

# Mindful Cultivation: Developing Inner Resources For Resilient Well-Being



FACES Compassion and Wisdom  
Seattle, March 2, 2018

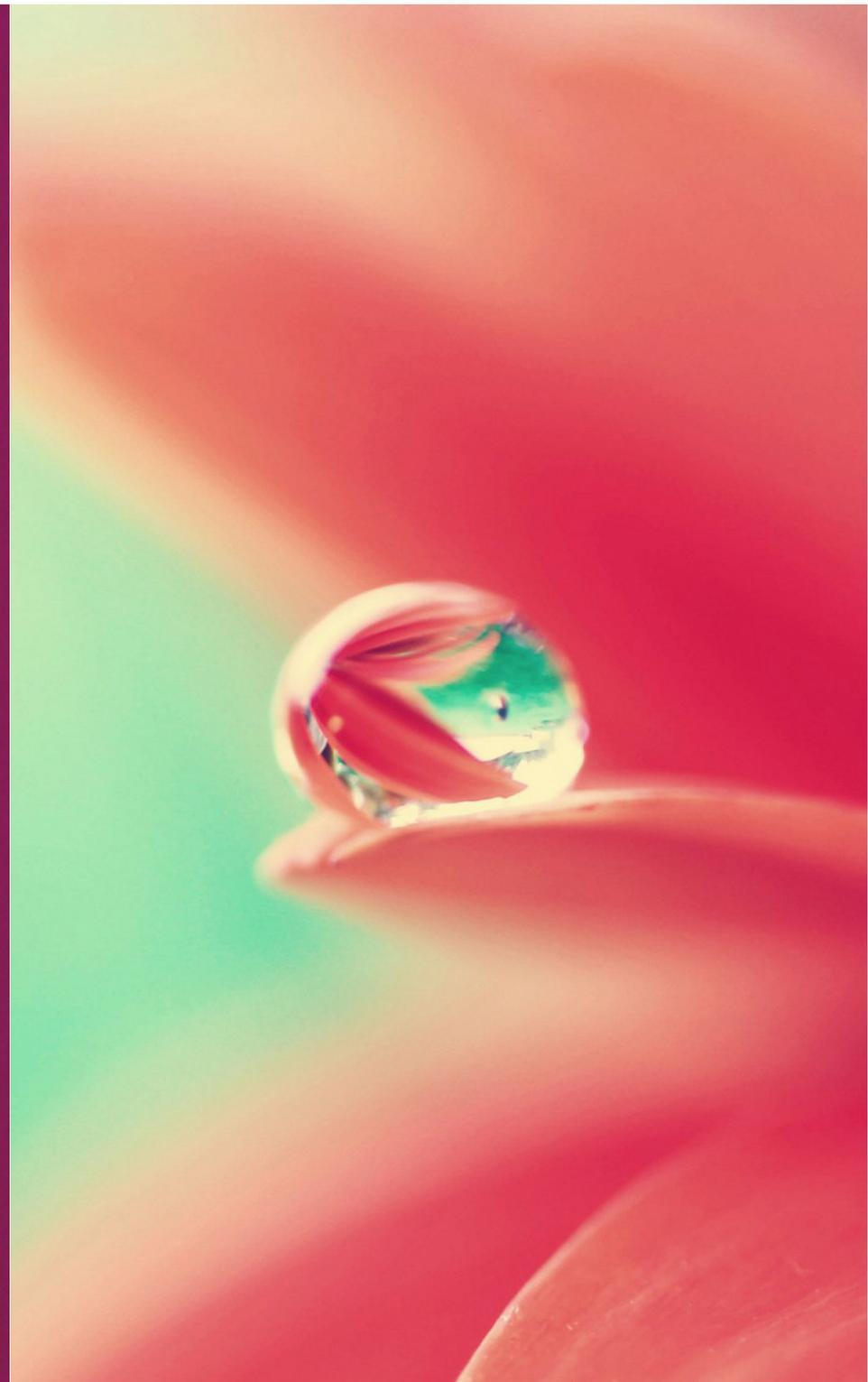
Rick Hanson, Ph.D.  
Greater Good Science Center  
University of California at Berkeley  
[www.RickHanson.net](http://www.RickHanson.net)

*Think not lightly of good,  
saying,  
“It will not come to me.”*

*Drop by drop is  
the water pot filled.*

*Likewise, the wise one,  
Gathering it little by little,  
Fills oneself with good.*

**Dhammapada 9.122**



# Sections

1. Positive Neuroplasticity
2. The Green Zone Brain
3. Wholeness, Nowness, Allness



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# Positive Neuroplasticity

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# Mental Resources for Resilient Well-Being

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# Well-Being

Hedonia

Eudaimonia

# Shaping the Course of a Life

Challenges

Vulnerabilities

Resources

# Location of Resources

World

Body

Mind

# Some Mental Resources

Character Strengths

Secure Attachment

Executive Functions

Positive Mood

Social and Emotional Intelligence

Resilience

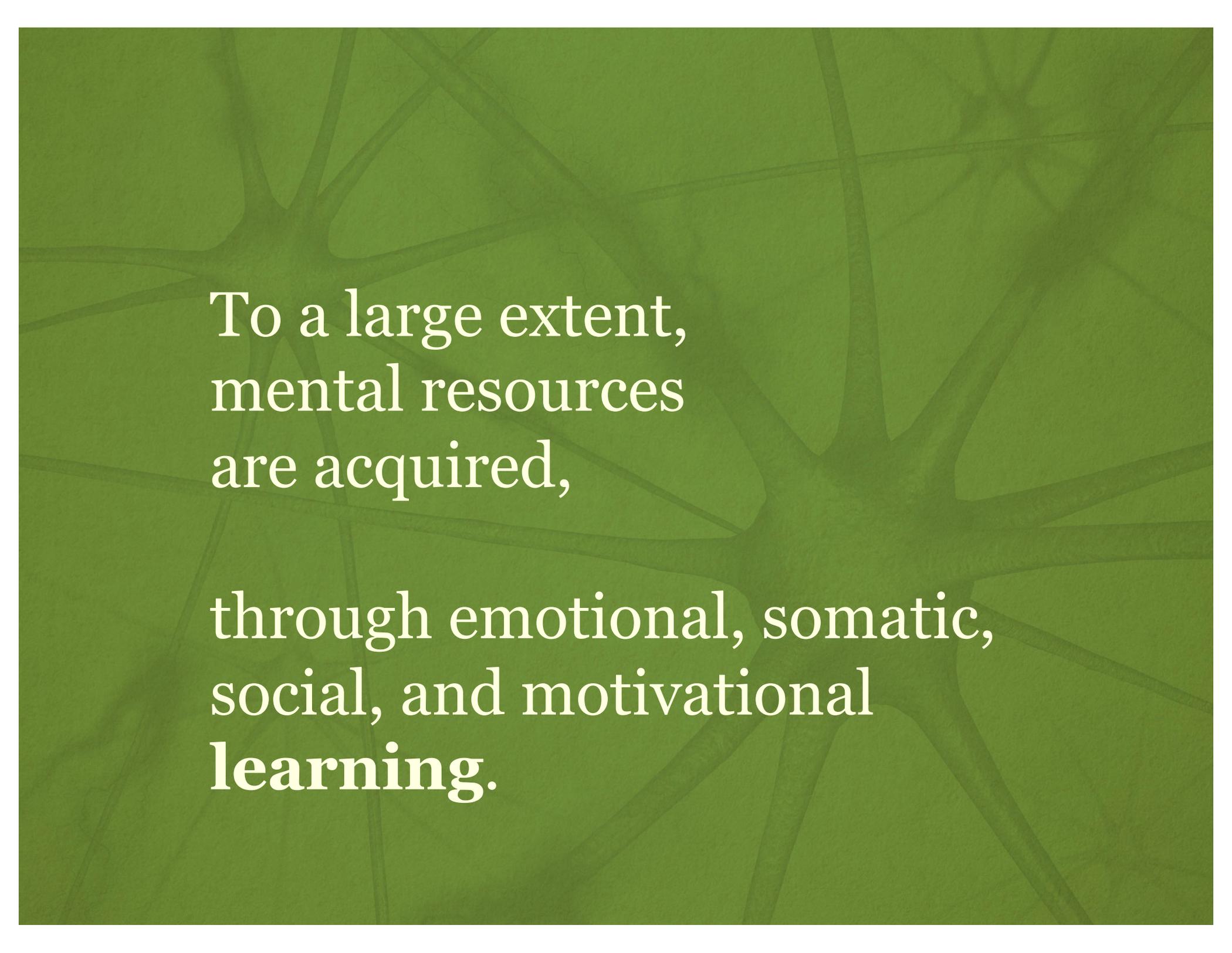


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Pick a partner and choose an A and a B (A's go first). Then take turns, with one person speaking while the partner mainly listens, exploring this question:

What psychological resources – **inner strengths** – do you draw on for a personal challenge?

If you're alone,  
reflect or journal.



To a large extent,  
mental resources  
are acquired,

through emotional, somatic,  
social, and motivational  
**learning.**

# Two Wolves in the Heart

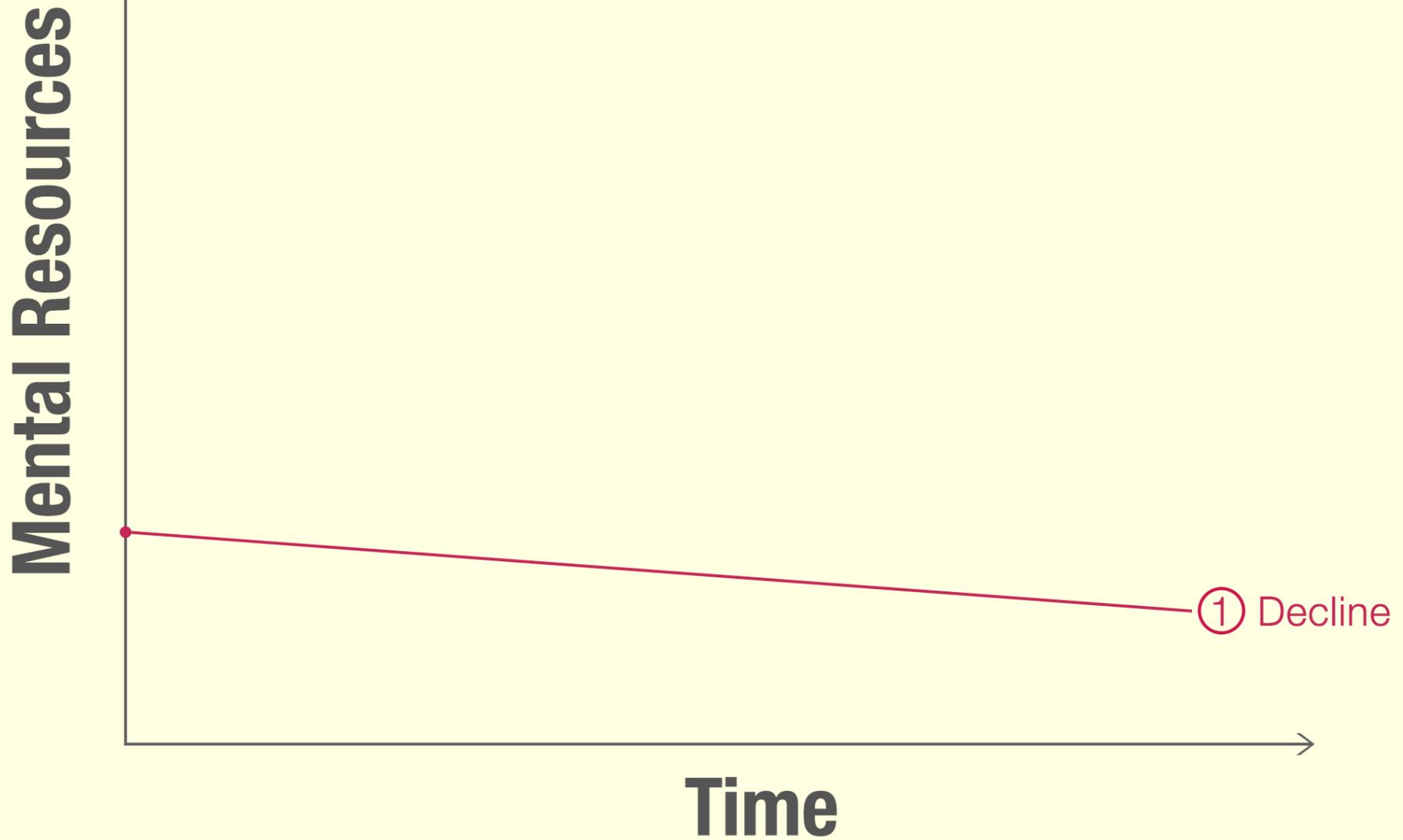


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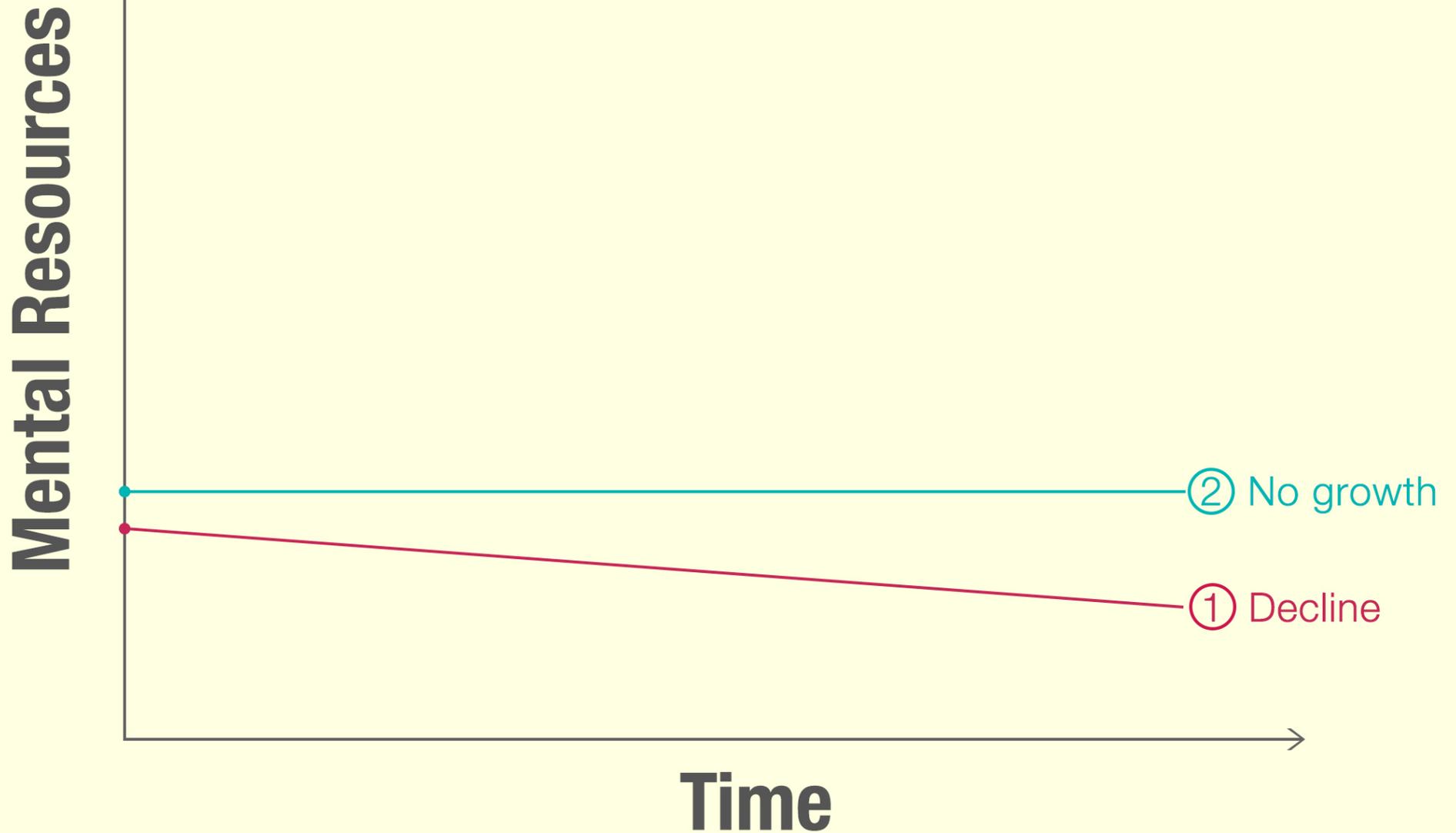
# Acquiring Mental Resources

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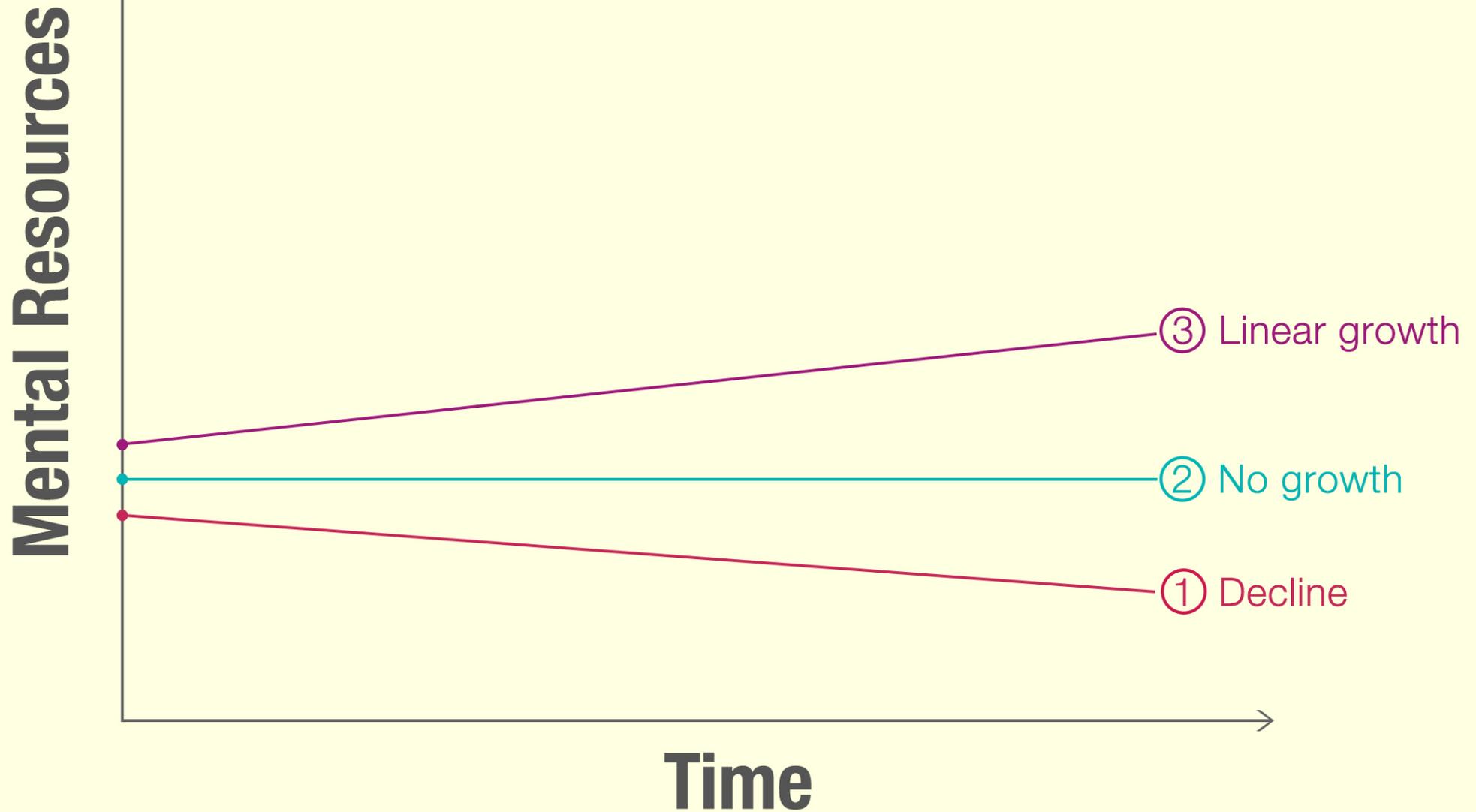
# Four Learning Curves



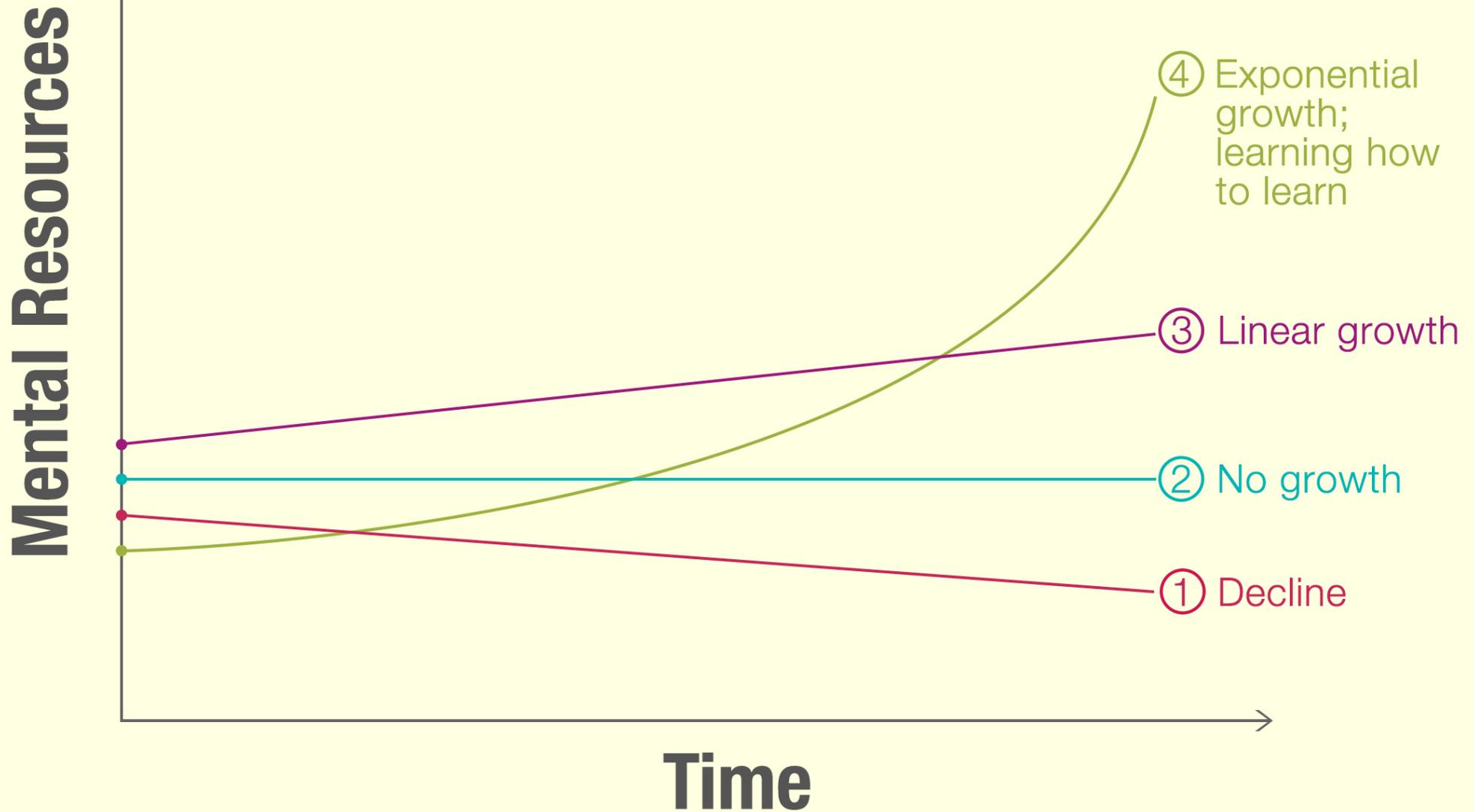
# Four Learning Curves



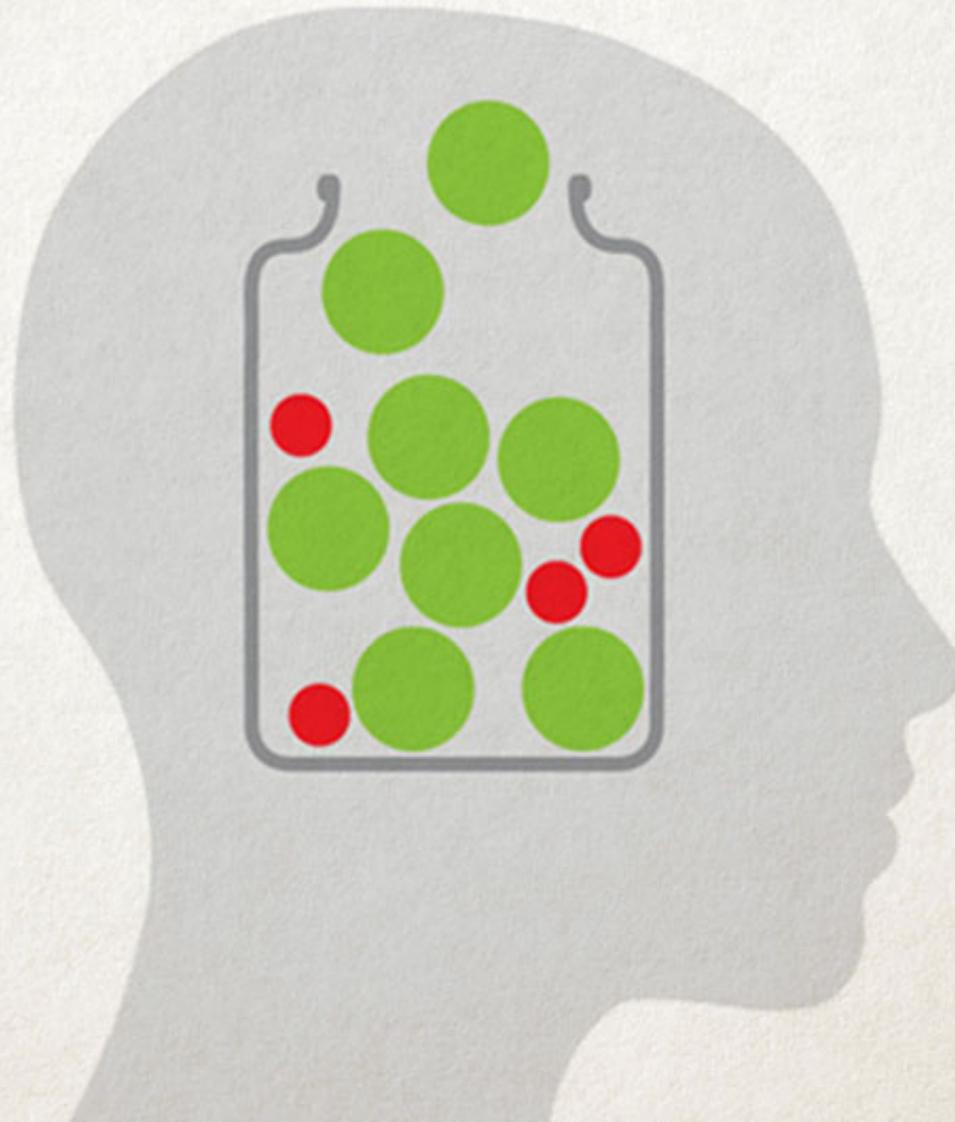
# Four Learning Curves



# Four Learning Curves



# Mental Resources Are Acquired Through Changes in the Brain



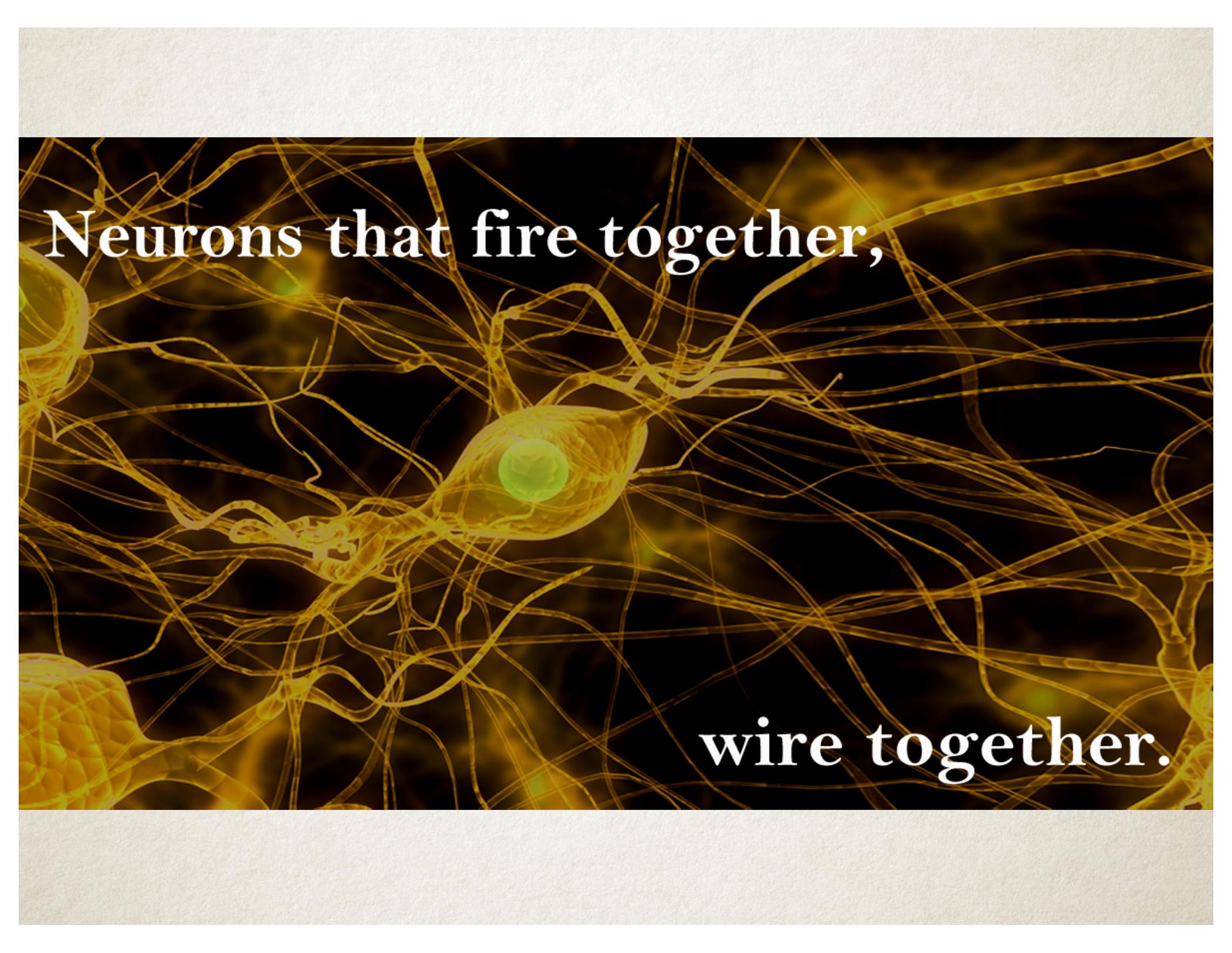
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# The Neuropsychology Of Learning

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Most human learning – healing,  
growth, transformation – begins with  
and is shaped by our experiences:  
immaterial consciousness  
represented by material neurobiology.

Patterns of mental/neural activity  
are encoded, consolidated, and  
reconsolidated into lasting changes  
of neural structure or function (that  
may involve other bodily systems).

A network of glowing yellow neurons with a central neuron highlighted in green. The neurons are interconnected by a dense web of thin, yellow, fiber-like structures. The central neuron has a bright green nucleus and is surrounded by a network of yellow fibers. The background is dark, making the glowing neurons stand out.

Neurons that fire together,

wire together.

# Major Neural Mechanisms of Learning

(De)Sensitizing existing synapses

Building new synapses

Altered gene expression

Building and integrating new neurons

Altered ongoing activity in a region

Altered connectivity of regions

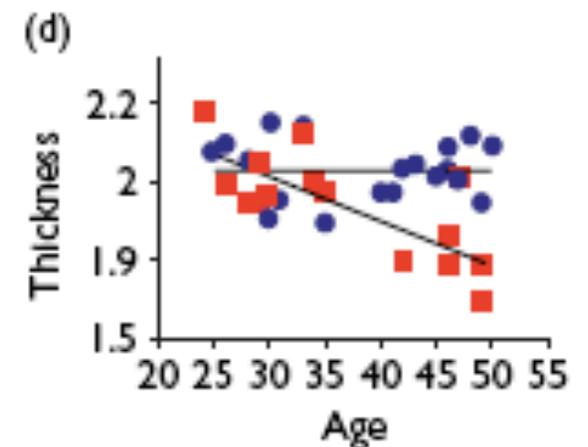
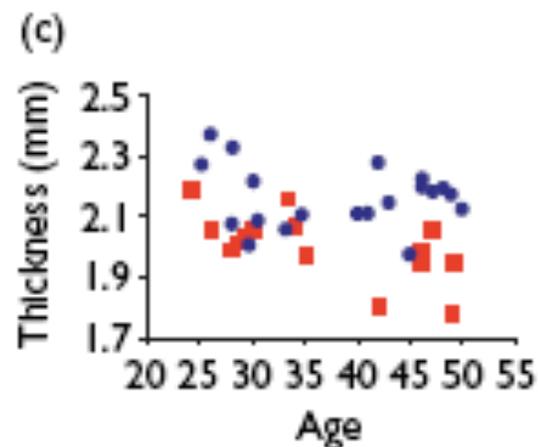
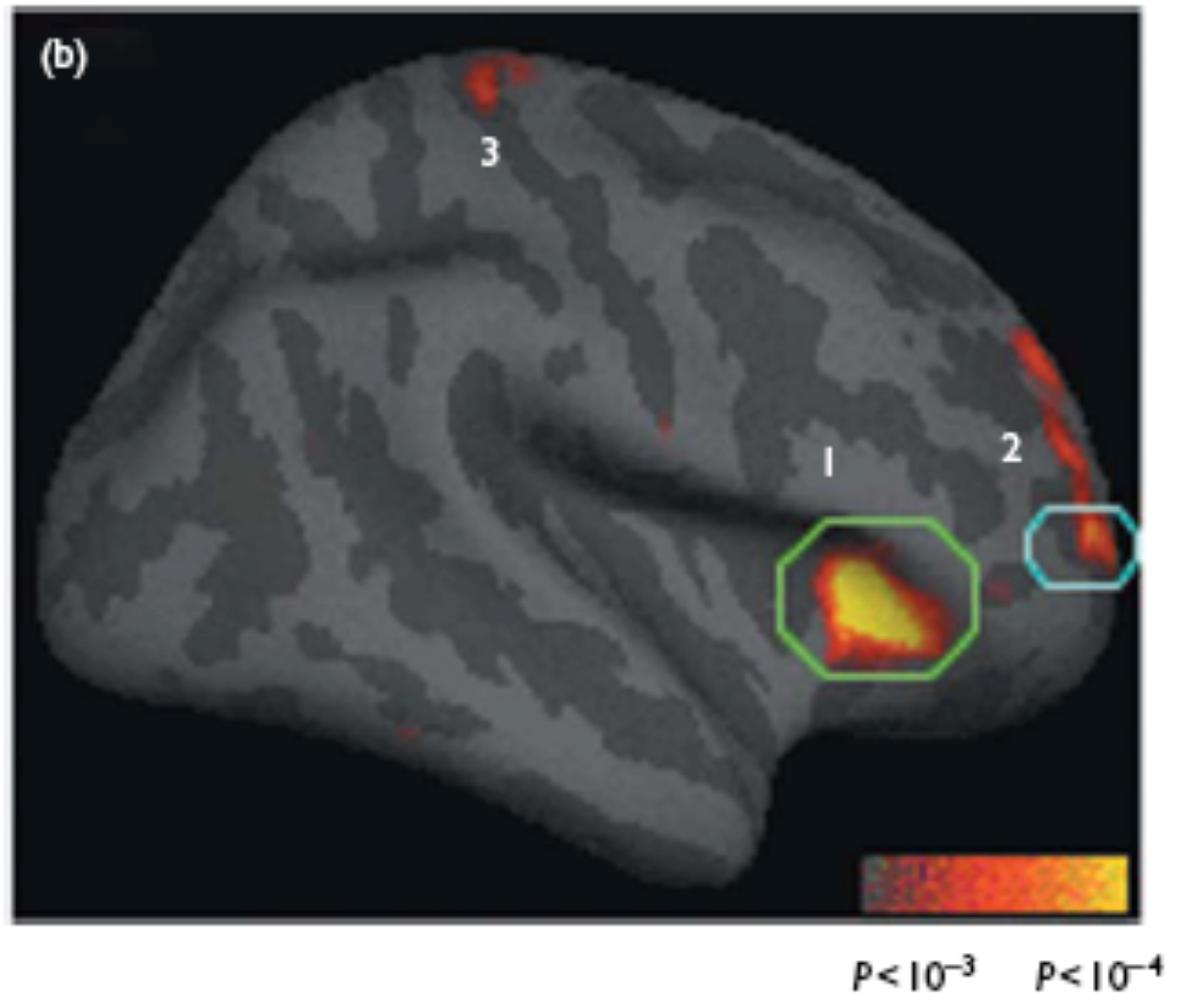
Altered neurochemical activity

Information from hippocampus to cortex

Modulation by stress hormones, cytokines

Slow wave and REM sleep

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

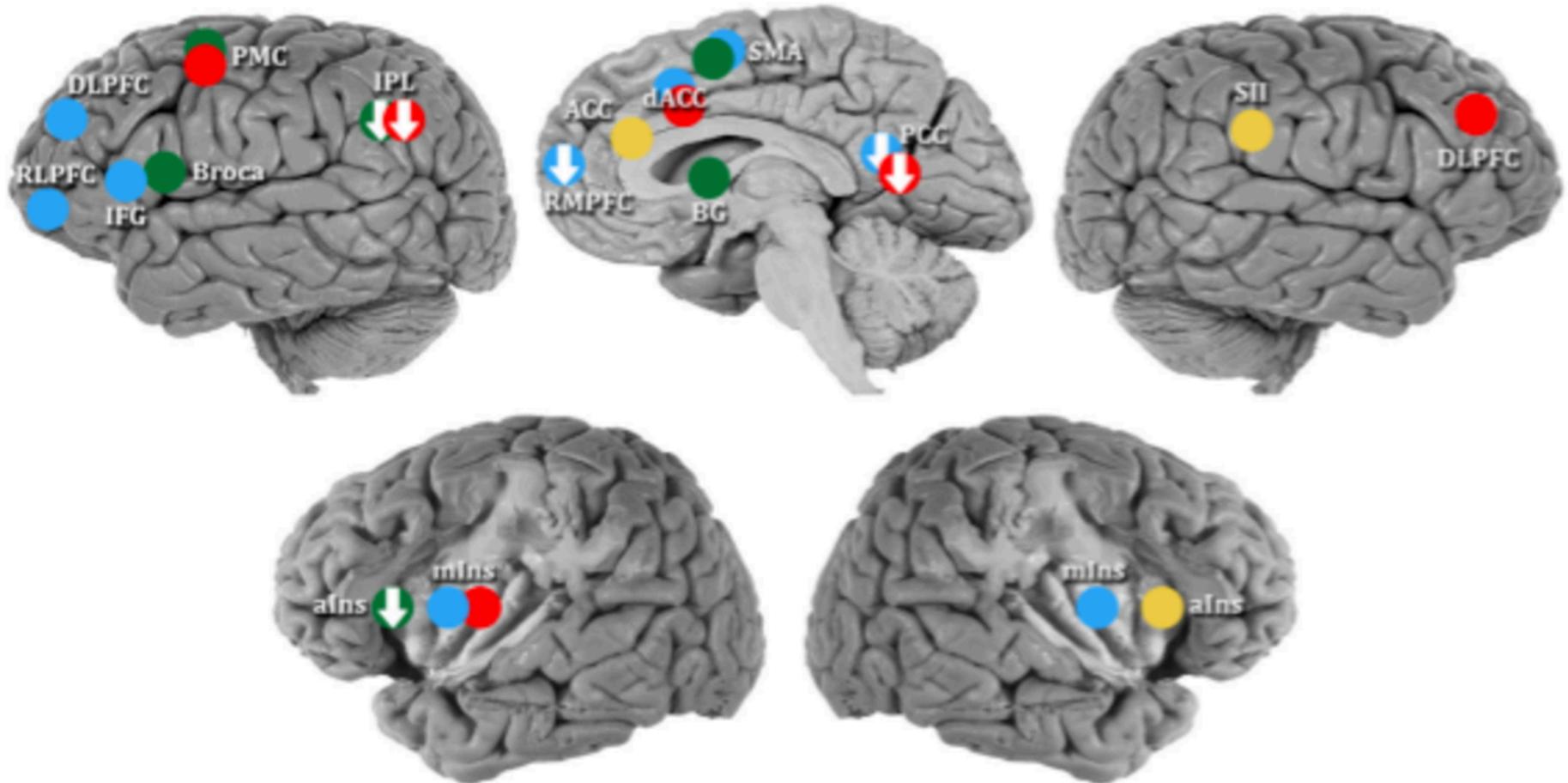


# Effects of Meditation on the Brain

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- Increased gray matter in the:
  - Insula - interoception; self-awareness; empathy for emotions
  - Hippocampus - visual-spatial memory; establishing context; inhibiting amygdala and cortisol
  - Prefrontal cortex (PFC) - executive functions; attention control
- Reduced cortical thinning with aging in insula and PFC
- Increased activation of left frontal regions, lifting mood
- Increased gamma-range brainwaves – heightened learning and integration
- Preserved telomere length in chromosomes, aiding longevity

● Focused Attention ● Open Monitoring ● Mantra Recitation ● Loving-kindness/Compassion



**Fox, et al., 2016, *Neuroscience and Biobehavioral Reviews*, 65, 208-228**

**Mental resources**  
are acquired in two stages:

Encoding > Consolidation

Activation > Installation

State > Trait

We become more **compassionate** by repeatedly installing experiences of compassion.

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We become more **grateful** by repeatedly installing experiences of gratitude.

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We become more **resilient** by repeatedly installing experiences of resilience.

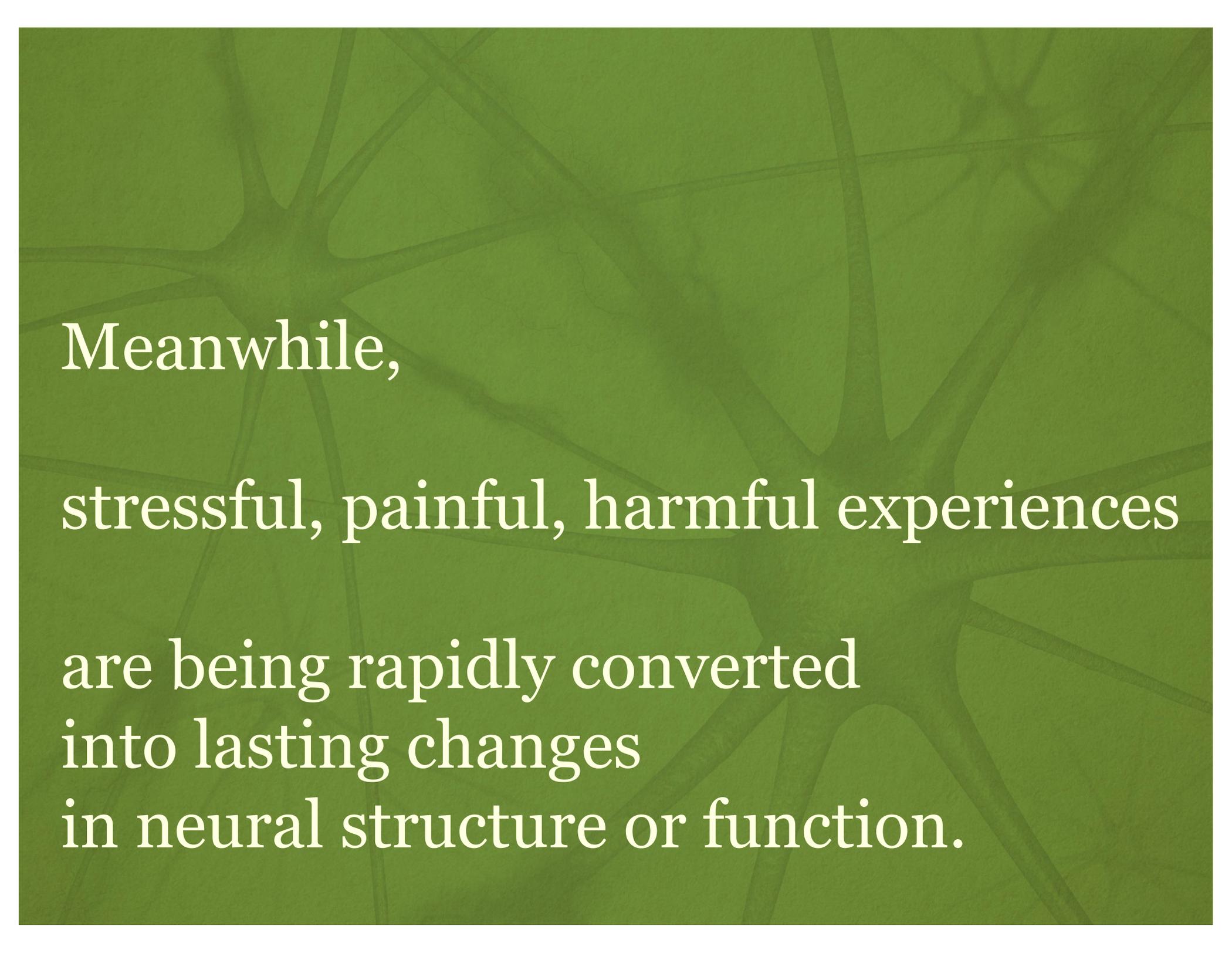
**Experiencing doesn't equal learning.**

**Activation without installation  
may be pleasant,  
but no trait resources are acquired.**

What fraction of our  
beneficial mental states leave  
traces in neural structure?

Professionals and the public are often better at activation than at installation.

This can reduce gains from psychotherapy, coaching, human resources training, mindfulness programs, character education, and self-help activities.



Meanwhile,

stressful, painful, harmful experiences

are being rapidly converted

into lasting changes

in neural structure or function.

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# The Negativity Bias

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# The Negativity Bias

During the 600 million year evolution of the nervous system, avoiding “sticks” was usually more consequential than getting “carrots.”

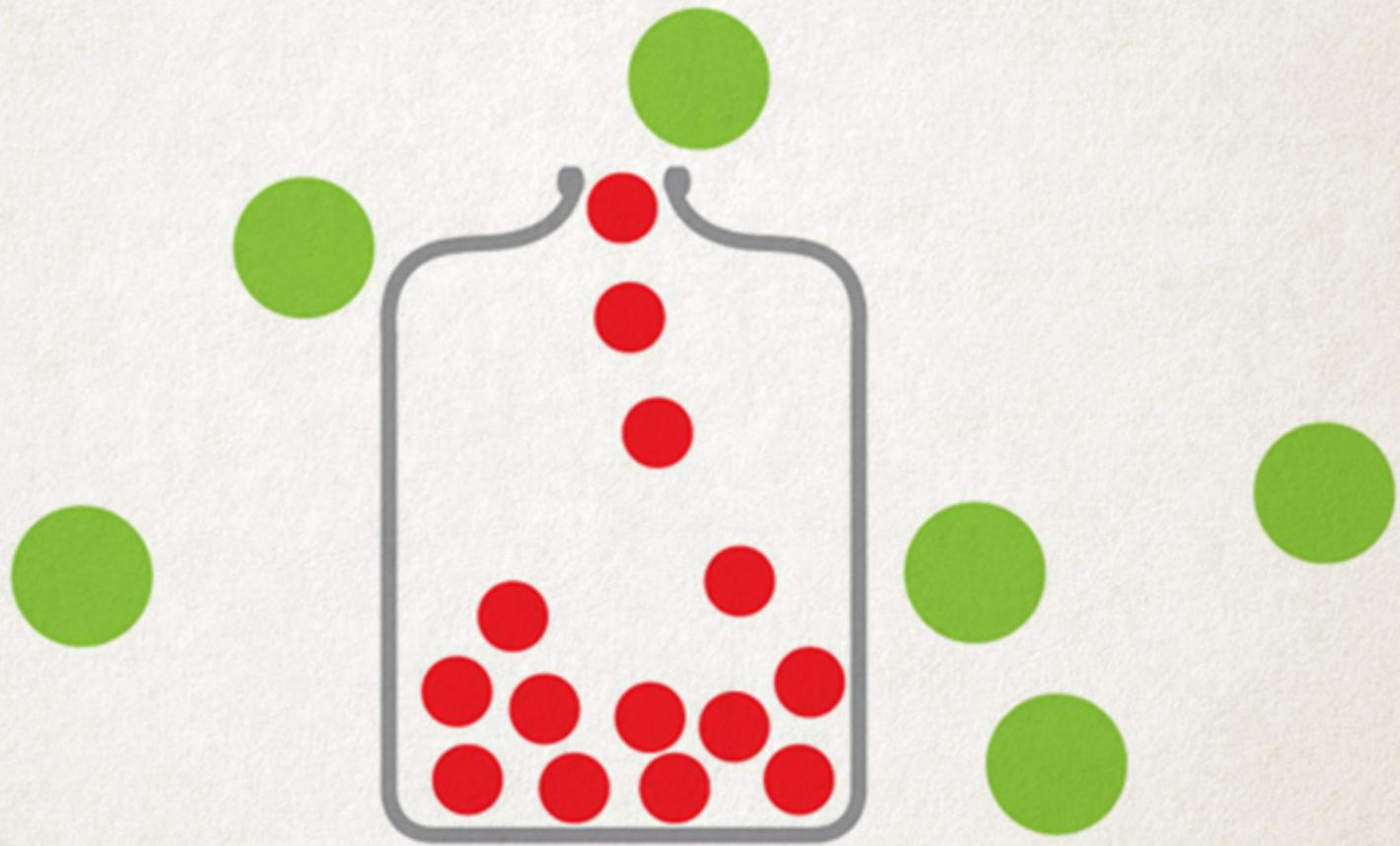
1. So we scan for bad news,
2. Over-focus on it,
3. Over-react to it
4. Install it efficiently in memory (incl. implicit),
5. Sensitize the brain to the negative, and
6. Create vicious cycles with others.

# Velcro for Bad, Teflon for Good

The negativity bias

bad experiences

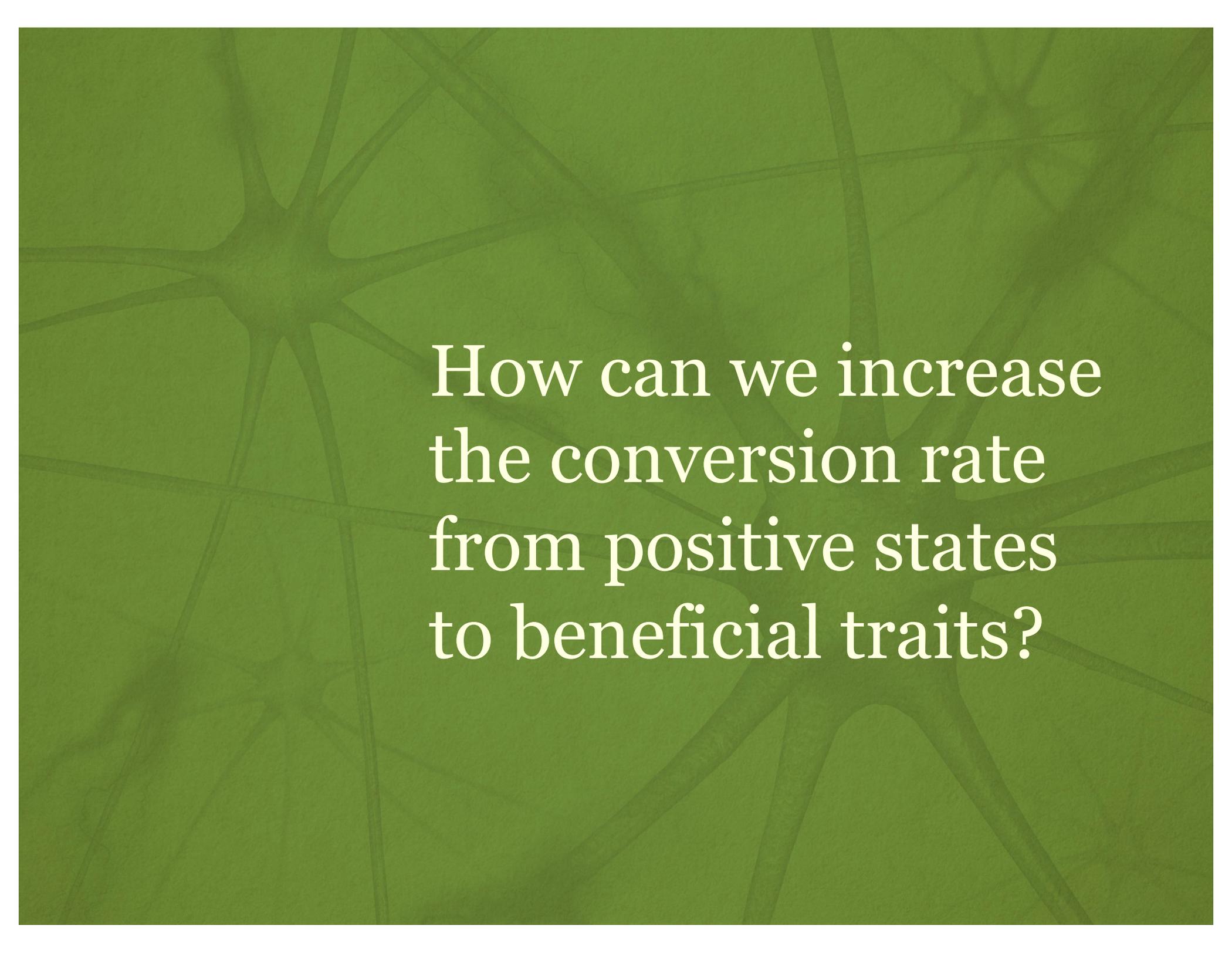
good experiences



The Negativity Bias

The brain is good  
at learning from bad experiences  
but relatively bad  
at learning from good ones.

Even though  
learning from good experiences  
of mental resources and related factors  
grows inner strengths.



How can we increase  
the conversion rate  
from positive states  
to beneficial traits?

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# Learning How To Learn

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# Mindful Cultivation: HEAL Process

## Activation

1. Have a beneficial experience

## Installation

2. Enrich the experience
3. Absorb the experience
4. Link positive and negative material  
(Optional)

# Let's Try It

## Notice

Something  
beneficial in  
awareness

## Create

Gratitude,  
gladness

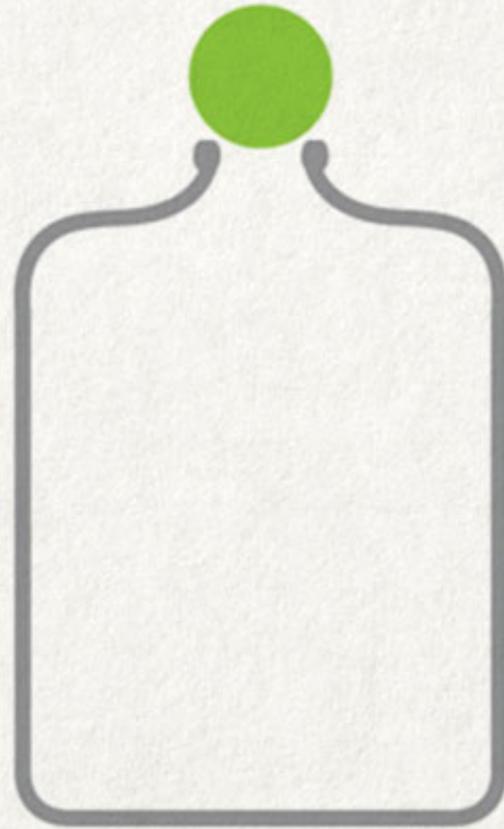
## Create

Compassion,  
kindness

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For each of the above:

Have the experience. Enrich it. Absorb it.



**H**ave a Beneficial Experience

# 1. Have a Beneficial Experience

Experience: a beneficial thought, perception, emotion, desire, action, or blend

**Notice** an experience already present, in the foreground or background of awareness

**Create** an experience, such as:

- Bringing to mind various facts
- Imagining something
- Calling up somatic markers
- Taking action

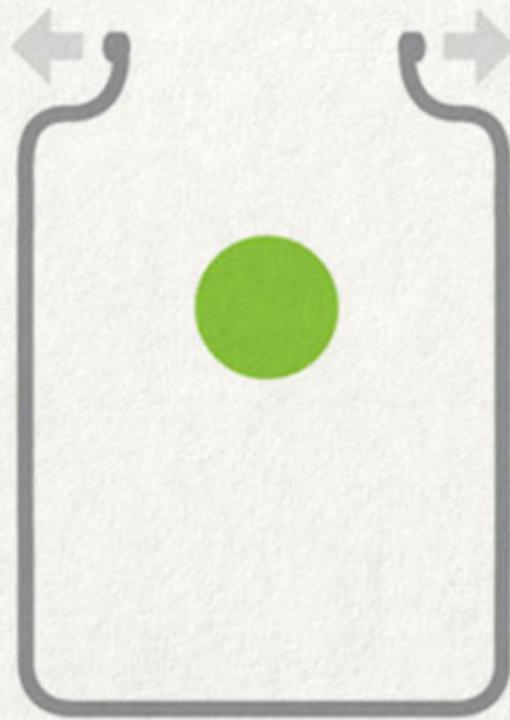
# Two Aspects of Installation

## Enriching:

- Mind – big, rich, protected experience
- Brain – intensifying and maintaining neural activity

## Absorbing:

- Mind – intending and sensing that the experience is received into oneself, with related rewards
- Brain – priming, sensitizing, and promoting more effective encoding and consolidation



**E**nrich It

# Factors of Enriching

**Duration** – maintenance, repetition

**Intensity** – arousal

**Multimodality** – multiple aspects of experience

**Novelty** – alertness, sense of freshness, granularity of attention

**Salience** – personal relevance

# Multimodality

**Thought** – meaning, elaboration, metaphor

**Perception** – interoception

**Emotion** – valence

**Desire** – valuing

**Action** – enacted, shared with others

# Factors of Enriching

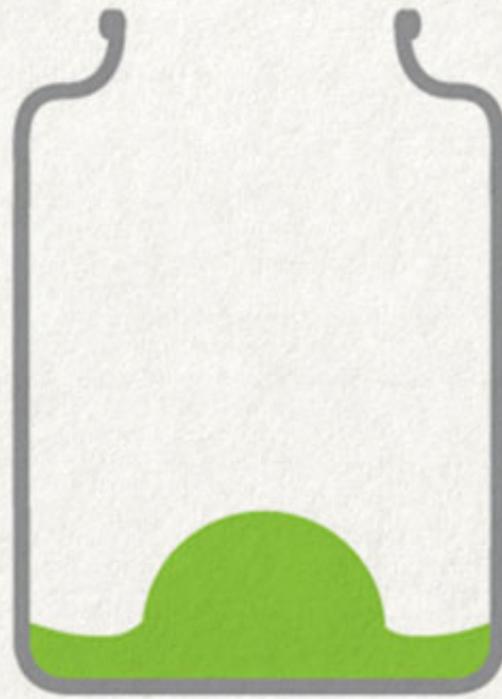
**Duration** – maintenance, repetition

**Intensity** – arousal

**Multimodality** – multiple aspects of experience

**Novelty** – alertness, sense of freshness, granularity of attention

**Salience** – personal relevance



**A**bsorb It

# Factors of Absorbing

**Intend** to internalize the experience (priming).

**Sense** the experience sinking in (sensitizing):

- Imagery – water into sponge, jewel in treasure chest
- Sensation – warm soothing balm spreading inside
- Knowing – “I am becoming a little more \_\_\_\_\_.”
- Felt sense of shift – embodied registration of change

**Find rewards** in the experience (promoting encoding and consolidation through dopamine and norepinephrine activity)

# Like a Nice Fire

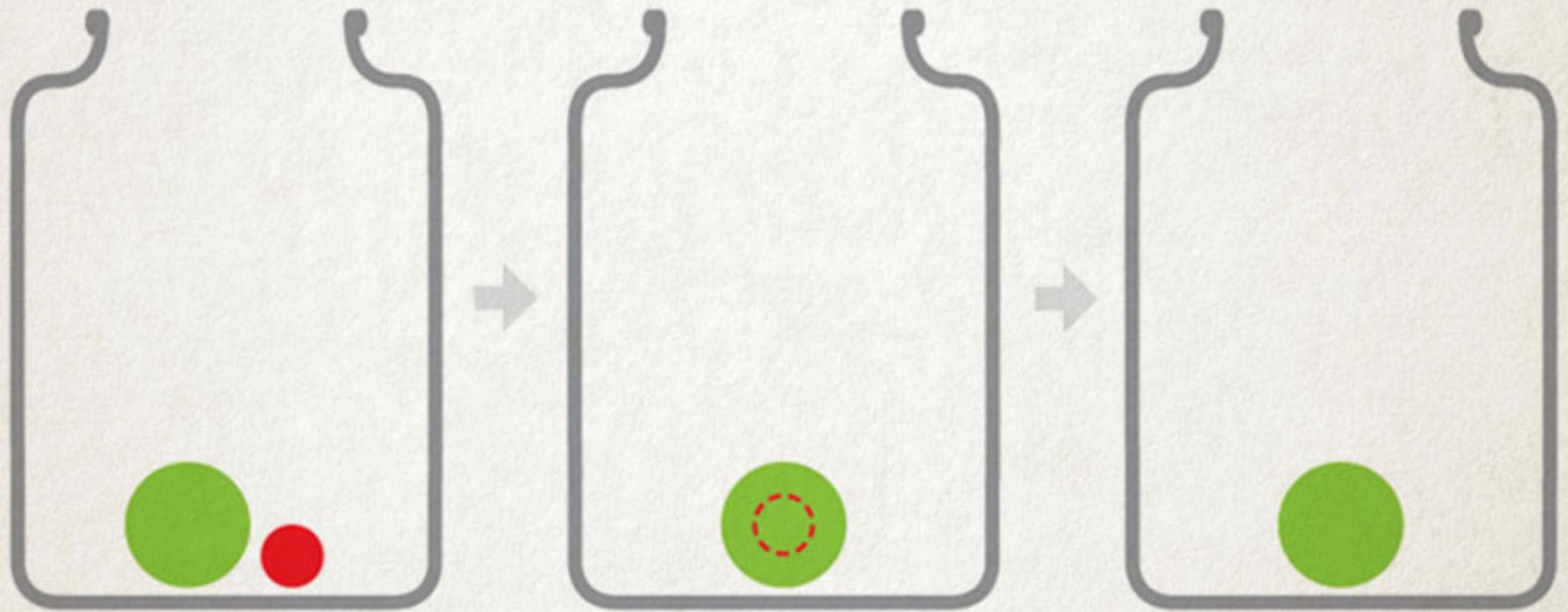


This is the fundamental how  
of “experiential gain” that can be applied  
to any what – any inner resource.

Aspects of Enriching and Absorbing are present  
in any effective psychotherapy, coaching, etc.

But systematic, explicit guidance for the  
**installation** phase of learning is uncommon.

And systematic training in the **mental factors**  
of emotional, somatic, motivational learning  
is even more rare.



**Link Positive & Negative Material**

# Comments on Linking

This step is optional:

- Not necessary for learning
- Risk of flooding, hijacking by negative material

It is common in everyday life and used widely in psychotherapy and related interventions.

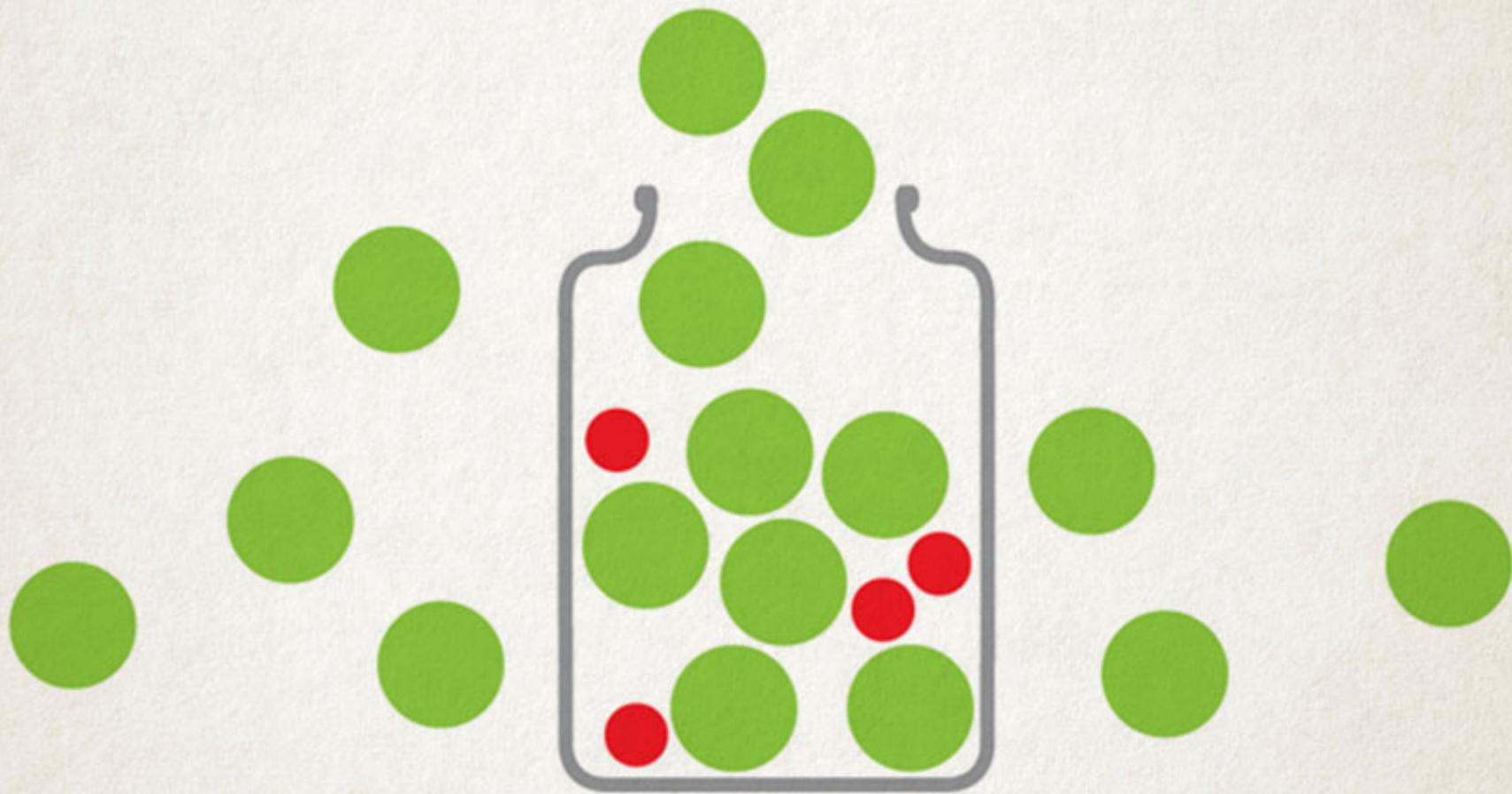
Three conditions:

- Hold two things in awareness
- Keep the positive more prominent
- Drop the negative if it is overwhelming

# Degree of Engagement with Negative

- The **idea** of the negative material
- A **felt sense** of the negative material
- The positive material **goes into** the negative material

Throughout, the positive material remains more prominent in awareness.



Have It, Enjoy It

# It's Good to Take in the Good

Develops psychological resources:

- General – resilience, positive mood, feeling loved
- Specific – matched to challenges, wounds, deficits

Has built-in, implicit benefits:

- Training attention and executive functions
- Being active rather than passive
- Treating oneself kindly, that one matters

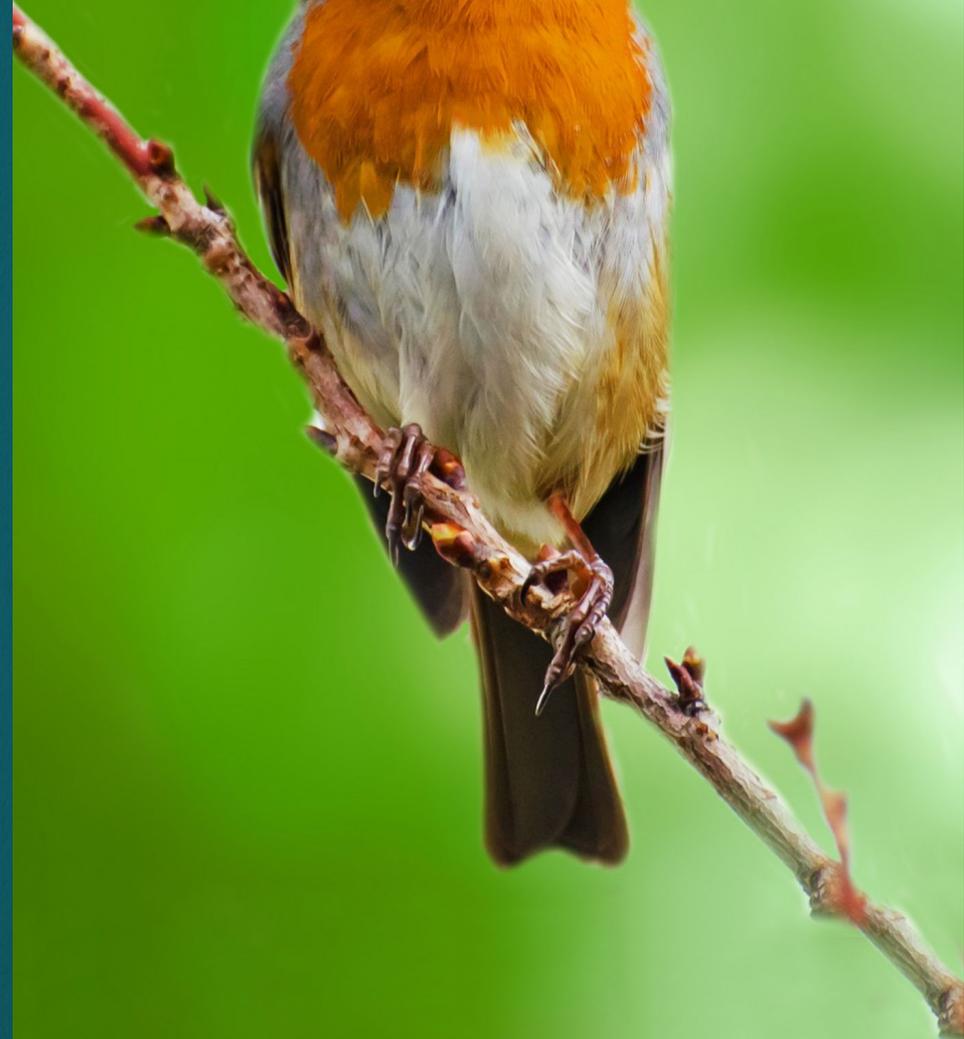
May sensitize brain to the positive

Fuels positive cycles with others

”

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

**Lao Tzu**



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# Helping Others Grow Inner Resources

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# Four Ways to Use HEAL with Others

Doing it implicitly

Teaching it and leaving it up to people

Doing it explicitly with people

Asking people to do it on their own

# HEAL in Classes and Trainings

Take a few minutes to explain it and teach it.

In the flow, encourage Enriching and Absorbing, using natural language.

Encourage people to use HEAL on their own.

Do HEAL on regular occasions (e.g., at end of a therapy session, at end of mindfulness practice)

# Implicit HEAL in Therapy

- Creating space for beneficial experiences
- Drawing attention to beneficial facts
- Encouraging positive experience of beneficial fact
- Drawing attention to key aspects of an experience
- Slowing the client down; not moving on
- Modeling taking in the good oneself

# Explicit HEAL in Therapy (1)

## Teach the method

- Background helps about brain, negativity bias
- Emphasize facts and mild beneficial experiences.
- Surface blocks and work through them.
- Explain the idea of “risking the dreaded experience,” noticing the (usually) good results, and taking them in.

# Explicit HEAL in Therapy (2)

- Do HEAL with client(s) during a session
  - Reinforcing key resource states and traits
  - Linking rewards to desired thoughts or actions
  - When learning from therapy has worked well
  - When realistic views of self and world come true
  - Good qualities in client
  - New insights
- Encourage HEAL between sessions
  - Naming occasions
  - Identifying key beneficial facts and experiences



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Pick a partner and choose an A and a B (A's go first). Then take turns, with one person speaking while the partner mainly listens, exploring this question:

How do you –  
and how could you –  
help people develop  
inner resources  
for their challenges?

If you're alone,  
reflect or journal.



2

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# Green Zone Brain



What are some of  
the good facts  
in your life these  
days?

Pick a partner and  
choose an A and a B  
(A's go first). Then take  
turns, with one person  
speaking while the  
partner mainly listens,  
exploring this question:

As the listener, keep finding  
a genuine gladness about  
the good facts in the life of  
your partner.

or journal.

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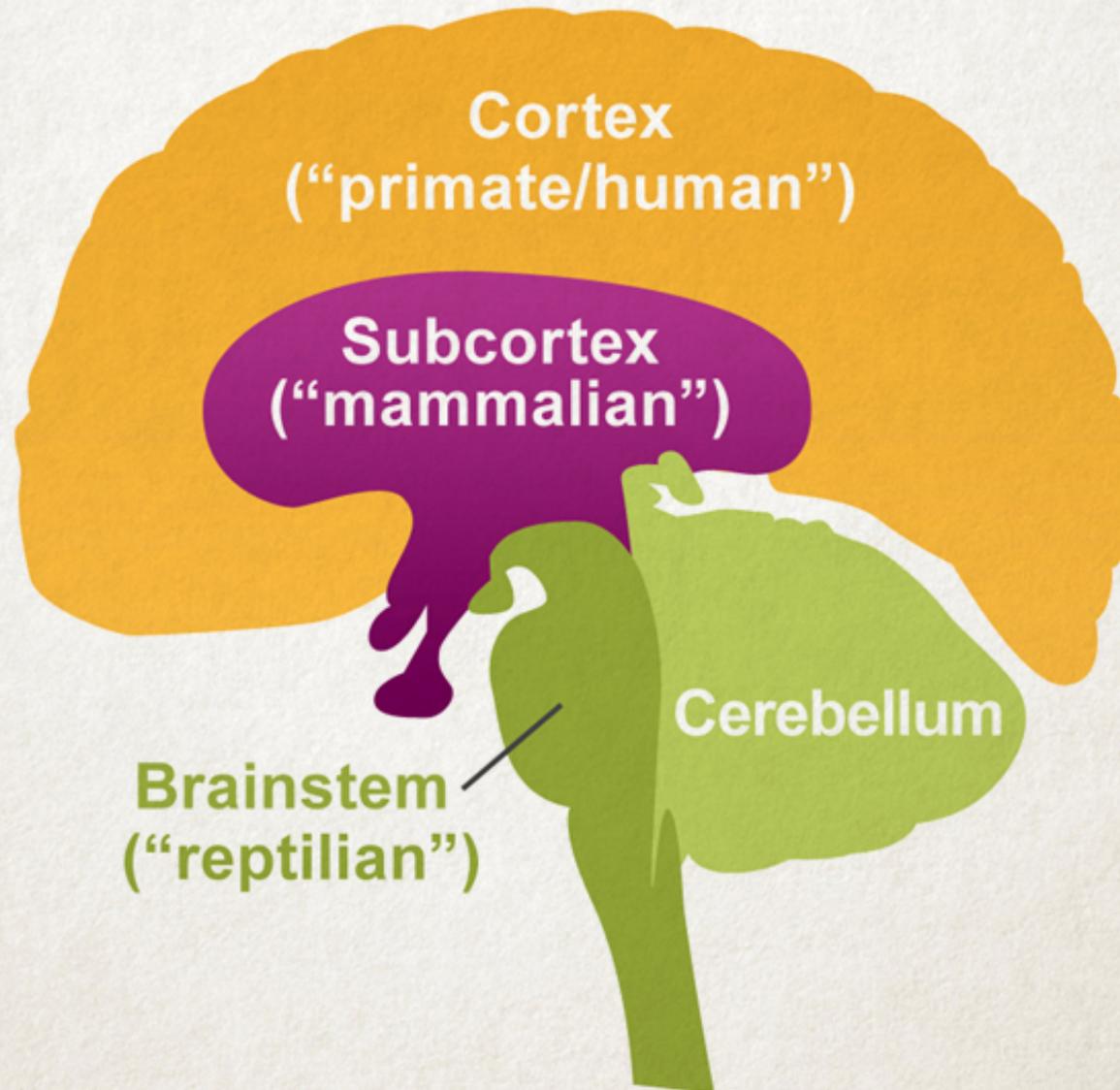
# Developing Key Inner Resources

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**What** – if it were more present in the mind of a person – would really help with challenges, temperament, or inner wounds or deficits?

**How** could a person have and install more experiences of these mental resources?

# The Evolving Brain



# Our Three Fundamental Needs



**safety**



**satisfaction**



**connection**

# Needs Activated by...



## Safety

Unpleasant  
Pain  
Threat



## Satisfaction

Pleasant  
Opportunity  
Loss



## Connection

Related  
Attraction  
Rejection

# Needs Met by Three Systems



**Safety**

**Avoiding  
harms**



**Satisfaction**

**Approaching  
rewards**



**Connection**

**Attaching  
to others**

# Needs Feel Met: Responsive Mode



When we feel basically **safe** – not disturbed by **threat** – the Avoiding system goes Responsive, with a sense of **peace**.



When we feel basically **satisfied** – not disturbed by **loss** – the Approaching system goes Responsive, with a sense of **contentment**.



When we feel basically **connected** – not disturbed by **rejection** – the Attaching system goes Responsive, with a sense of **love**.

# The Responsive Mode is Home Base

In the **Responsive** “**green zone**,” the body defaults to a sustainable equilibrium of refueling, repairing and recovering.

The mind defaults to a sustainable equilibrium of:

Avoiding

**Peace**

Approaching

**Contentment**

Attaching

**Love**

This is the brain in its homeostatic **Responsive**,  
*minimal craving* mode.

# Can You Stay in the Green Zone With:

A sense of  
unpleasant?

A sense of  
pleasant?

A sense of  
relatednes?

# Pet the Lizard



# Feed the Mouse



# Hug the Monkey



# Needs Don't Feel Met: **Reactive Mode**



When we feel **unsafe** –  
disturbed by **threat** – the  
Avoiding system  
goes Reactive,  
with a sense  
of **fear**.



When we feel **dissatisfied** –  
disturbed by **loss** –  
the Approaching  
system goes  
Reactive, with  
a sense of  
**frustration**.



When we feel **disconnected** –  
disturbed by **rejection** – the  
Attaching system  
goes Reactive,  
with a sense  
of **heartache**.

# The Reactive Mode is Leaving Home

In the **Reactive “red zone,”** the body fires up into the stress response: fight, flight, or freeze; outputs usually exceed inputs; long-term building projects are deferred.

The mind fires up into:

Avoiding

**Fear**

Approaching

**Frustration**

Attaching

**Heartache**

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

# Coming Home, Staying Home

Meeting your core needs brings you home to the **Responsive** “green zone.”

Taking in the good Responsive states grows Responsive traits. In a wonderful cycle, these traits promote good states – which can strengthen your Responsive traits.

Responsive states and traits help you stay Responsive when the world is flashing red.



# Matching Resources to Needs

## Safety

Alertness  
Grit  
Resolution  
Protections  
Calm  
Relaxation

## Peace

## Satisfaction

Gratitude  
Gladness  
Capabilities  
Restraint  
Ambition  
Enthusiasm

## Contentment

## Connection

Empathy  
Compassion  
Kindness  
Assertiveness  
Self-worth  
Confidence

## Love



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Pick a partner and choose an A and a B (A's go first). Then take turns, with one person speaking while the partner mainly listens, exploring this topic:

For yourself or another person, pick a specific challenge, identify inner resources matched to it, and then explore how to develop these resources.

If you're alone,  
reflect or journal.

# Matching Resources to Needs

## Safety

Alertness  
Grit  
Resolution  
Protections  
Calm  
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## Peace

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## Contentment

## Connection

Empathy  
Compassion  
Kindness  
Assertiveness  
Self-worth  
Confidence

## Love

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# Wider Implications

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Repeatedly taking in experiences of safety, satisfaction, and connection

develops an increasingly unconditional core sense of fullness and balance, rather than deficit and disturbance.

For individuals, this is the foundation of resilient happiness.

For groups and countries,  
they could become less vulnerable  
to the classic manipulations of  
fear and anger,  
greed and possessiveness,  
and “us” against “them” conflicts.

# Coming Home

**Peace**

**Contentment**

**Love**



**3**

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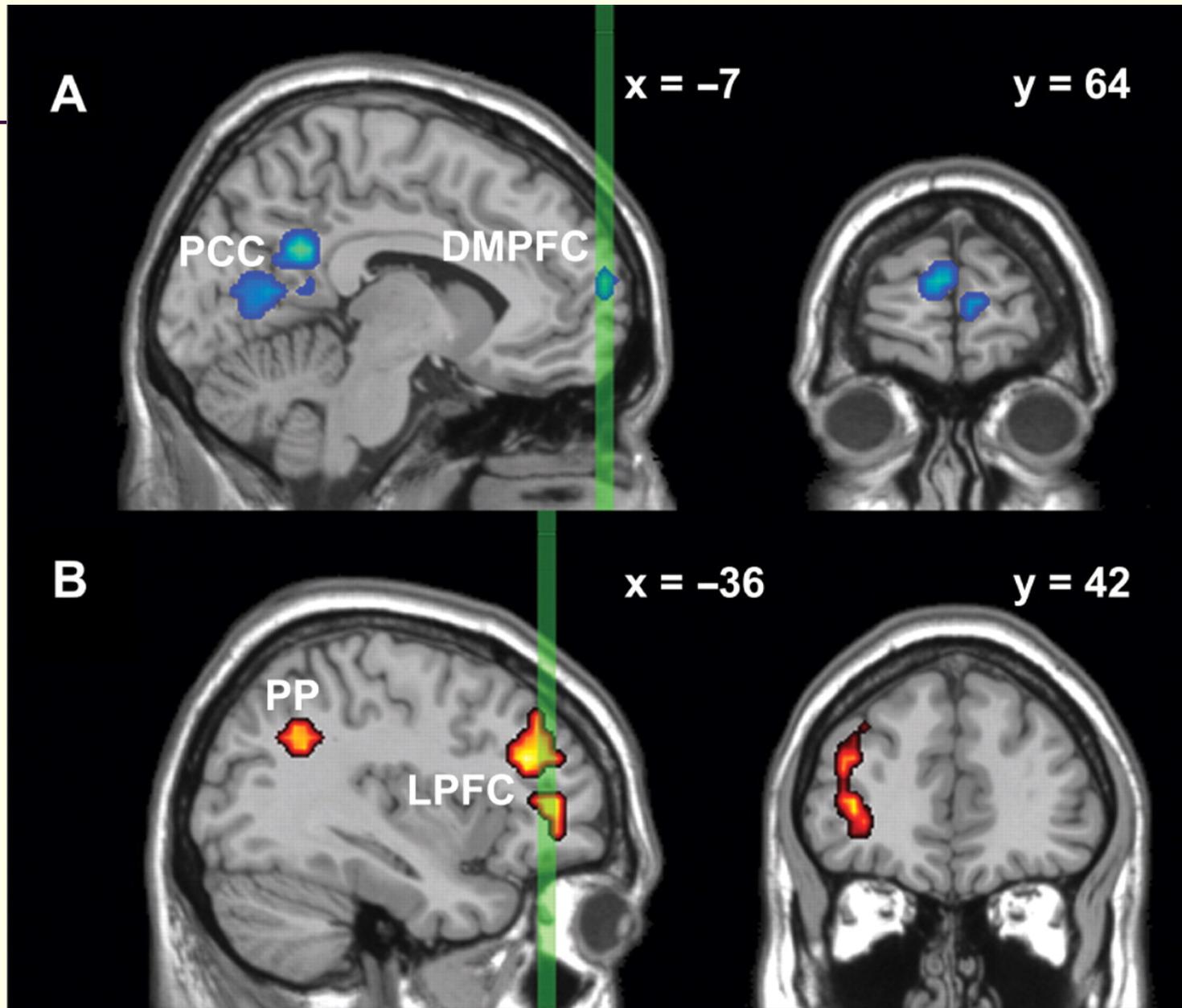
**Wholeness,  
Nowness, Allness**

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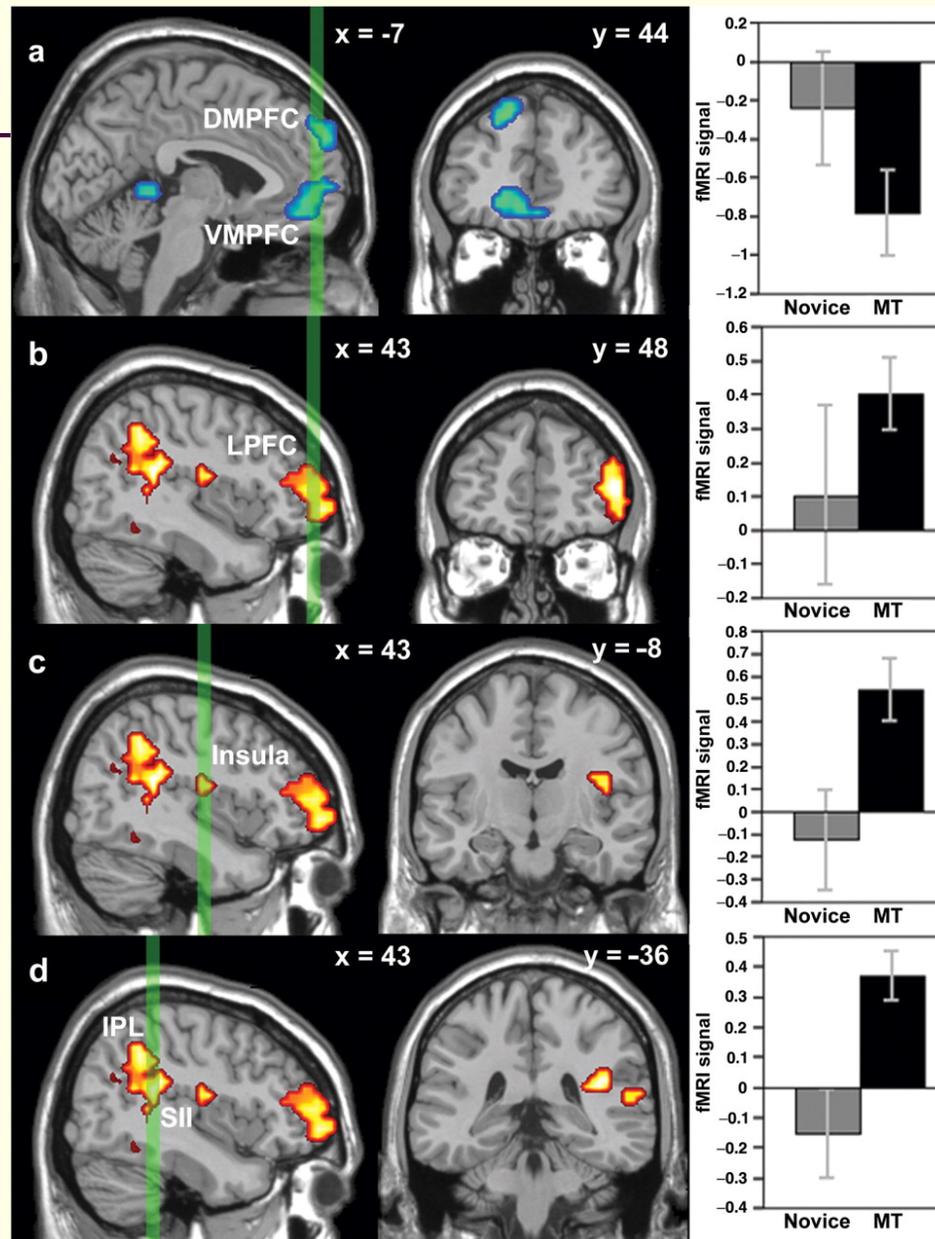
# Lateral Networks of Spacious Awareness

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# Self-Focused (blue) and Open Awareness (red) Conditions (in the novice, pre MT group)



# Self-Focused (blue) and Open Awareness (red) Conditions (following 8 weeks of MT)



# Ways to Activate Lateral Networks

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- Relax.
- Focus on bare sensations and perceptions.
- Sense the body as a whole.
- Take a panoramic, “bird’s-eye” view.
- “Dont-know mind”; release judgments.
- Let experience flow, staying here now.
- Relax the sense of “I, me, and mine.”

# Whole Body Awareness

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- Involves insula and middle parietal, which integrate sensory maps of the body, plus right hemisphere, for holistic (gestalt) perception
- Practice
  - Sense the breath in one area (e.g., chest, upper lip)
  - Sense the breath as a whole: one gestalt, percept
  - Sense the body as a whole, a whole body breathing
  - Sense experience as a whole: sensations, sounds, thoughts . . . all arising together as one unified thing

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In the Present Moment

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*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 greater the equanimity. In [our] practice, we work to expand the range of life experiences in which we are free.*

U Pandita

# At the Front Edge of Now

- The three neural networks of attention:
  - Alerting
  - Orienting
  - Mobilizing
- Pre-conceptual processing
- Continually letting go

*If you let go a little,  
you will have a little peace.*

*If you let go a lot,  
you will have a lot of peace.*

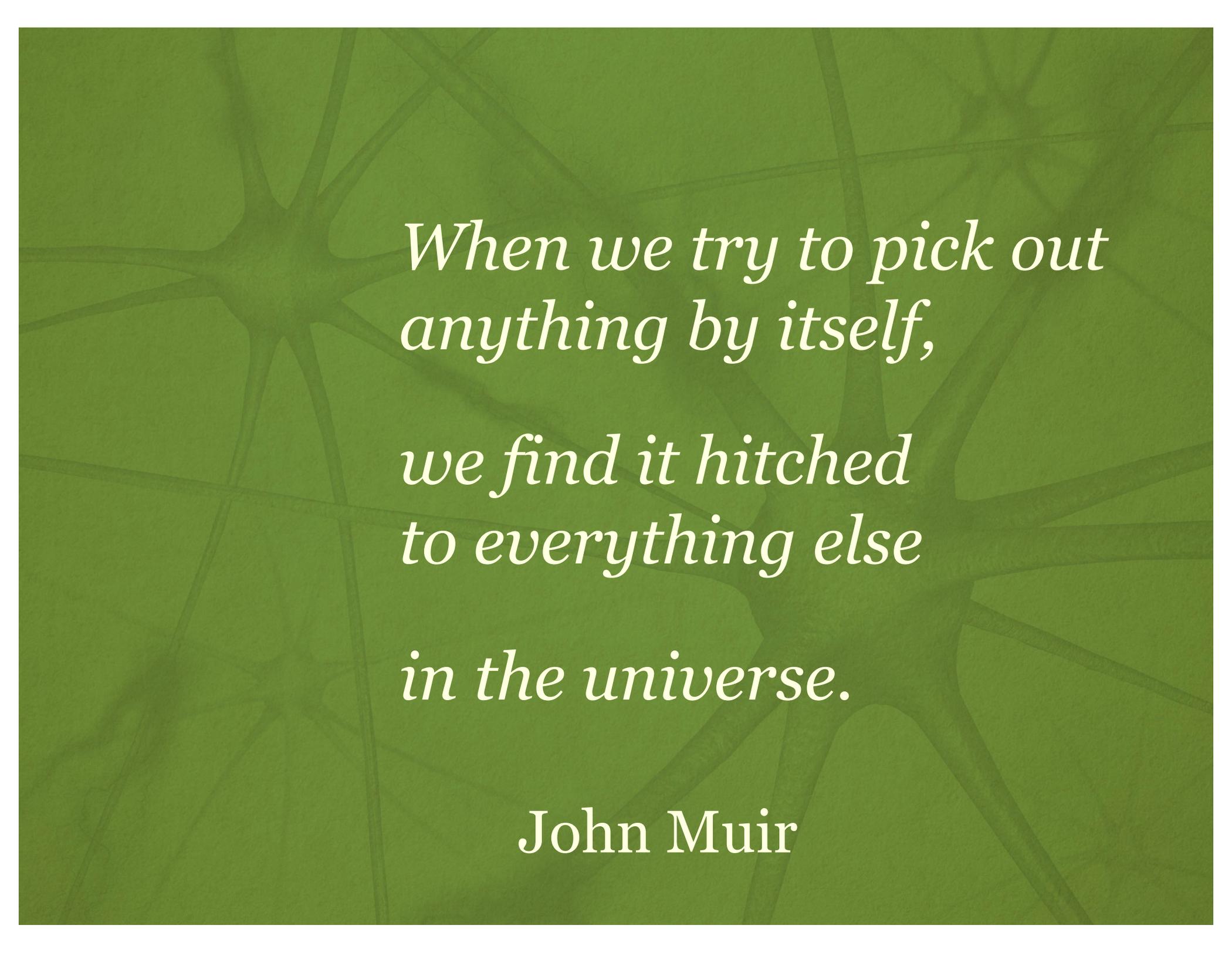
*If you let go completely,  
you will be completely peaceful.*

Ajahn Chah

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# Opening into Allness

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*When we try to pick out  
anything by itself,  
we find it hitched  
to everything else  
in the universe.*

John Muir

# Only Allness

Feeling at ease: peace, contentment, love

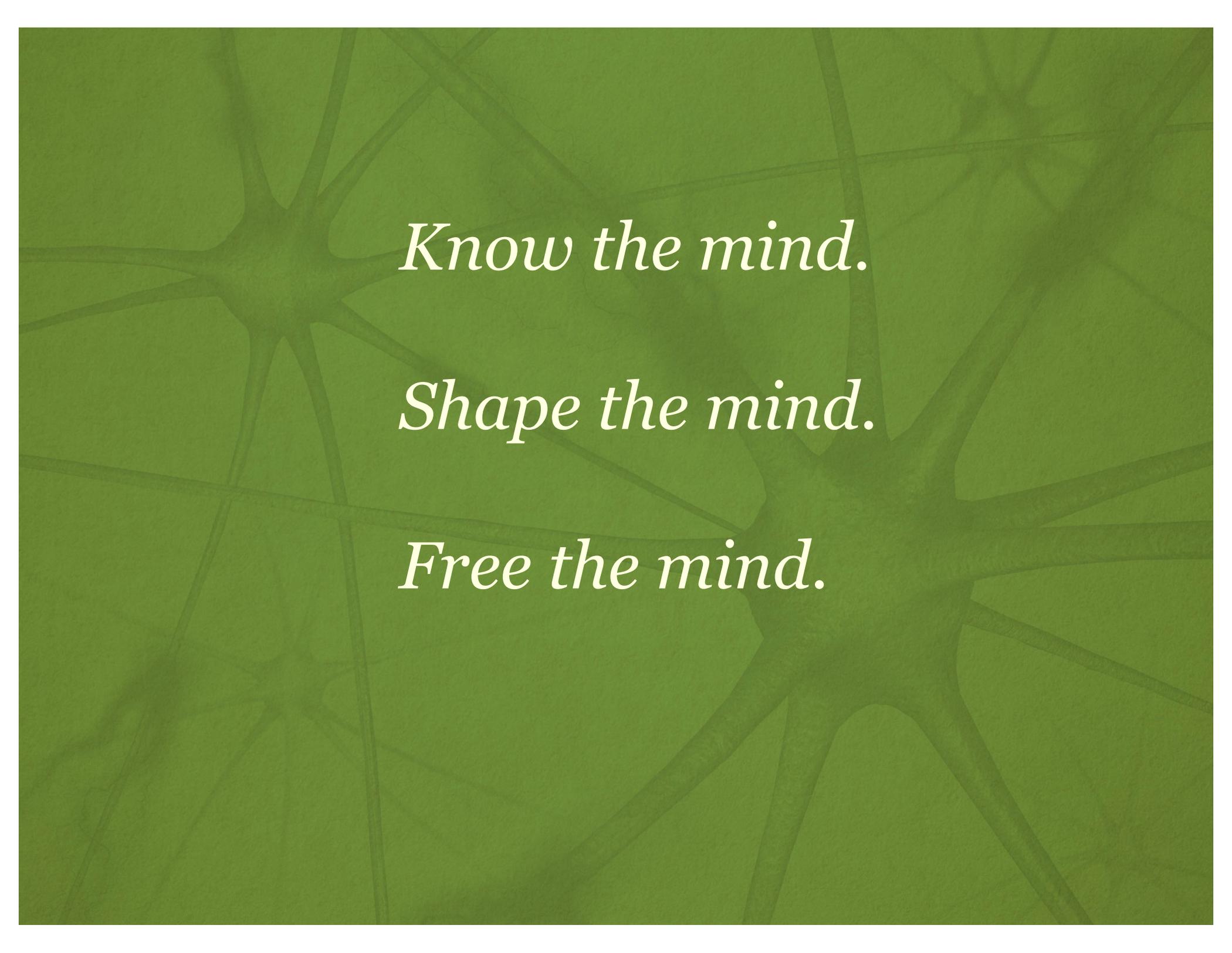
Tranquil and alert

Aware of the room as a whole, gazing to horizon

Sense of the objective, impersonal; relaxing “self”

Sense of stream of consciousness depending on  
human culture, the body, life, matter and energy

Recognizing mind as a local rippling of a vast sea of  
causes, opening into being the sea of allness



*Know the mind.*

*Shape the mind.*

*Free the mind.*

# Thank You



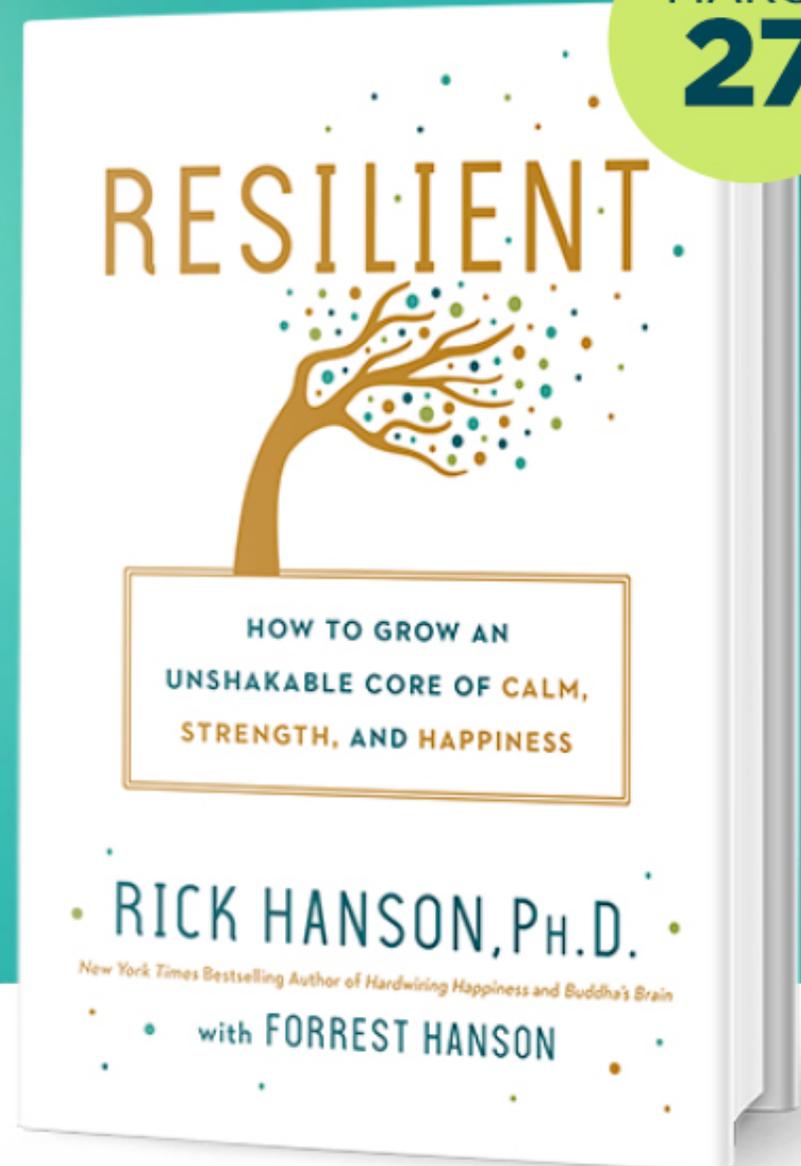
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**Unshakable Core**  
of Resilient Well-Being

Learn how to develop key inner strengths to stay calm, confident, and happy no matter what life throws at you.

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MARCH  
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# Suggested Books

See **[RickHanson.net](http://RickHanson.net)** for other good books.

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# Supplemental Materials

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# Promoting Motivation

- Identify what you want to encourage (thought, word, deed); be clear; what would it look like?
- Use HEAL to associate rewards to what you want to encourage:
  - Before doing it
  - While doing it
  - After doing it
- Give over to this new habit, let it carry you along.

# In Couples, Benefits of HEAL

- “Installs” key resources that support interactions (e.g., self-soothing, recognition of good intentions)
- Dampens vicious cycles
- Helps partner feel seen, credited for efforts
- Increases the sense of the good that is present
- Reduces clinginess, pursuing, or reproach that the other person withdraws from

# Using HEAL with a Couple

- Basic steps (often informal):
  - Attention to a good fact
  - Evoking and sustaining a good experience
  - Managing blocks
  - Awareness of the impact on one's partner
  - Debriefing, often from both partners
- Pitfalls to avoid:
  - Seeming to side with one person
  - Unwittingly helping a person overlook real issues
  - Letting the other partner pile on

# Uses for Children

- Registering curricular skills and other resources
- Motivation for learning; associating rewards
- Seeing the good in the world, others, and oneself – and in the past, present, and future
- Seeing life as opportunity
- Feeling like an active learner
- Developing child-specific inner strengths

# Adaptations for Children

- Kids gain from HEAL – particularly mistreated, anxious, spirited/ ADHD, or LD children.
- Style:
  - Be matter of fact: this is mental/neural literacy.
  - A little brain talk goes a long way.
  - Be motivating: name benefits; “be the boss of your own mind.”
  - Down to earth, naturalistic
  - Scaffold based on executive functions, motivation, and need for autonomy.
  - Brief, concrete

# Occasions for HEAL with Kids

- Explicit training in positive neuroplasticity
- Natural rhythms in the day (e.g., start of class, after a lesson or recess, end of day)
- When working with an individual child
- When dealing with classroom issues