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
Neurobhavana:
Cultivating the End
Of the Causes of Craving

Conference on Mindfulness and Compassion
June 27, 2015

Rick Hanson, Ph.D.
The Wellspring Institute for Neuroscience and Contemplative Wisdom
WiseBrain.org RickHanson.net
Foundations
Common - and Fertile - Ground

Neuroscience

Psychology

Contemplative Practice
We ask, “What is a thought?”

We don’t know,

yet we are thinking continually.

Venerable Tenzin Palmo
The Neurology of Cultivation
Two wolves in the heart
## Major Buddhist Inner Strengths

<table>
<thead>
<tr>
<th>Mindfulness</th>
<th>Compassion</th>
<th>View</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investigation</td>
<td>Kindness</td>
<td>Intention</td>
</tr>
<tr>
<td>Energy</td>
<td>Altruistic joy</td>
<td>Effort</td>
</tr>
<tr>
<td>Bliss</td>
<td>Virtue</td>
<td>Conviction</td>
</tr>
<tr>
<td>Tranquility</td>
<td>Wisdom</td>
<td>Generosity</td>
</tr>
<tr>
<td>Concentration</td>
<td></td>
<td>Patience</td>
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<tr>
<td>Equanimity</td>
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</tbody>
</table>
INNER STRENGTHS ARE BUILT FROM BRAIN STRUCTURE
How do you get these inner strengths into your brain?
Mental activity entails underlying neural activity.
Ardent, Diligent, Resolute, and Mindful
Repeated mental activity entails repeated neural activity.

Repeated neural activity builds neural structure.
Neurons that fire together,
wire together.
We can use the mind
to change the brain

to change the mind for the better

to benefit ourselves and other beings.
In the Garden of the Mind

1. Be with what is there.
2. Decrease the negative.
3. Increase the positive.

Let be. Let go. Let in.
Mindfulness is present in all three.

“Being with” is primary – but not enough.
We also need “wise effort.”
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)
Learning – changing neural structure and function – has two stages:

From **short-term** memory buffers to **long-term** storage

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

From **activation** to **installation**.
Inner strengths are grown from experiences of them – activated states – that are installed as traits.
You become more compassionate by installing experiences of compassion.

You become more grateful by installing experiences of gratitude.

You become more mindful by installing experiences of mindfulness.
Most experiences of inner strengths are **enjoyable**.

They feel good because they are good for us and others.
Without **installation**, there is no learning, no change in the brain.
We’re good at activation but bad at installation.

This is the fundamental weakness in most patient education, human resources training, psychotherapy, coaching, and mindfulness training.
Meanwhile, painful, harmful experiences are being rapidly converted into neural structure.
Velcro for Bad, Teflon for Good

The negativity bias

bad experiences

good experiences
The brain is good at learning from bad experiences but bad at learning from good ones. Even though learning from good experiences is the primary way to grow resources for well-being.
The Negativity Bias
Taking in the Good
Let’s Try It

- **Notice** something beneficial already present in awareness.
  - Have the experience.
  - Enrich it.
  - Absorb it.

- **Create** the experience of compassion.
  - Have the experience.
  - Enrich it.
  - Absorb it.
Learning to Take in the Good
Have a Good Experience
Absorb It
Link Positive and Negative Material
HEAL Yourself

Have a positive experience.

Enrich it.

Absorb it.

Link positive and negative material.
Have It, Enjoy It
The Buddha’s Drive Theory of Suffering
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 a path that embodies and leads to the passing away of this craving and suffering.
What causes craving?

What ends these causes?
The Evolving Brain

The Triune Brain - (P. MacLean 1990)
### Meeting Three Core Needs

<table>
<thead>
<tr>
<th>Need</th>
<th>Signal</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>Unpleasant</td>
<td>Avoiding</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>Pleasant</td>
<td>Approaching</td>
</tr>
<tr>
<td>Connection</td>
<td>Heartfelt</td>
<td>Attaching</td>
</tr>
</tbody>
</table>
Craving Arising . . .

When there is a presumed or 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** (Avoiding)
- **Frustration** (Approaching)
- **Heartache** (Attaching)

The brain in allostatic, *Reactive, craving* mode
Craving Passing Away . . .

With no presumed or 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** (Avoiding)
- **Contentment** (Approaching)
- **Love** (Attaching)

The brain in homeostatic, **Responsive**, minimal craving mode
Choices . . .

Or?

**Reactive Mode**

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

**Responsive Mode**

- Avoid
- Peace
- Wisdom
- Contentment
- Love
- Attach
In Buddhism, we work to expand the range of life experiences in which we are free.

U Pandita
Can You Stay in the Green Zone When:

Things are unpleasant?

Things are pleasant?

Things are heartfelt?
With equanimity, you can deal with situations with calm and reason while keeping your inner happiness.

The Dalai Lama
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.
Know the mind.

Shape the mind.

Free the mind.
From the 2\textsuperscript{nd} to the 3\textsuperscript{rd} Noble Truth
Mental Resources for Challenges

**Safety** – Grit, protection, relaxation, feeling alright right now, peace

**Satisfaction** – Gratitude, gladness, accomplishment, contentment

**Connection** – Belonging, appreciation, friendship, compassion, love
Pet the Lizard
Feed the Mouse
Hug the Monkey
Peace

Contentment

Love
Cultivation Undoes Craving

We rest the mind upon beneficial states so that the brain may gradually take their shape.

This disentangles us from craving as we increasingly rest in a peace, contentment, 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.
A Fifth Yana?

The “Buddhastream” 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)
Penetrative insight

joined with calm abiding

utterly eradicates

afflicted states.

Shantideva
Suggested Books

See www.RickHanson.net for other great books.

See 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