

# Positive Neuroplasticity: The Mindful Cultivation Of Durable Inner Resources



Australian Meditation Conference, 2018

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# Two Wolves in the Heart





# Some InnerResources

Mindfulness

Character Virtues

Positive Emotions

Compassion, Love

Interpersonal Skills

Patience, Determination, Grit

# In the Garden of the Mind

**1**

**Be with what  
is there**

**2**

**Decrease  
the negative**

**3**

**Increase  
the positive**

Witness. Pull weeds. Plant flowers.  
Let be. Let go. Let in.  
Mindfulness is present in all three.

“Being with” is primary – but not enough.  
We also need “wise effort.”





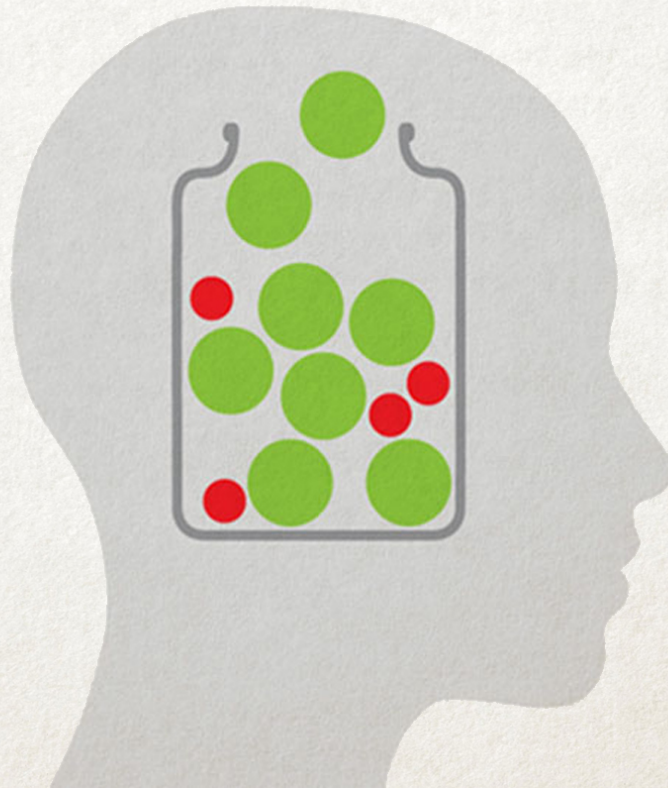
# SPIRIT ROCK MEDITATION CENTER



Join us for  
**Cultivating Inner Strength - Monastic  
Daylong [Dana - No Fee Day]**  
with Ayya Anandabodhi  
and Ayya Santacitta  
on  
**Sunday, July 8**  
from 9:30 am - 5 pm.

(Photo by Ed Ritger)

# Which Means Changing the Brain For the Better





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

Encoding ➤ Consolidation

Activation ➤ Installation

State ➤ Trait

# Key Mechanisms of Neuroplasticity

- (De)Sensitizing existing synapses
- Building new synapses between neurons
- Altered gene expression inside neurons
- Building and integrating new neurons
- Altered activity in a region
- Altered connectivity among regions
- Changes in neurochemical activity (e.g., dopamine)
- Changes in neurotrophic factors
- Modulation by stress hormones, cytokines
- Slow wave and REM sleep
- Information transfer from hippocampus to cortex





Neurons that fire together,

wire together.

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 **mindful** by repeatedly installing experiences of mindfulness.



**BUT: Experiencing doesn't equal learning.**

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

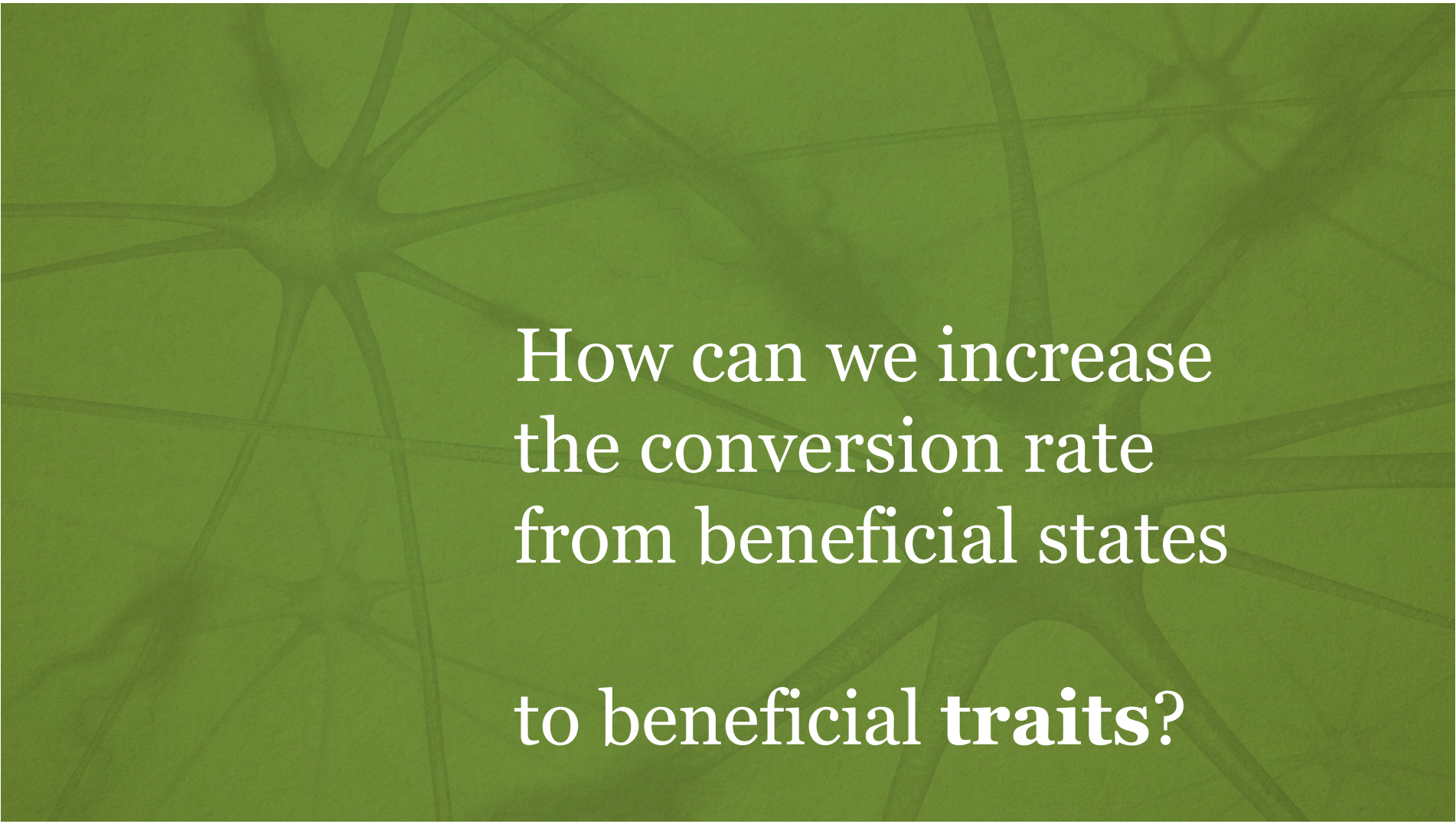
What fraction of our  
beneficial mental states lead to lasting  
changes in neural structure or function?



We focus more on activation  
more than installation.

This reduces the gains from  
psychotherapy, coaching,  
human resources training,  
mindfulness programs,  
and self-help activities.





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



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# Mindful Cultivation

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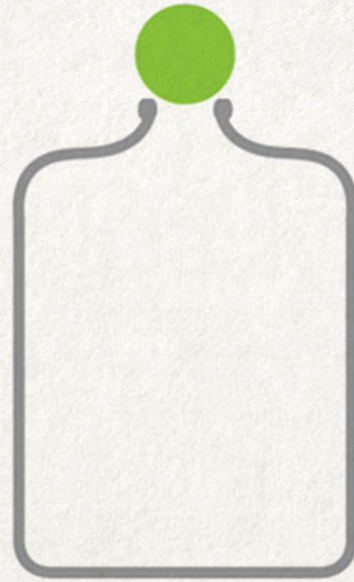
# Turning States into Traits: HEAL

## Activation

1. **Have** a beneficial experience

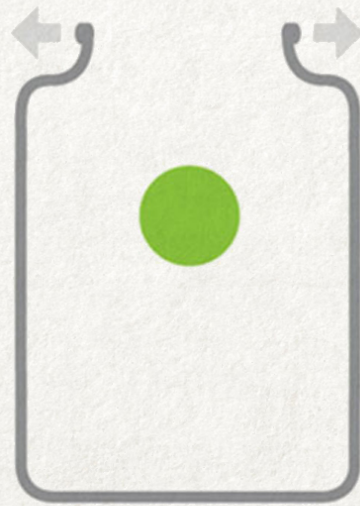
## Installation

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

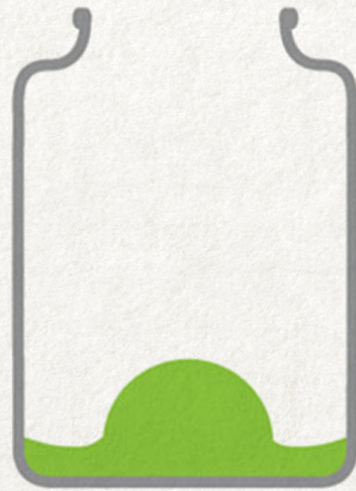


**H**ave a Beneficial Experience



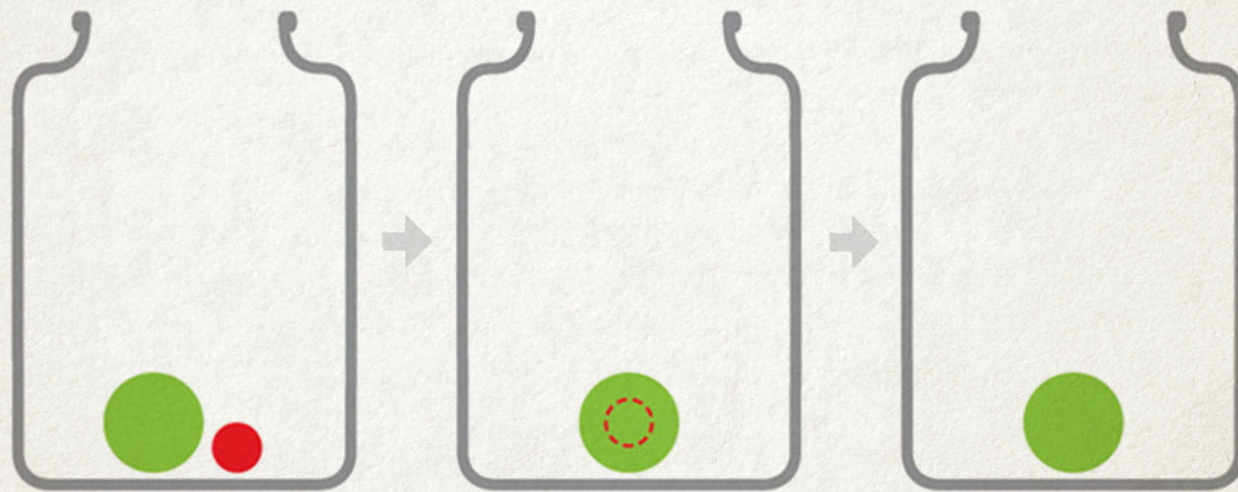


**E**nrich It

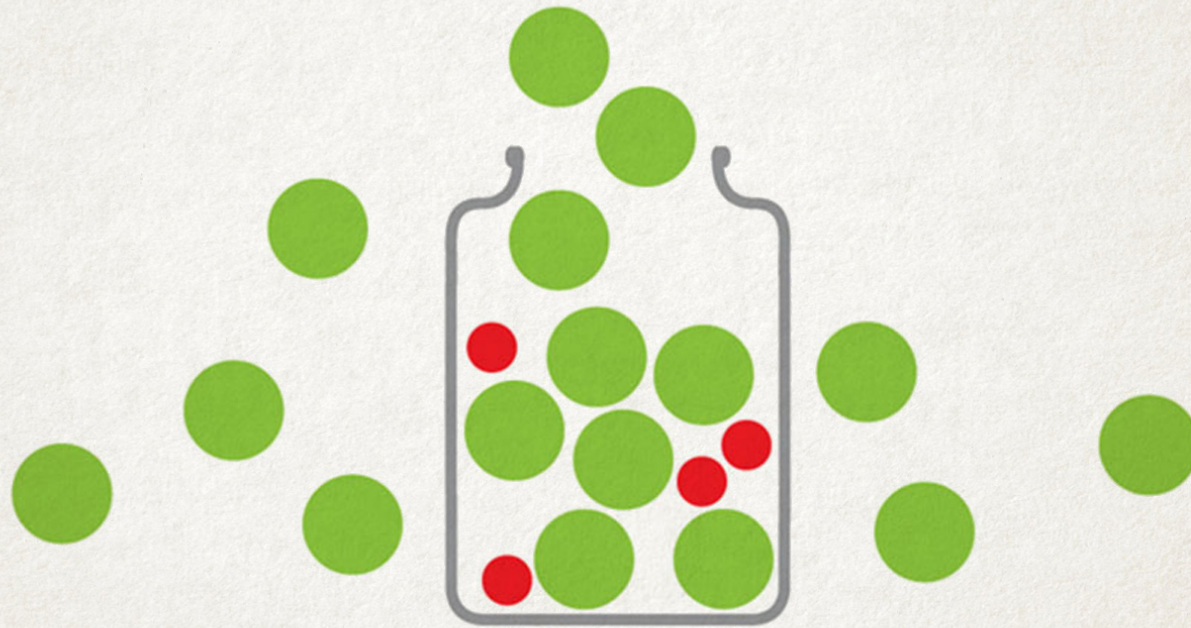


Absorb It





**L**ink Positive & Negative Material



Have It, Enjoy It



# HEAL with Compassion

## Activation

1. Have – compassion . . .

## Installation

2. Enrich – duration . . . embodiment

3. Absorb – sinking in . . . rewarding

4. Link – caring easing suffering

(Optional)

# It's Good to Take in the Good

Develops psychological resources:

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

Has built-in, implicit benefits:

- Training attention and executive functions
- Treating oneself kindly, that one matters

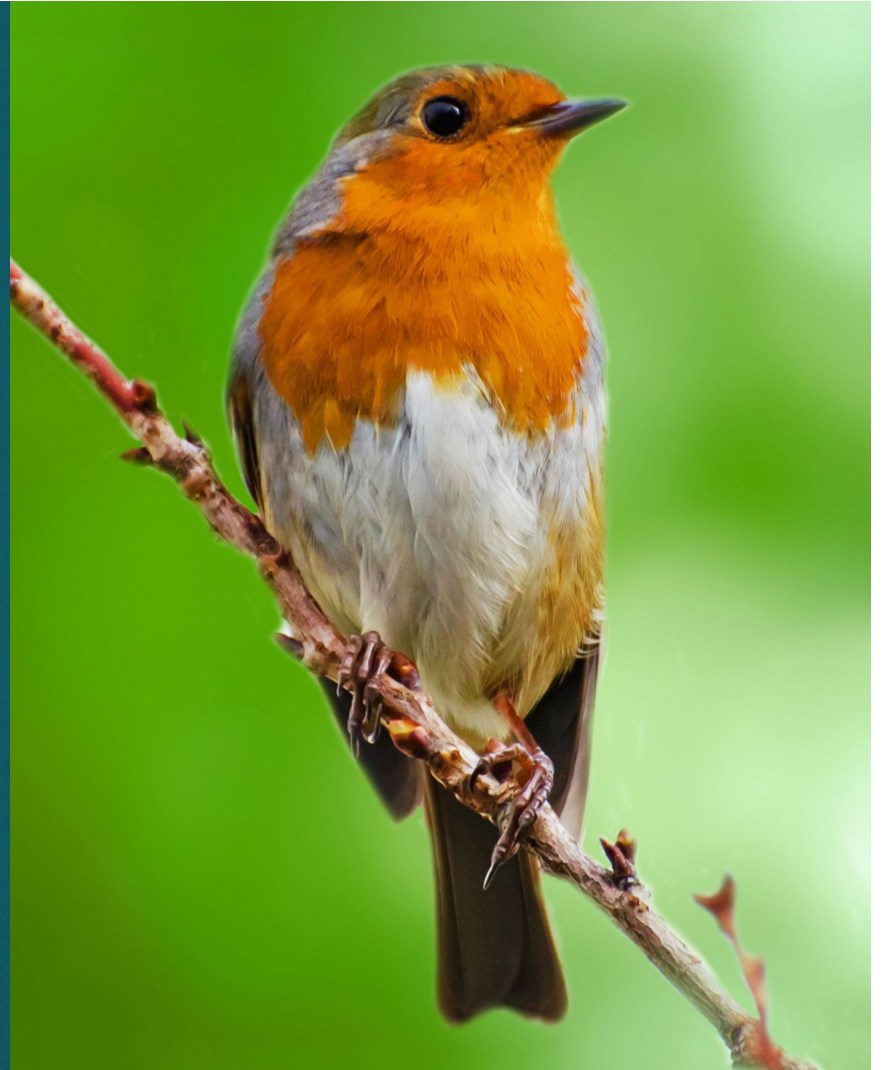
May sensitize the brain to the positive

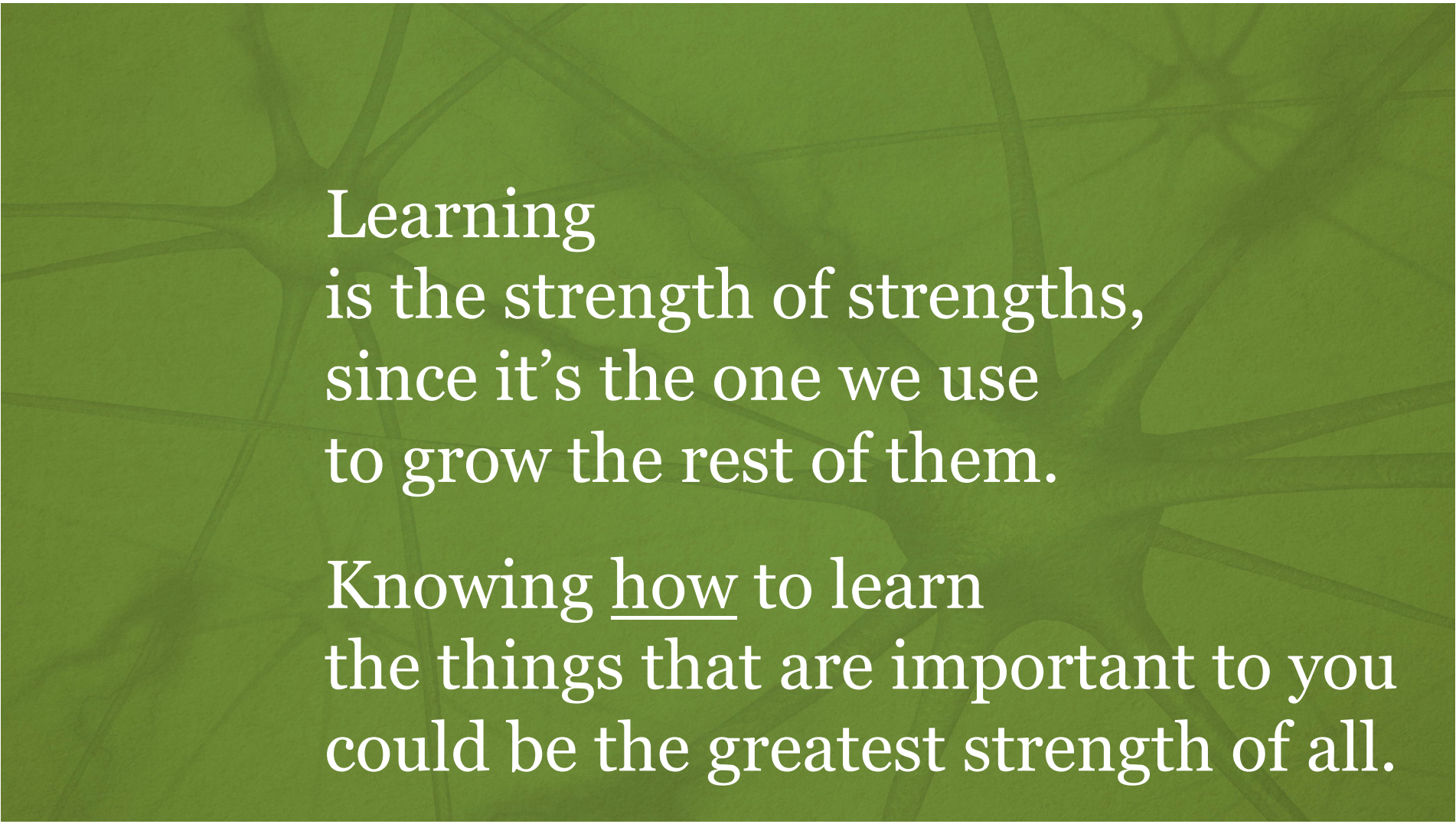
Fuels positive cycles with others



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

**Lao Tzu**





Learning  
is the strength of strengths,  
since it's the one we use  
to grow the rest of them.

Knowing how to learn  
the things that are important to you  
could be the greatest strength of all.





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# Fullness and Balance

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# Four Ennobling Truths


There is suffering.

As craving increases, so does suffering.

As craving decreases, so does suffering.

There is a path of ending craving.





If craving causes suffering . . .  
**what causes craving?**



Craving is **embodied**.

It arises in relationship to  
an animal's **needs** –  
including a complicated  
animal like us.

So, what do we need?



# Meeting Our Three Fundamental Needs



**Safety**

**Avoiding**  
harms

(threat response)



**Satisfaction**

**Approaching**  
rewards

(goal pursuit)



**Connection**

**Attaching**  
to others

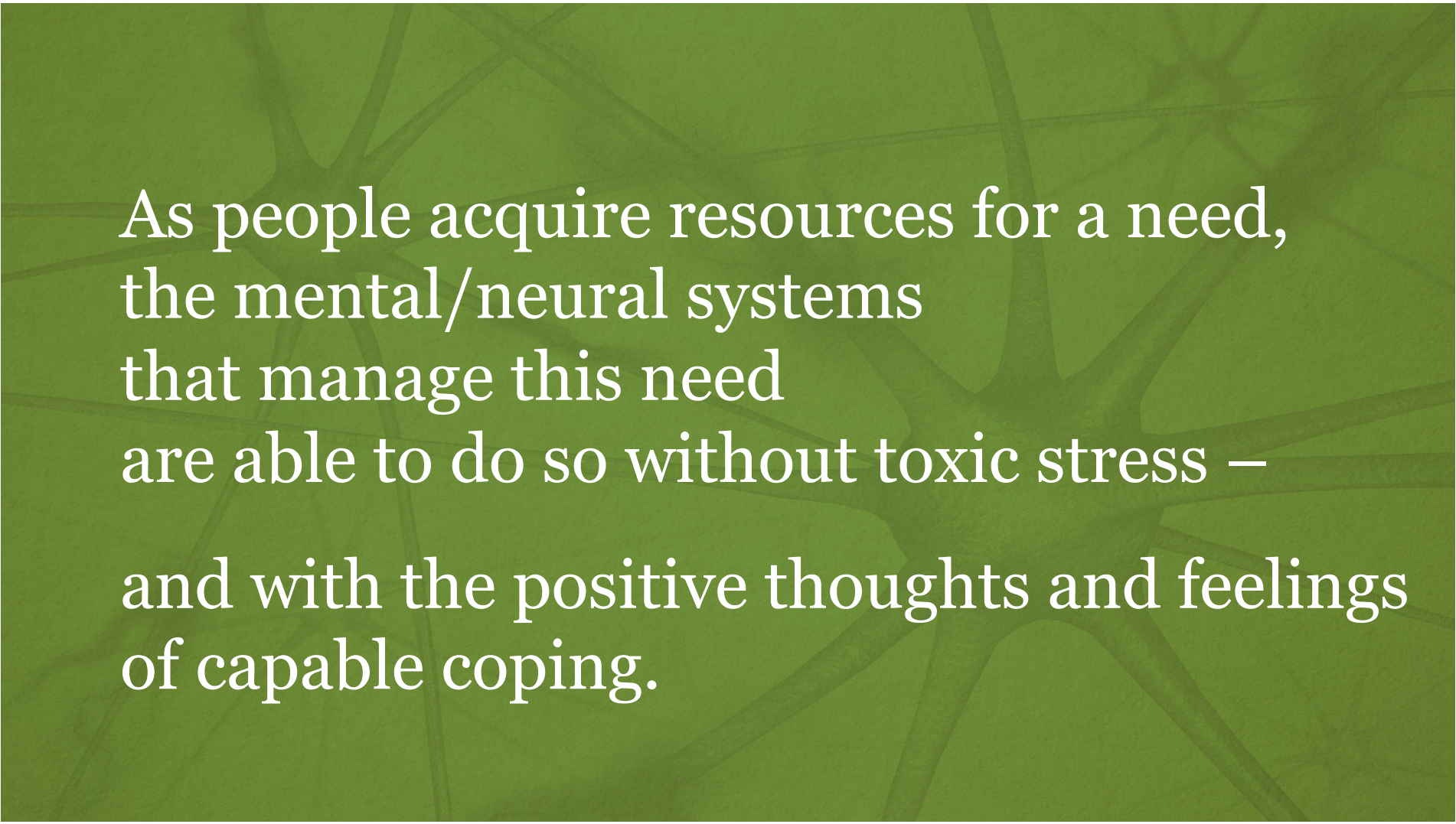
(social engagement)

When needs feel unmet . . .  
not enough safety, satisfaction, or connection . . .  
then there is a sense of deficit or disturbance,  
something missing or something wrong.

This produces the drive states  
of “craving” (broadly defined):

- fear, anger, helplessness
- frustration, loss, drivenness
- hurt, resentment, shame






As people acquire resources for a need,  
the mental/neural systems  
that manage this need  
are able to do so without toxic stress –  
and with the positive thoughts and feelings  
of capable coping.

Further,  
**internalizing** experiences of needs met  
builds up a sense of fullness and balance –

so we can meet the next moment  
and its challenges  
feeling already strong,  
already happy, loving,  
and at peace.



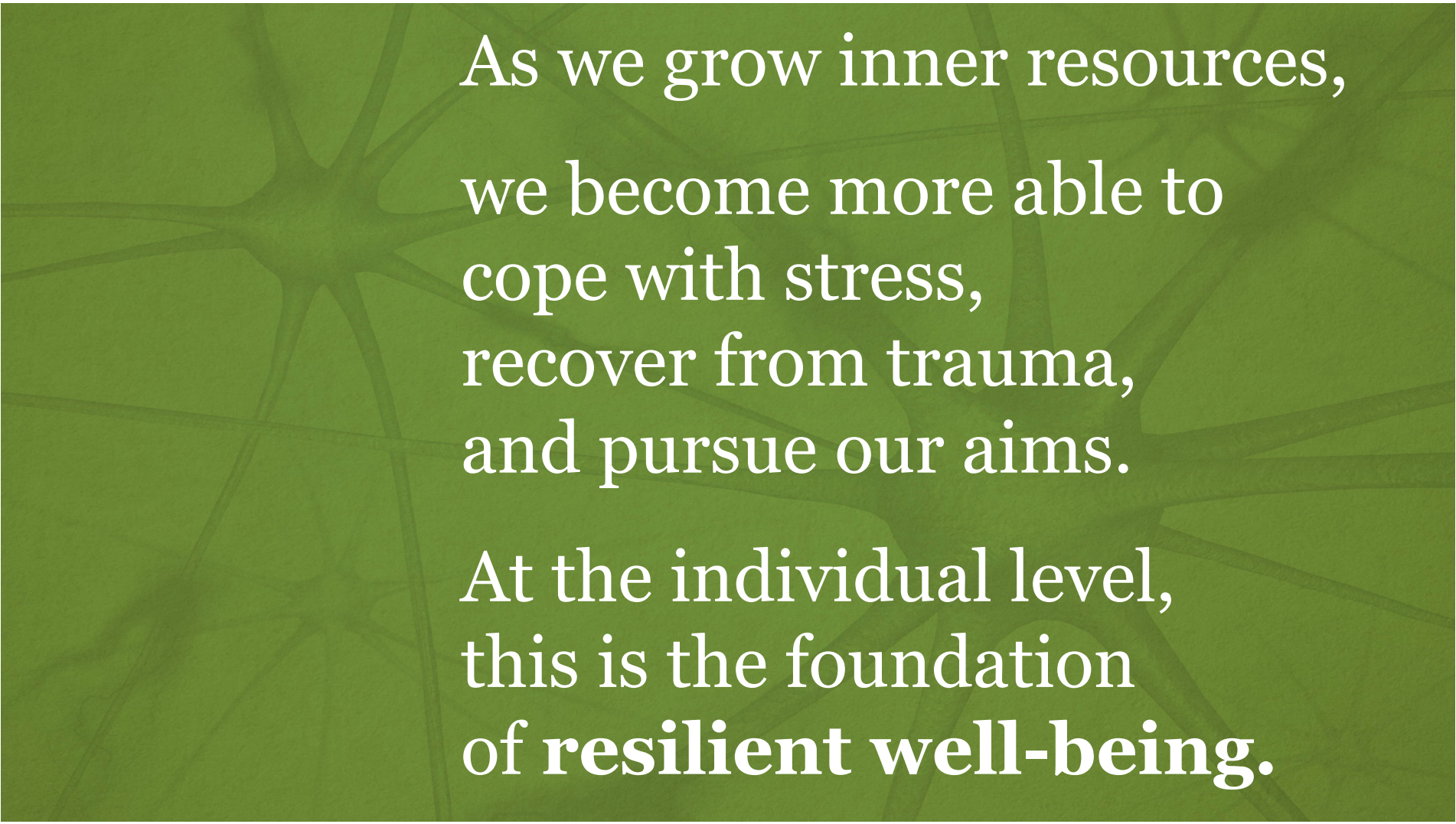


**Cultivation  
reduces  
craving.**




# Wider Implications





As we grow inner resources,  
we become more able to  
cope with stress,  
recover from trauma,  
and pursue our aims.

At the individual level,  
this is the foundation  
of **resilient well-being.**



At the level of groups and countries,  
people become less vulnerable  
to the classic manipulations of  
fear and anger,  
greed and possessiveness,  
and “us” against “them” conflicts.  
Which has big implications for our world.

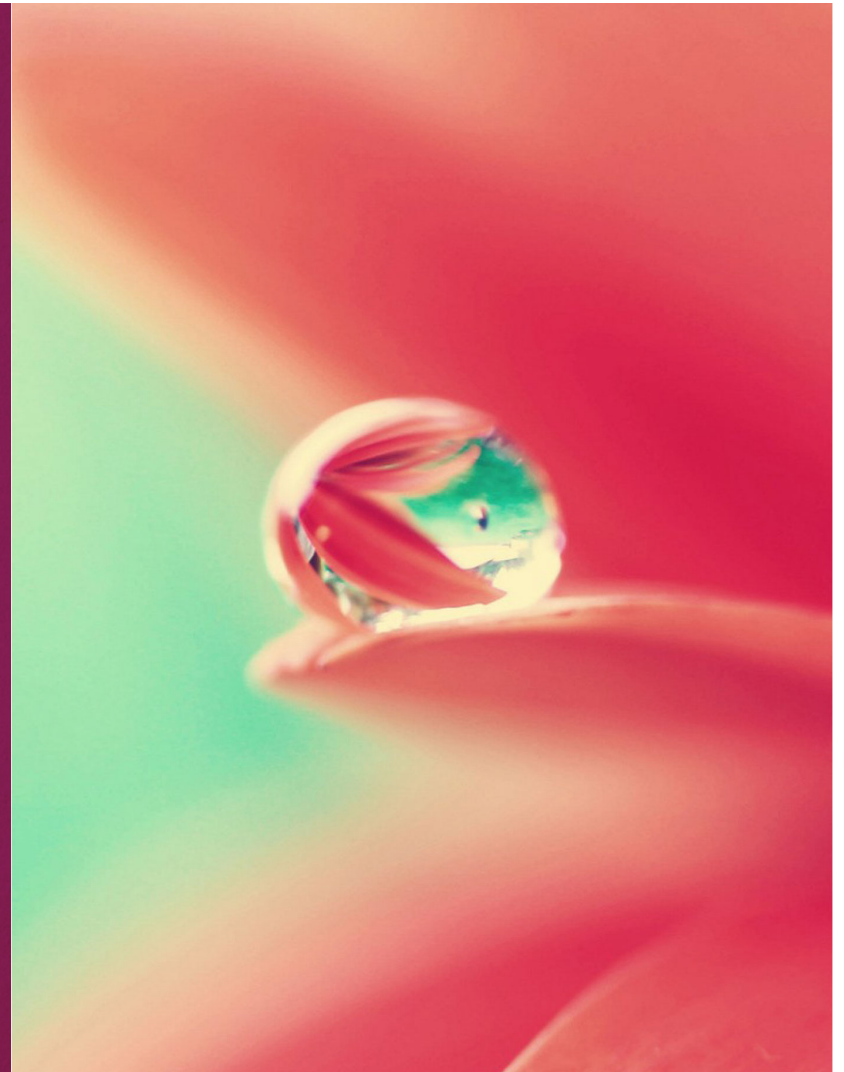


*Think not lightly of good,  
saying,  
“It will not come to me.”*

*Drop by drop is  
the water pot filled.*

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

**Dhammapada 9.122**





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

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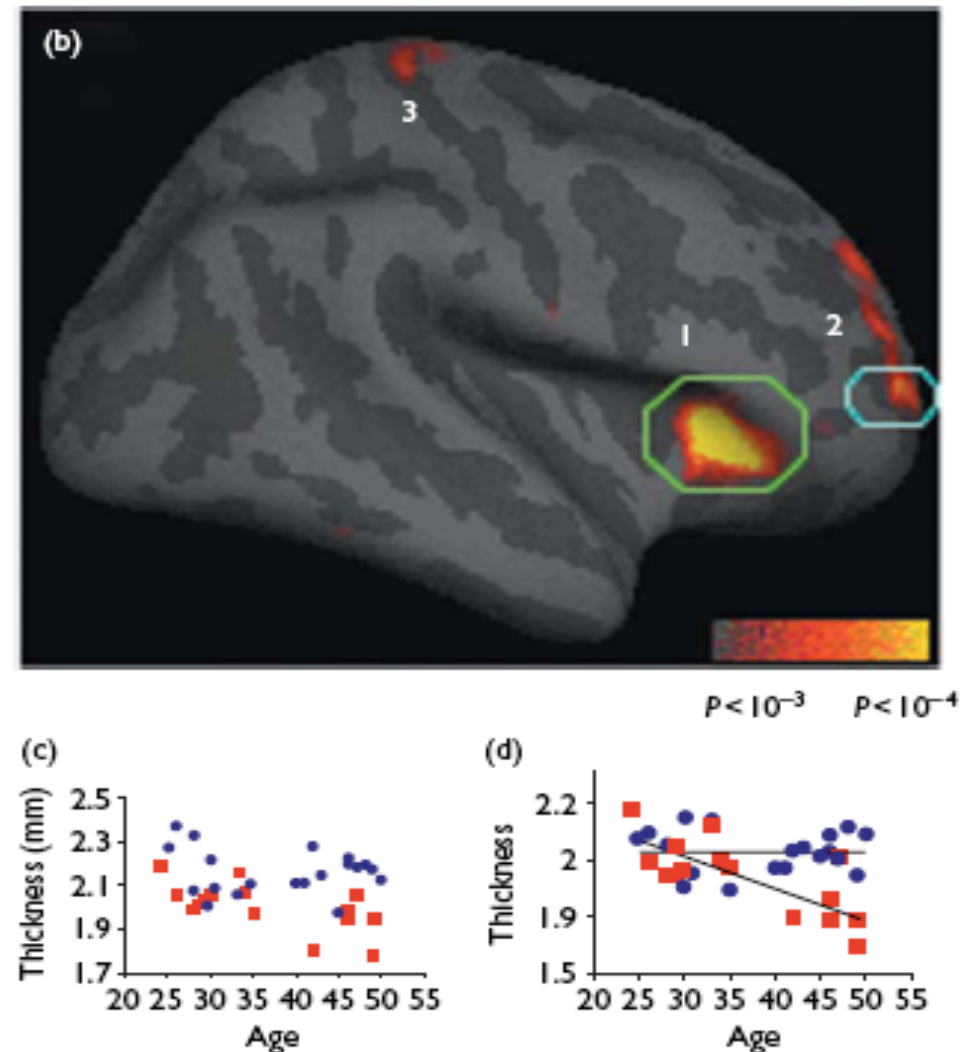
# Supplemental Materials



Meditation  
experience is  
associated  
with increased  
cortical thickness.

Lazar, et al. 2005.

*Neuroreport*, 16, 1893-1897.



# 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



# Explicit HEAL in Therapy

(3)

- Encourage HEAL between sessions
  - Naming occasions
  - Identifying key beneficial facts and experiences

# HEAL and Trauma

- **General considerations:**
  - People vary in their resources and their traumas.
  - Often the major action is with “failed protectors.”
  - Respect “yellow lights” and the client’s pace.
- The first three steps of HEAL are generally safe. Use them to build resources for tackling the trauma directly.
- Use the Link step to address peripheral features and themes of the trauma.
- With care, use Link to get at the heart of the trauma.



# 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
  - Be 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