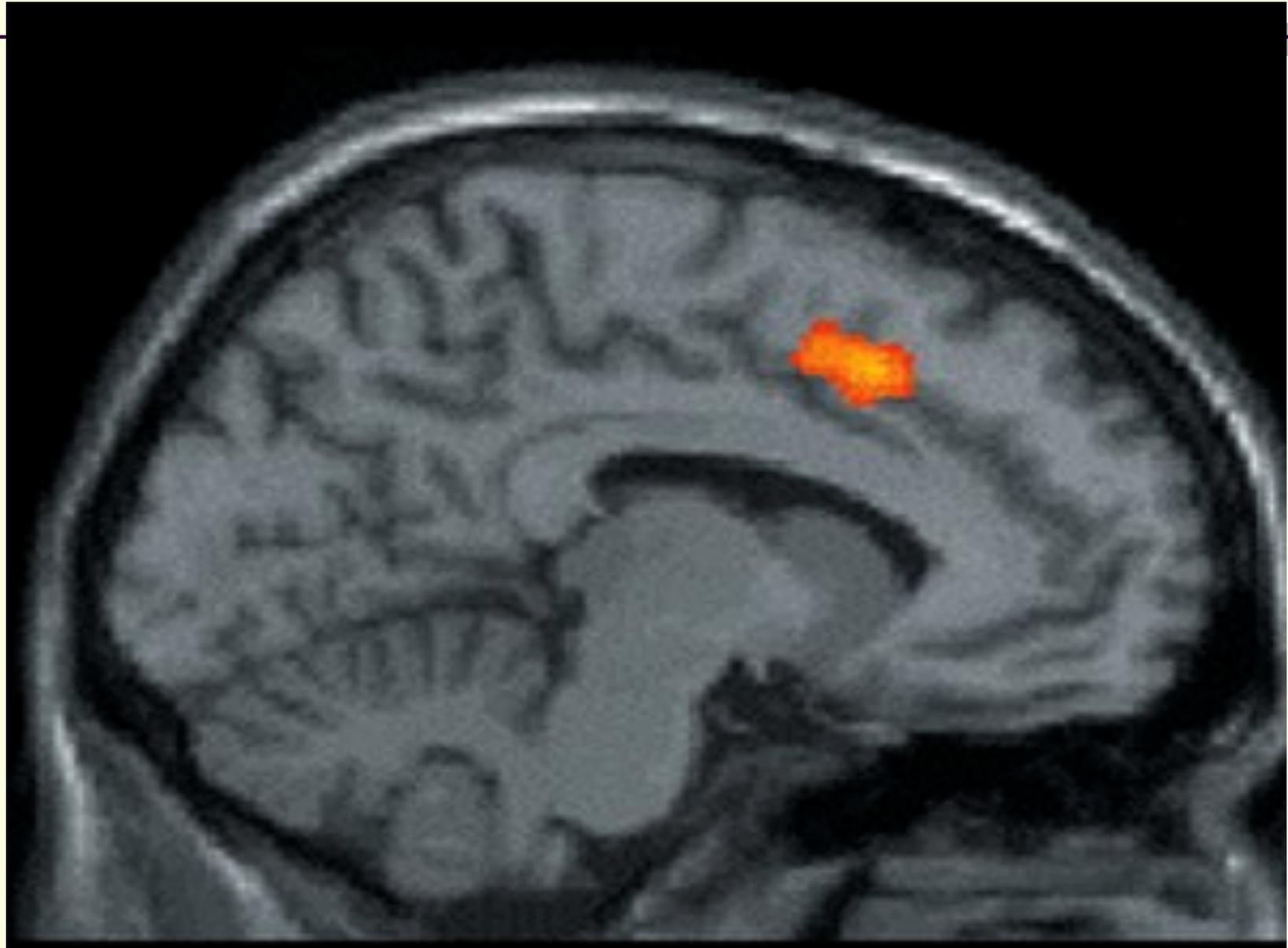
Using Your Mind to Change Your Brain



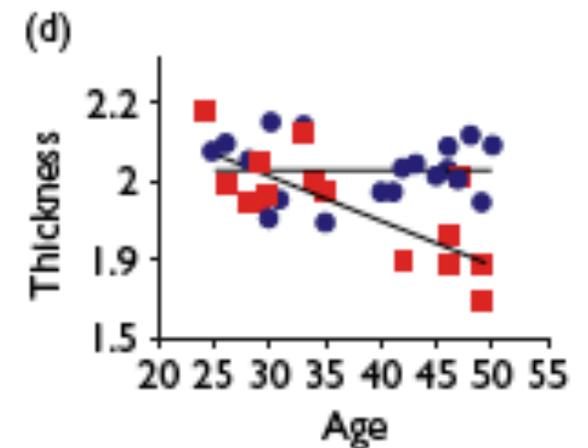
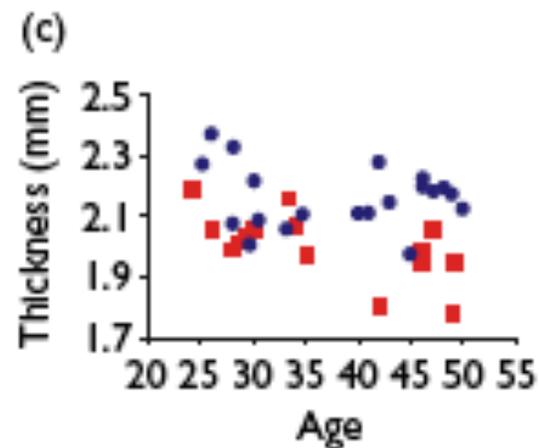
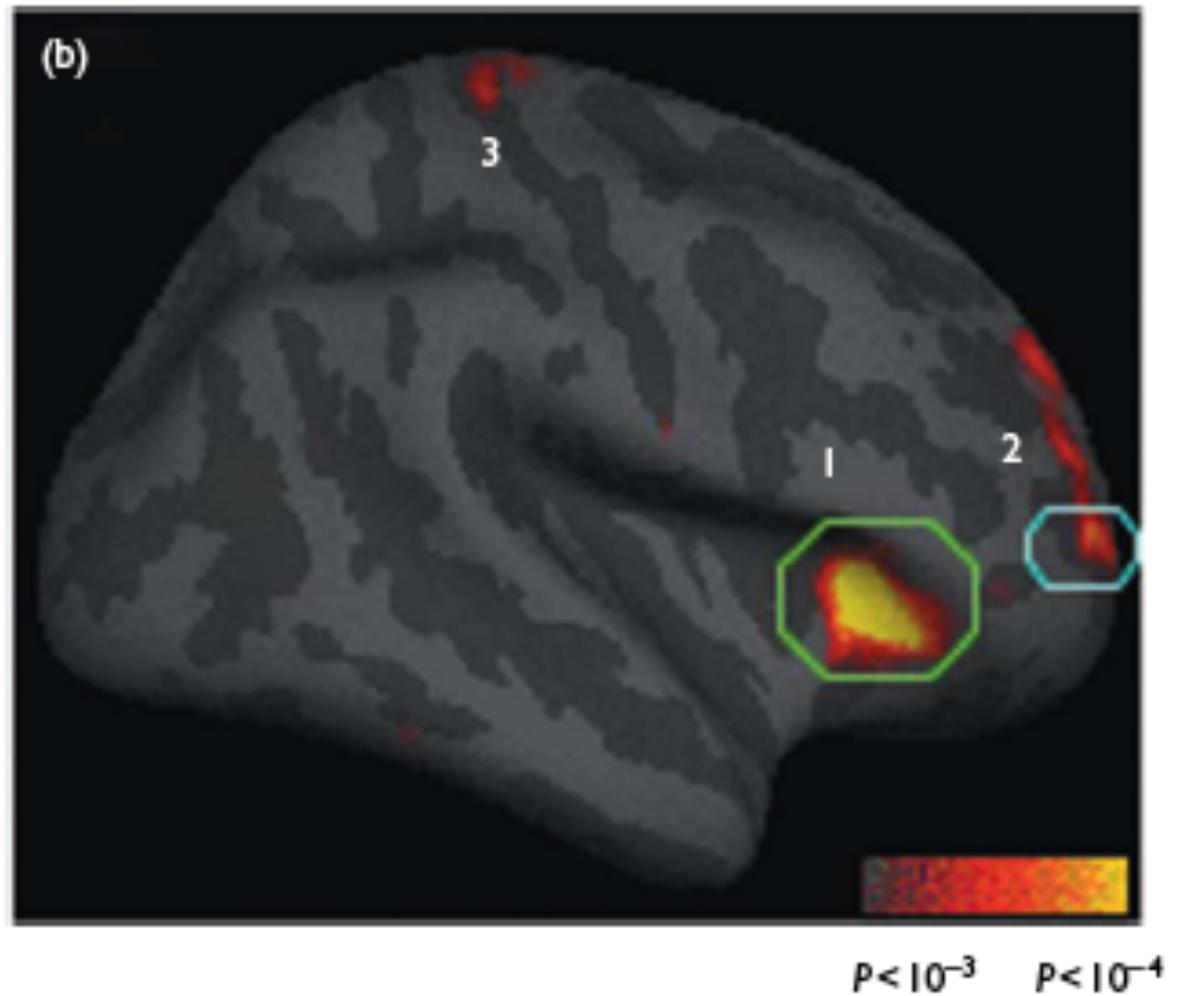
Mental States Become Neural Traits

- 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.



Honoring Experience

Your experience *matters*.

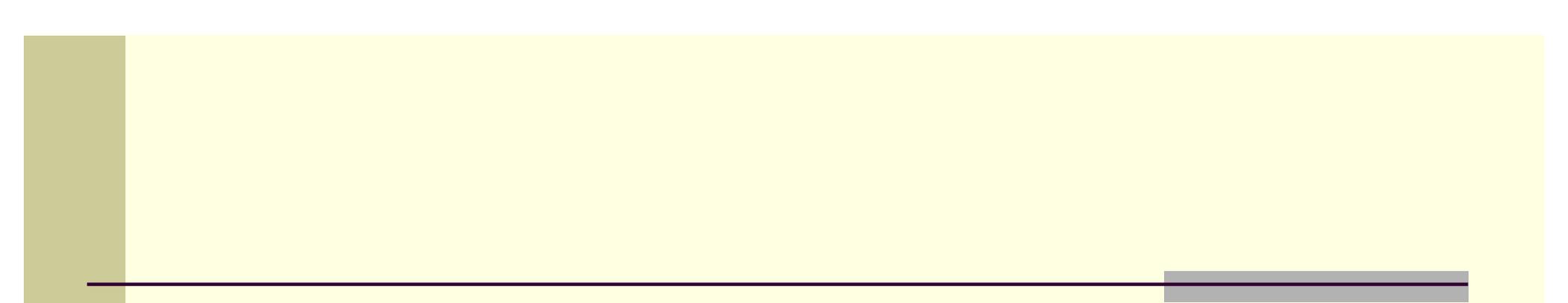
**Both for how it feels in the moment
and for the lasting residues it leaves behind,
woven into the fabric of a person's brain and being.**

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.

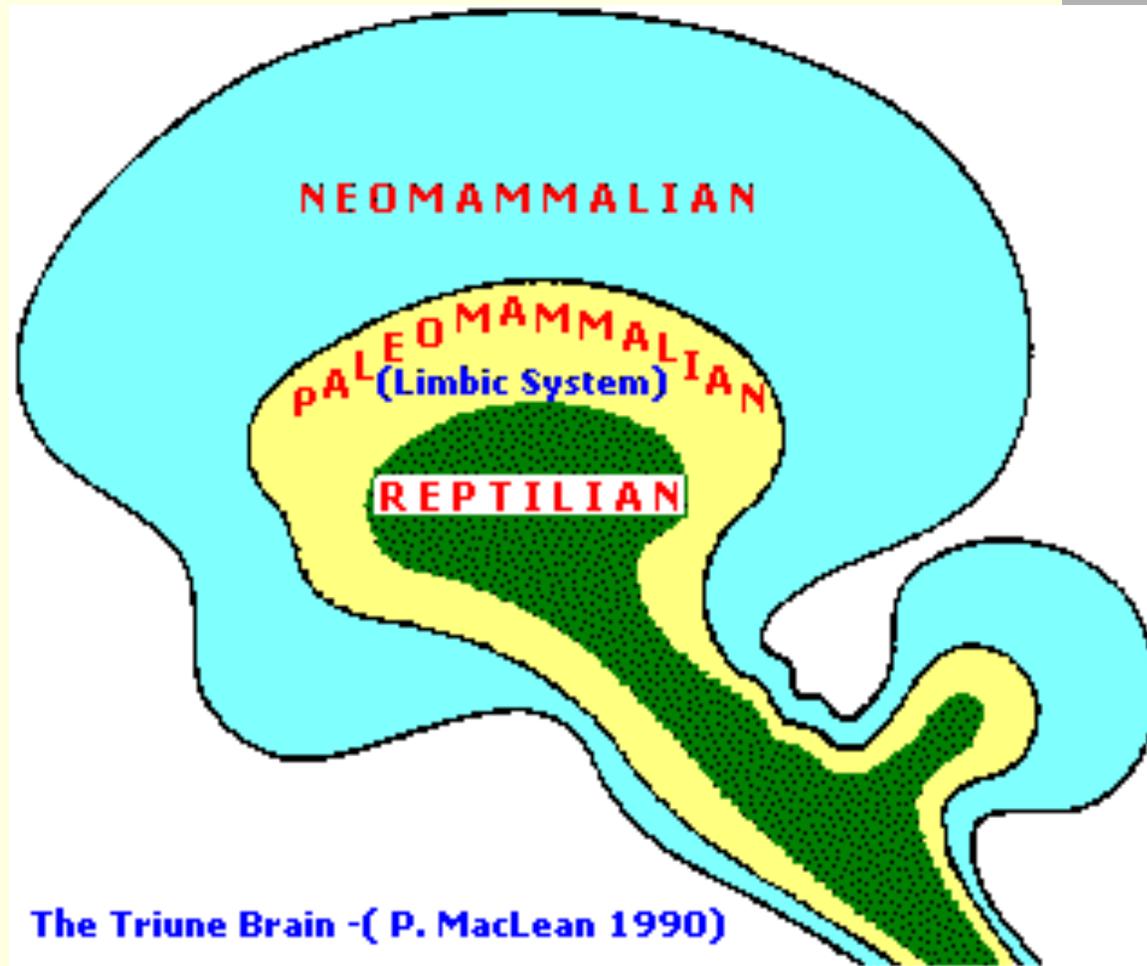
*The education of attention
would be the education par excellence.*

William James



The Responsive Mode

Evolutionary History



The Triune Brain

Three Motivational Systems

- **Avoid Harms:**

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

- **Approach Rewards:**

- Functional in first animals
- Elaborated in mammals via sympathetic arousal, limbic/emotional valence, sustained pursuit, etc.

- **Attach to Others:**

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

The Homeostatic Home Base

When not disturbed by threat, loss, or rejection:

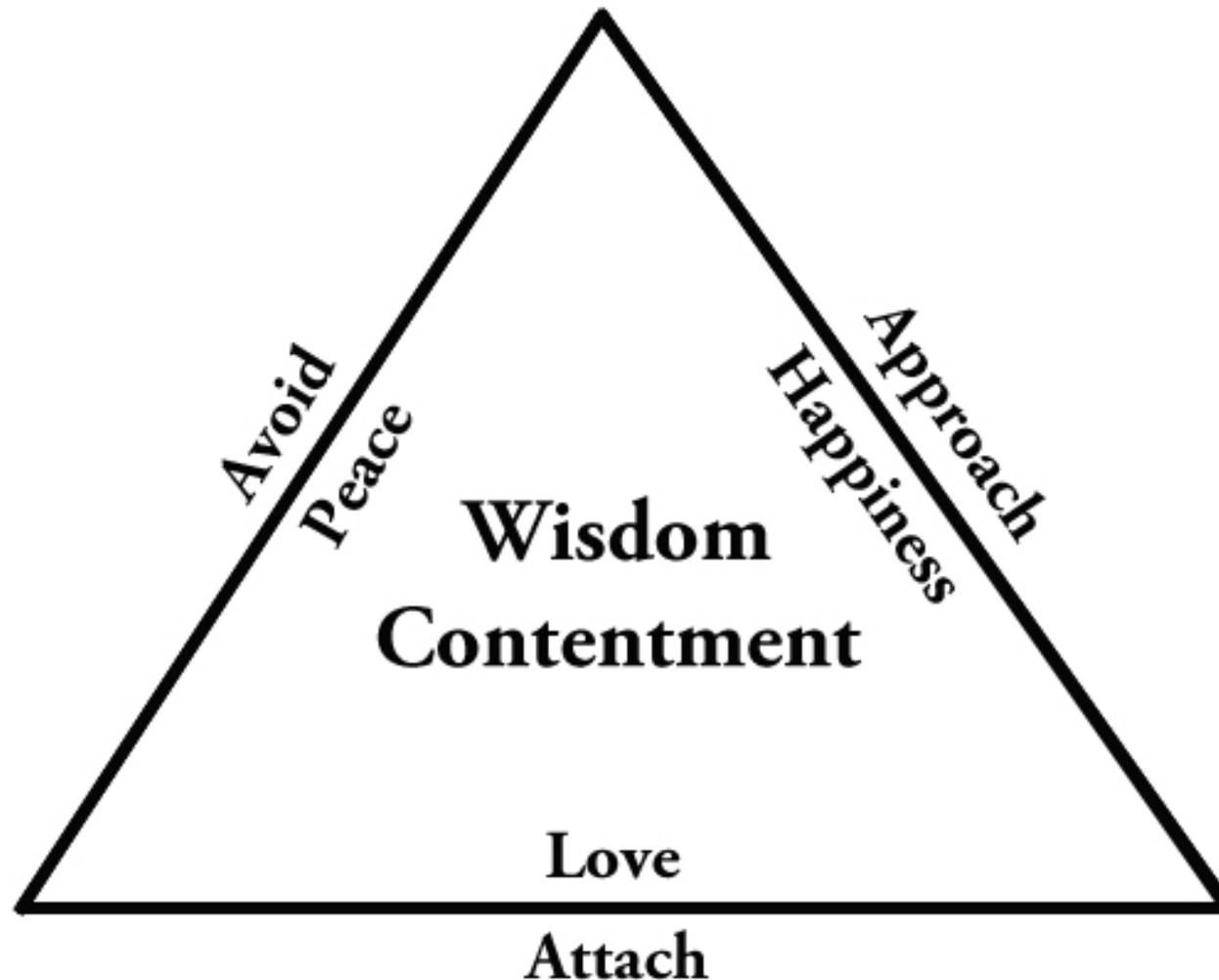
The body defaults to a sustainable equilibrium of refueling, repairing, and pleasant abiding.

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



Responsive Mode

| | <u>View</u> | <u>Action</u> | <u>Experience</u> |
|-----------------|--|---|--|
| Avoid | Resources, challenges-in- context | Govern/restrain, truth-to-power, forgive | Strength, safety, peace |
| Approach | Sufficiency, abundance, disenchantment | Aspire, give, let go | Glad, grateful, fulfilled, satisfied |
| Attach | Connection, belonging, social supplies | Open to others; join; be empathic, compassionate, kind, caring; love | Membership, closeness, friend- ship, bonding loved and loving |

Behind the Obscurations

Sam sees *“peeping among the cloud-wrack . . . a white star
twinkle for a while.*

*The beauty of it smote his heart, as he looked up out of the
forsaken land, and hope returned to him.*

*For like a shaft, clear and cold, the thought pierced him that
in the end the Shadow was only a small and passing thing:
there was light and high beauty forever beyond its reach.”*

Tolkein, *The Lord of the Rings*



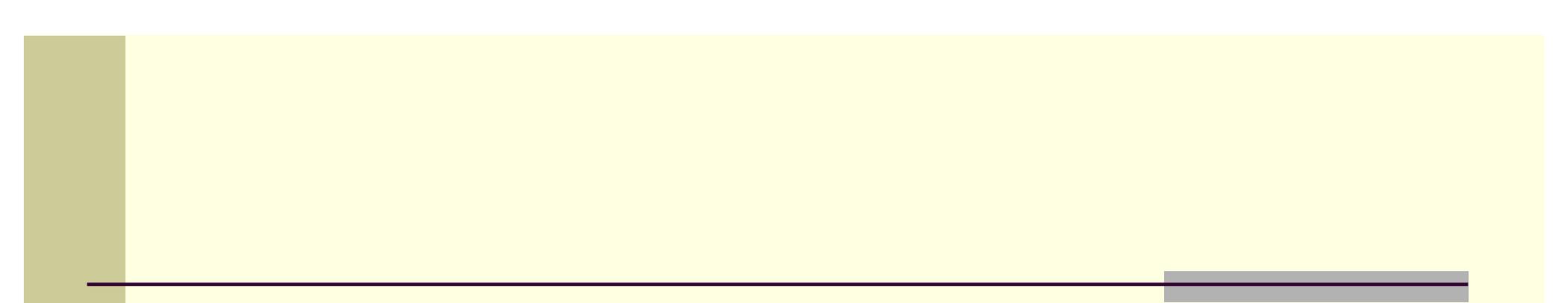
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Key Benefits of Responsive Mode

- 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



The Reactive Mode

Fired up for Survival

When disturbed by threat, loss, or rejection:

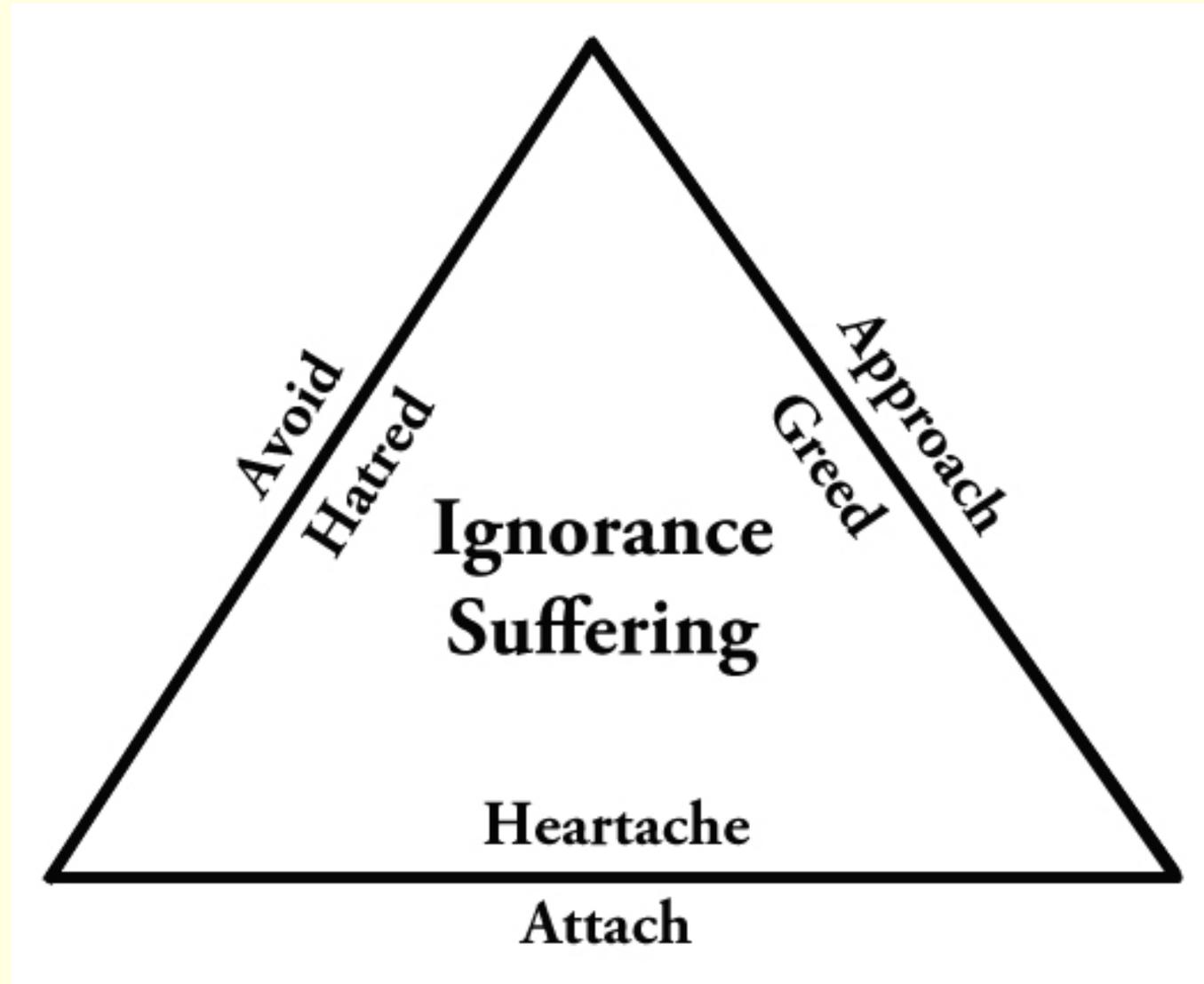
The body fires up into the stress response; resources are expended for immediate needs while long-term building is deferred; outputs exceed inputs; unsustainable.

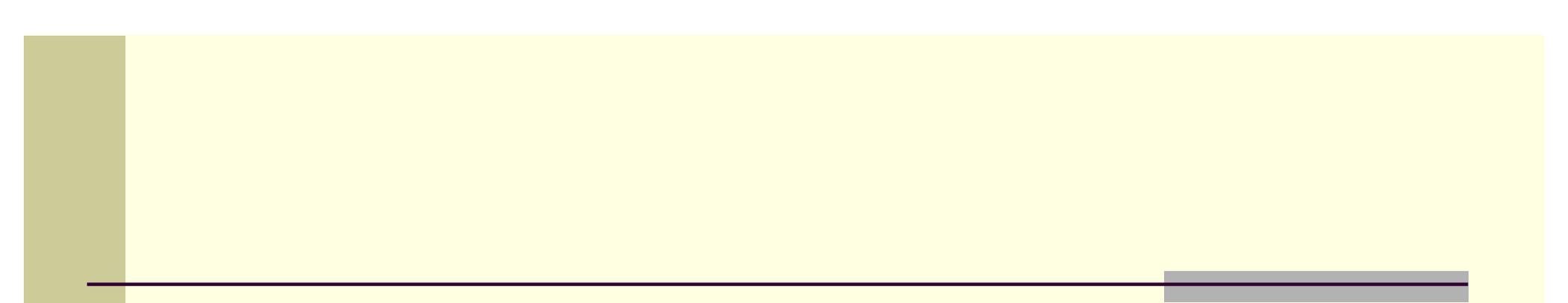
The mind fires up into:

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

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

The Reactive Mode





The Negativity Bias

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.

A Major Result of the Negativity Bias: Threat Reactivity

- Two mistakes:
 - Thinking there is a tiger in the bushes when there isn't one.
 - Thinking there is no tiger in the bushes when there is one.
- We evolved to make the first mistake a hundred times to avoid making the second mistake even once.
- This evolutionary tendency is intensified by temperament, personal history, culture, and politics.
- Threat reactivity affects individuals, couples, families, organizations, nations, and the world as a whole.

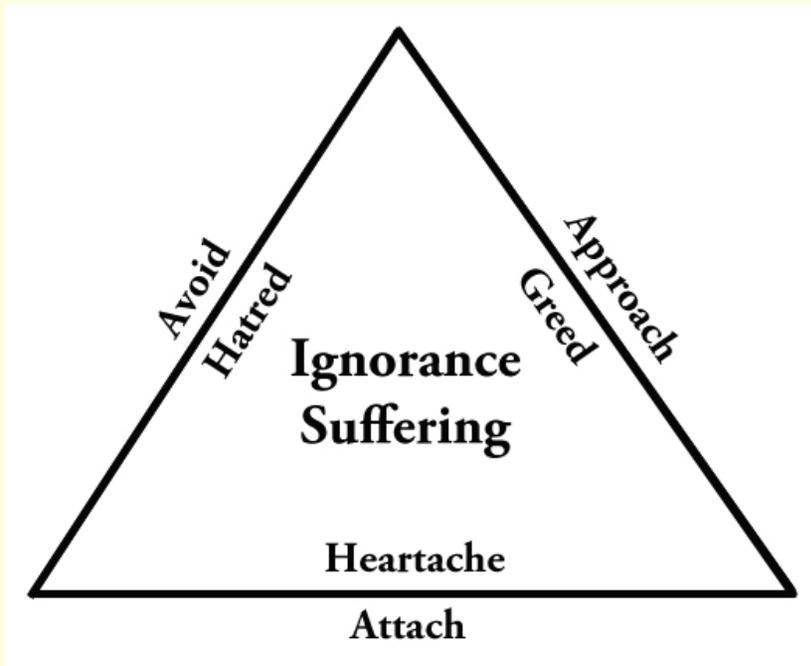
Reactive Mode

| | <u>View</u> | <u>Action</u> | <u>Experience</u> |
|-----------------|---|--------------------------------------|---|
| Avoid | Harms present or lurking | Fight, flight, freeze | Fear, anger, weakness |
| Approach | Scarcity, loss, unreliability, not expected rewards | Grasp, acquire | Greed, longing, frustration, disappointment |
| Attach | Separated, being “beta,” devalued | Cling, seek approval, reproach | Loneliness, heart- break, envy, jealousy, shame |

Psychopathology as Reactive Dysfunctions

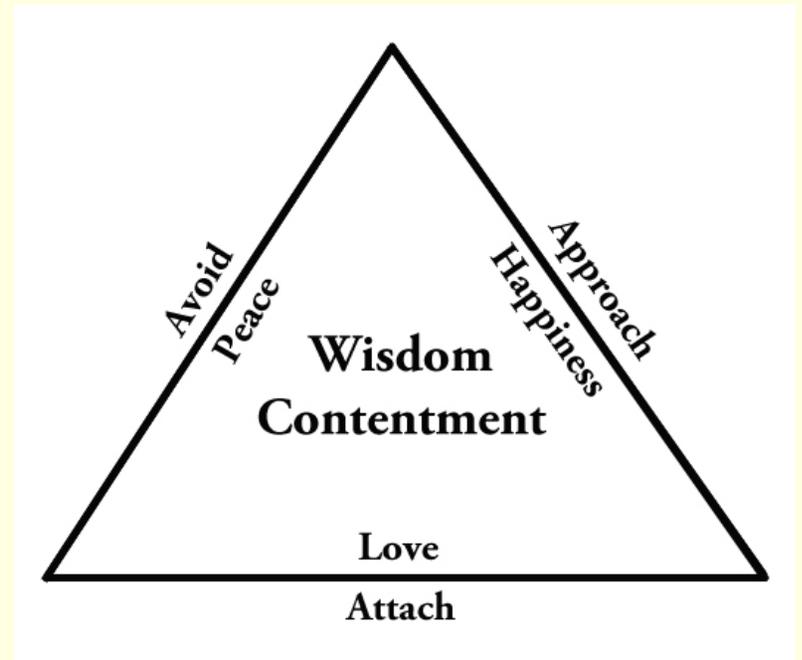
- **Avoid** - Anxiety disorders; PTSD; panic, terror; rage; violence
- **Approach** - Addiction; over-drinking, -eating, -gambling; compulsion; hoarding; driving for goals at great cost; spiritual materialism
- **Attach** - Borderline, narcissistic, antisocial PD; symbiosis; *folie a deux*; “looking for love in all the wrong places”

Choices . . .



Reactive Mode

Or?



Responsive Mode

*We can deliberately use the mind
to change the brain for the better.*



Inner Resources

Causes and Effects

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

The brain is shaped by the mental/neural states that are activated, installed, and reactivated within it.

Inner “poisons” (e.g., hatred, greed, heartache, delusion) cause suffering, harm, and negative cycles.

Inner resources (e.g., peace, happiness, love, wisdom) cause contentment, welfare, and positive cycles.

Inner Resources Include

- **Virtues** (e.g., patience, energy, generosity, restraint)
- **Executive functions** (e.g., meta-cognition)
- **Attitudes** (e.g., optimism, compassion, kindness)
- **Capabilities** (e.g., emotional intelligence, resilience)
- **Positive emotions** (e.g., gratitude, love, joy)
- **Approach orientation** (e.g., curiosity, exploration)

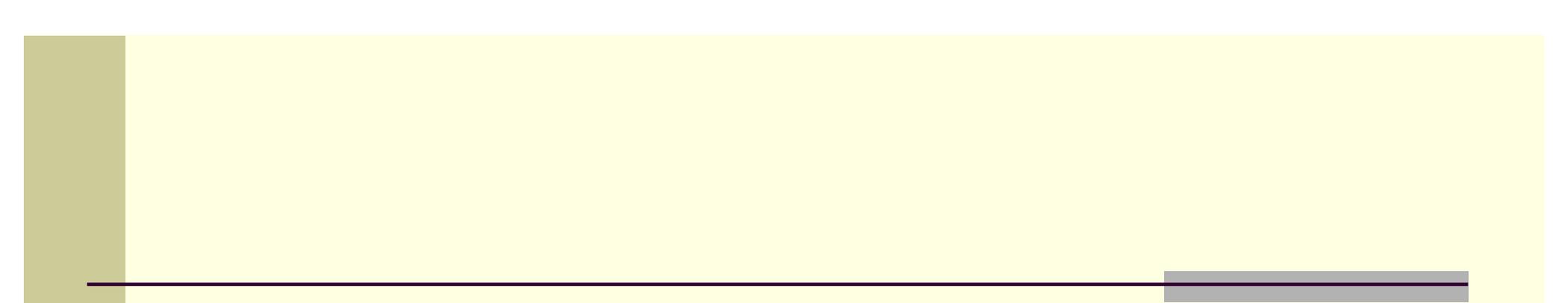
Cultivating Inner Resources

- Inner resources develop via modeling, conceptualization, pleasant and painful experiences, and practice.

- Pleasant experiences are a particularly powerful factor, e.g.:
 - Nurture child development
 - Encourage exploration and skill development
 - Initiate and sustain the Responsive mode
 - Help us endure the unpleasant and convert it to resources
 - Motivate us to continue learning
 - One can value pleasant experiences without craving them.

- The final common pathway of all these processes is registration of the inner resource in implicit memory. This is *installation*.

**Given the negativity bias of the brain,
and its inefficiencies at transferring pleasant
experiences into implicit memory,
how can we strengthen the installation
of inner resources
that help us come home to our true nature?**



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.

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

Pema Chodron

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.”

Components of a Good Experience

- **Bodily states** - healthy arousal; PNS; vitality
- **Emotions** - both feelings and mood
- **Views** - expectations; object relations; perspectives on self, world, past and future
- **Behaviors** - repertoire; inclinations

Types of Good Experiences

Avoiding Harms

- Feeling basically alright right now
- Feeling protected, strong, safe, at peace

Approaching Rewards

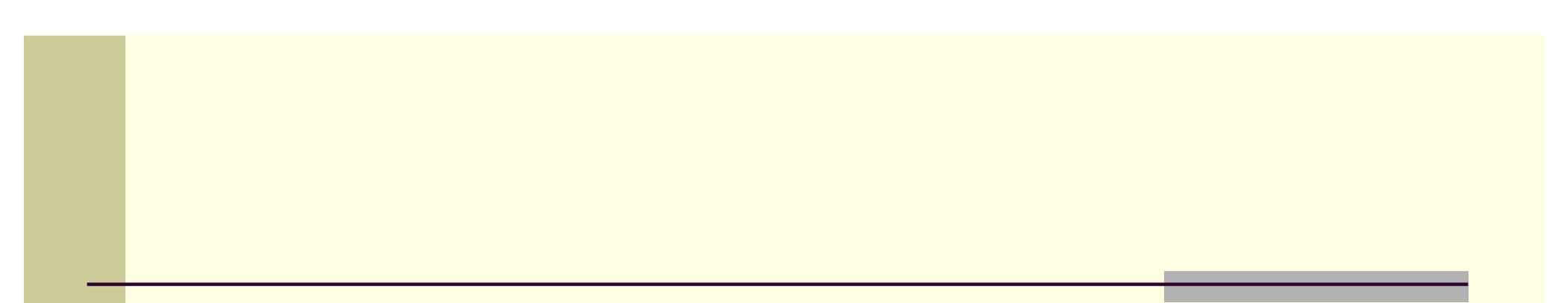
- Everyday sensual pleasures
- Satisfactions in accomplishing goals
- Feeling glad, grateful, contented, fulfilled
- Therapeutic, spiritual, or existential realizations

Attaching to Others

- Feeling included, seen, liked, appreciated, loved
- Feeling compassionate, kind, generous, loving

Right Mindfulness and Right Effort

- The great bird of practice has two wings: *being with* and *working with* the mind.
 - *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 - for mindfulness.



Taking the Fruit as the Path

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.

Coming Home . . .

Peace

Happiness

Love



Know the mind.

Shape the mind.

Free the mind.

Great Books

See www.RickHanson.net for other great books.

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Key Papers - 1

See www.RickHanson.net for other scientific papers.

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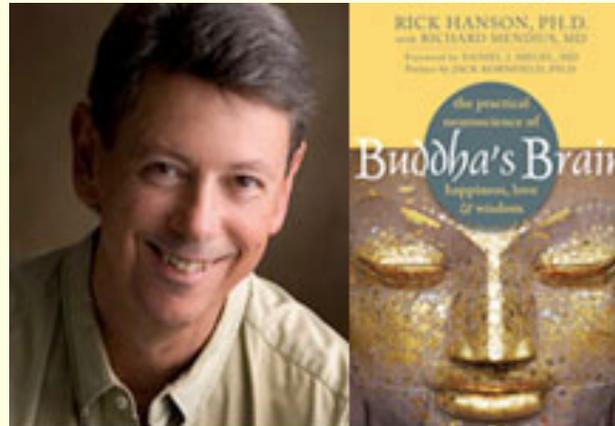
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