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
Hardwiring Happiness: Weaving Love and Inner Peace Into Your Brain and Your Life

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Topics

- Perspectives
- Growing inner strengths
- The negativity bias
- Taking in the good
- Research on the HEAL process
- Practical uses of the HEAL process
- The 2\textsuperscript{nd} and 3\textsuperscript{rd} Noble Truths
- Key resource experiences
- Healing old pain
- The fruit as the path
Perspectives
Common - and Fertile - Ground

Neuroscience  Psychology

Contemplative Practice
Neurons that fire together, wire together.
Self-Directed Neuroplasticity

We can use the mind
To change the brain
To change the mind for the better
To benefit ourselves and other beings.
Naturalizing the Dharma

To “naturalize” something is to place it in the frame of the natural world, to operationalize it in natural terms.

Buddhist practice engages the mental causes of suffering and its end. What could be the natural, neurobiological (NB) causes of those causes?

What could be a NB operationalization of dukkha, tanha, nirodha, sila, samadhi, panna, and bhavana?

It is ironic that a practice that is so much about coming into the body can be reluctant to engage the full implications of what embodiment in life means.
If one going down into a river, swollen and swiftly flowing, is carried away by the current -- how can one help others across?

The Buddha
Growing Inner Strengths
Two wolves in the heart
Inner Strengths Include

- **Virtues** (e.g., patience, energy, generosity, restraint)
- **Executive functions** (e.g., meta-cognition)
- **Attitudes** (e.g., optimism, openness, confidence)
- **Capabilities** (e.g., mindfulness, emotional intelligence, resilience)
- **Positive emotions** (e.g., gratitude, self-compassion)
- **Approach orientation** (e.g., curiosity, exploration)
Inner Strengths Are Built From Brain Structure
Let’s Try It

- **Notice** the experience already present in awareness that you are alright right now
  - Have the experience
  - Enrich it
  - Absorb it

- **Create** the experience of compassion
  - Have the experience - bring to mind someone you care about . . . Feel caring . . . Wish that he or she not suffer . . . Open to compassion
  - Enrich it
  - Absorb it
The Neuropsychology of Learning

Learning – changing neural structure and function – proceeds in two stages:

From **state** to **trait**

From **activation** to **installation**

From **short-term** memory buffers to **long-term** storage
Growing Feeling Cared About

1. **Have** – Bring to mind one or more beings who care about you . . . In your life today or from your past . . . The relationship need not be perfect . . . But in real ways you are included, or seen, or appreciated, or liked, or loved . . .

2. **Enrich** – Help this experience last . . . Open to it in your heart, your body . . . If your mind wanders, bring it back . . .

3. **Absorb** – Intend and sense that this experience is sinking into you . . . Like water into a sponge . . . Giving over to it . . .
Inner strengths are grown from experiences of them or related factors - activated states - that are installed as traits.
You become more compassionate
by repeatedly installing experiences of compassion.

You become more grateful
by repeatedly installing experiences of gratitude.

You become more mindful
by repeatedly installing experiences of mindfulness.
Without this installation – without turning passing mental states into enduring neural structure – there is no learning, no change in the brain.

This is the fundamental weakness in most psychotherapy, coaching, mindfulness training, and spiritual practice.
The same research that proves therapy works shows no improvement in outcomes over the last 30 or so years.

Scott Miller
Meanwhile your painful, harmful experiences are being rapidly converted into neural structure.
The Negativity Bias
Negative Experiences In Context

- Going negative about negative --> more negative

- Some inner strengths come only from negative experiences, e.g., knowing you’ll do the hard thing.

- But negative experiences have inherent costs, in discomfort and stress.

- Many inner strengths could have been developed without the costs of negative experiences.

- Many negative experiences are pain with no gain.
The Brain’s Negativity Bias

As our ancestors evolved, avoiding “sticks” was more important for survival than getting “carrots.”

Negative stimuli:
- More attention and processing
- Greater motivational focus: loss aversion

Preferential encoding in implicit memory:
- We learn faster from pain than pleasure.
- Negative interactions: more impactful than positive
- Easy to create learned helplessness, hard to undo
- Rapid sensitization to negative through cortisol
Velcro for Bad, Teflon for Good

The negativity bias

bad experiences

good experiences
The Negativity Bias
Stone age brains in the 21st century
We can deliberately use the mind to change the brain for the better.
Taking in the Good
Learning to Take in the Good
Have a Good Experience
Targets of TG

- **Thoughts** - expectations; object relations; perspectives on self, world, past and future
- **Perceptions** - sensations; relaxation; vitality
- **Emotions** - both feelings and mood
- **Desires** - values, aspirations, passions, wants
- **Behaviors** - repertory; inclinations
Enrich It
“Enriching” Factors

- Duration
- Intensity
- Multimodality – thought, perception, emotion, desire, action
- Novelty
- Personal relevance
Absorb It
Link Positive and Negative Material
HEAL by Taking in the Good

1. **Have** a positive experience. Notice it or create it.

2. **Enrich** the experience through duration, intensity, multimodality, novelty, personal relevance

3. **Absorb** the experience by intending and sensing that it is sinking into you as you sink into it.

4. **Link** positive and negative material. [optional]
Have It, Enjoy It
Let’s Try It Again

- **Notice** the experience already present in awareness of some kind of strength . . . focus, determination, vitality, endurance
  - Have the experience
  - Enrich it
  - Absorb it

- **Create** the experience of goals attained
  - Have the experience - bring to mind a time you finished something large or small . . . Open to a sense of completion, accomplishment, relief, success . . .
  - Enrich it
  - Absorb it
It’s Good to Take in the Good

- Development of specific inner strengths
  - General - resilience, positive mood, feeling loved
  - “Antidote experiences” - Healing old wounds, filling the hole in the heart

- Implicit benefits:
  - Shows that there is still good in the world
  - Being active rather than passive
  - Treating yourself kindly, like you matter
  - Rights an unfair imbalance, given the negativity bias
  - Training of attention and executive functions

- Sensitizes brain to positive: like Velcro for good
Keep a green bough in your heart, and a singing bird will come.

Lao Tsu
The Role of Cultivation

Three fundamental ways to engage the mind:
- Be with it. Decrease negative. Increase positive.
- Let be. Let go. Let in.
- Mindfulness present in all three ways to engage mind

While “being with” is profound, it can be isolated and over-valued in some therapies or spiritual practices.

Skillful means for decreasing the negative and increasing the positive have developed over thousands of years. Why not use them?
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)
Know the mind.

Shape the mind.

Free the mind.
Research on the HEAL Process
Study on the HEAL Process

- With collaborators from the University of California, a 2013 study on the HEAL course, using a randomized waitlist control group design (46 subjects).

- Course participants, compared to the control group, reported more Contentment, Self-Esteem, Satisfaction with Life, Savoring, and Gratitude.

- After the course and at two month follow-up, pooled participants also reported more Love, Compassion, Self-Compassion, Mindfulness, Self-Control, Positive Rumination, Joy, Amusement, Awe, and Happiness, and less Anxiety and Depression.
Combined Sample: Depression (BDI) & Anxiety (BAI)
Practical Uses of the HEAL Process
The Four Ways to Offer a Method

- Doing it implicitly
- Teaching it and then leaving it up to the person
- Doing it explicitly with the person
- Asking the person to do it on his or her own
TG and Children

- All kids benefit from TG.

- Particular benefits for mistreated, anxious, spirited/ADHD, or LD children.

- Adaptations:
  - Brief
  - Concrete
  - Natural occasions (e.g., bedtimes)
Synergies of TG and Mindfulness

- Improved mindfulness enhances TG.

- TG increases factors of mindfulness (e.g., self-acceptance, self-compassion, distress tolerance).

- TG heightens learning from mindfulness:
  - The sense of stable presence itself
  - Confidence that awareness itself is never disturbed
  - Peace of realizing that experiences come and go
Obstructions to Taking in the Good

- General
  - Distractibility
  - Blocks to self-awareness in general

- Specific
  - Fears of losing one’s edge or lowering one’s guard
  - Sense of disloyalty to others (e.g., survivor guilt)
  - Culture (e.g., selfish, vain, sinful)
  - Gender style
  - Associations to painful states
  - Secondary gains in feeling bad
  - Not wanting to let someone off the hook
  - Thoughts that TG is craving that leads to suffering
The 2\textsuperscript{nd} and 3\textsuperscript{rd} Noble Truths
A Telling of the Four Noble Truths

There is suffering.

When craving arises, so does suffering.

When craving passes away, so does suffering.

There is an eight-part path that both embodies and leads to the passing away of this craving.
Evolution of the Brain

The Triune Brain - (P. MacLean 1990)
Three Motivational and Self-Regulatory Systems

- **Avoid Harms:**
  - Predators, natural hazards, aggression, pain
  - Primary need, tends to trump all others

- **Approach Rewards:**
  - Food, shelter, mating, pleasure
  - Mammals: rich emotions and sustained pursuit

- **Attach to Others:**
  - Bonding, language, empathy, cooperation, love
  - Taps older Avoiding and Approaching networks

*Each system can draw on the other two for its ends.*
Craving Arising . . .

*When invaded by threat, loss, or rejection [felt deficit or disturbance of safety, satisfaction, or connection]:*

The **body** fires up into the stress response; outputs exceed inputs; long-term building is deferred.

The **mind** fires up into:

- **Fear** (the Avoiding system)
- **Frustration** (the Approaching system)
- **Heartache** (the Attaching system)

This is the brain in its allostatic, *Reactive, craving* mode.
When not invaded by threat, loss, or rejection [no felt deficit or disturbance of safety, satisfaction, and connection]

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)
- **Contentment** (the Approaching system)
- **Love** (the Attaching system)

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

Reactive Mode

- Avoid
- Hatred
- Ignorance
- Suffering
- Heartache
- Attach

Responsive Mode

- Avoid
- Peace
- Wisdom
- Contentment
- Love
- Attatch
Coming Home, Staying Home

Positive experiences of core needs met - the felt sense of safety, satisfaction, and connection - activate Responsive mode.

Activated Responsive states can become installed Responsive traits. Responsive traits foster Responsive states.

Responsive states and traits enable us to stay Responsive with challenges.
Key Resource Experiences
Pet the Lizard
Feed the Mouse
Hug the Monkey
Peace

Contentment

Love
Some Types of Resource Experiences

Avoiding Harms
■ Feeling basically alright right now
■ Feeling protected, strong, safe, at peace
■ The sense that awareness itself is untroubled

Approaching Rewards
■ Feeling basically full, the enoughness in this moment as it is
■ Feeling pleasured, glad, grateful, satisfied
■ Therapeutic, spiritual, or existential realizations

Attaching to Others
■ Feeling basically connected
■ Feeling included, seen, liked, appreciated, loved
■ Feeling compassionate, kind, generous, loving
Healing Old Pain
Using Memory Mechanisms To Help Heal Painful Experiences

- The machinery of memory:
  - When explicit or implicit memory is re-activated, it is re-built from schematic elements, not retrieved *in toto*.
  - When attention moves on, elements of the memory get re-consolidated.

- The open processes of memory activation and consolidation create a window of opportunity for shaping your internal world.

- Activated memory tends to associate with other things in awareness (e.g., thoughts, sensations), esp. if they are prominent and lasting.

- When memory goes back into storage, it takes associations with it.

- You can imbue implicit and explicit memory with positive associations.
The Fourth Step of TG

When you are having a positive experience:
- Sense the experience sinking down into old pain and deficits, and soothing and replacing them.

When you are having a negative experience:
- Bring to mind a positive experience that is its antidote.

Have the positive experience be prominent while the negative experience is small and in the background.

You’re not resisting negative experiences or getting attached to positive ones. You’re being kind to yourself and cultivating resources in your mind.
Psychological Antidotes

Avoiding Harms
- Strength, efficacy --> Weakness, helplessness, pessimism
- Safety, security --> Alarm, anxiety
- Compassion for oneself and others --> Resentment, anger

Approaching Rewards
- Satisfaction, fulfillment --> Frustration, disappointment
- Gladness, gratitude --> Sadness, discontentment, “blues”

Attaching to Others
- Attunement, inclusion --> Not seen, rejected, left out
- Recognition, acknowledgement --> Inadequacy, shame
- Friendship, love --> Abandonment, feeling unloved or unlovable
The Tip of the Root

- For the fourth step of TIG, try to get at the youngest, most vulnerable layer of painful material.

- The “tip of the root” is commonly in childhood. In general, the brain is most responsive to negative experiences in early childhood.

- Prerequisites
  - Understanding the need to get at younger layers
  - Compassion and support for the inner child
  - Capacity to “presence” young material without flooding
TG and Trauma

- General considerations:
  - People vary in their resources and their traumas.
  - Often the major action is with “failed protectors.”
  - Cautions for awareness of internal states, including positive
  - Respect “yellow lights” and the client’s pace.

- The first three steps of TG are generally safe. Use them to build
resources for tackling the trauma directly.

- As indicated, use the fourth step of TG to address the peripheral
features and themes of the trauma.

- Then, with care, use the fourth step to get at the heart of the trauma.

*First of all, do no harm.*
The Fruit as the Path
Cultivation Undoes Craving

- Taking in the good is an openness to positive experience while letting go – allowing the experience in and through you.

- Much suffering and harm comes from “craving” – resisting the unpleasant, grasping after the pleasant, and clinging to the heartfelt – a drive state based on deficit or disturbance of core needs – safety, satisfaction, connection – being met.

- By repeatedly internalizing the felt sense of core needs being met, we gradually reduce the sense of deficit or disturbance, and rest increasingly 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

Contentment

Love
A Fifth Yana?

The “Buddhastream” has developed through four major vehicles (*yanas*): Theravadan, Tibetan, Chan/Zen, and Pure Land.

Could we be helping develop an emergent Fifth Yana, with:

- Many householders engaging deep contemplative practice
- Multiculturalism as both a reality and a value
- Access to and eclectic use of the full array of Buddhist teachings
- Flattening hierarchies
- Naturalizing dharma practice; using science and psychology
- Skillful use of positive experiences; “Western tantra”
- Deconstructing and applying Buddhist practices in non-Buddhist settings (e.g., pain-control clinics, schools, psychotherapy)
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
Suggested Books

See www.RickHanson.net for other suggestions.

Key Papers - 1

See [www.RickHanson.net](http://www.RickHanson.net) for other scientific papers.


Key Papers - 2


- Hanson, R. 2008. Seven facts about the brain that incline the mind to joy. In Measuring the immeasurable: The scientific case for spirituality. Sounds True.
Key Papers - 3


Where to Find Rick Hanson Online

Hardwiring Happiness: The New Brain Science of Contentment, Calm, and Confidence

www.rickhanson.net/hardwiringhappiness

Personal website: www.rickhanson.net

Wellspring Institute: www.wisebrain.org

youtube.com/drrhanson  facebook.com/rickhansonphd