Taking in the Good: Building Resilience into the Brain Through Positive Experiences

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Topics

- Self-directed neuroplasticity
- Controlling attention
- Taking in the good
- Coming home to the naturally resilient brain
Self-Directed Neuroplasticity
A Neuron
All cells have specialized functions. Brain cells have particular ways of processing information and communicating with each other. Nerve cells form complete circuits that carry and transform information.

Electrical signaling represents the language of mind, the means whereby nerve cells, the building blocks of the brain, communicate with one another over great distances. Nerve cells generate electricity as a means of producing messages.

All animals have some form of mental life that reflects the architecture of their nervous system.

Eric R. Kandel
Fact #1

As your brain changes, your mind changes.
Ways That Brain Can Change Mind

For better:
- A little caffeine: more alertness
- Thicker insula: more self-awareness, empathy
- More left prefrontal activation: more happiness

For worse:
- Intoxication; imbalances in neurotransmitters
- Concussion, stroke, tumor, Alzheimer’s
- Cortisol-based shrinkage of hippocampus: less capacity for contextual memory
Fact #2

As your mind changes, your brain changes.

Immaterial mental activity maps to material neural activity.

This produces temporary changes in your brain and lasting ones.

Temporary changes include:

- Alterations in brainwaves (= changes in the firing patterns of synchronized neurons)
- Increased or decreased use of oxygen and glucose
- Ebbs and flows of neurochemicals
The Rewards of Love
Tibetan Monk, Boundless Compassion
Christian Nuns, Recalling Profound Spiritual Experiences

Beauregard, et al., Neuroscience Letters, 9/25/06
Mind Changes Brain in Lasting Ways

- What flows through the mind sculpts your brain. Immaterial experience leaves material traces behind.

- Increased blood/nutrient flow to active regions

- Altered epigenetics (gene expression)

- “Neurons that fire together wire together.”
  - Increasing excitability of active neurons
  - Strengthening existing synapses
  - Building new synapses; thickening cortex
  - Neuronal “pruning” - “use it or lose it”
Honoring Experience

One’s 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.
Fact #3

You can use your mind to change your brain to change your mind for the better.

This is self-directed neuroplasticity.

How to do this, in skillful ways?
Controlling Attention
Why Attention Matters

- In the “stage” of awareness, attention is like a spotlight, illuminating what it rests upon.

- Because neuroplasticity is heightened for what we pay attention to, attention is also like a vacuum cleaner, sucking its contents into the brain.

- Directing attention skillfully is therefore a fundamental way to shape the brain - and one’s life - over time.
The education of attention would be the education *par excellence*.

William James
Taking in the Good
The Importance of Inner Resources

Examples:
- Freud’s “positive introjects”
- Intrapersonal factors/processes of resilience, such as: learned optimism, emotional intelligence, “ego strength,” self-worth, determination, problem-solving skills, and personally meaningful spirituality

Benefits
- Lift mood and increase positive emotions: many physical and mental health benefits
- Improve self-regulation
- Improve outlook on world, self, and future
- Increase resilience
How to Take in the Good

1. Look for positive facts, and let them become positive experiences.

2. Savor the positive experience:
   - Sustain it for 10-20-30 seconds.
   - Feel it in your body and emotions.
   - Intensify it.

3. Sense and intend that the positive experience is soaking into your brain and body - registering deeply in emotional memory.
Targets of TIG

- **Bodily states** - healthy arousal; PNS; vitality
- **Emotions** - both feelings and mood
- **Views** - expectations; object relations; perspectives on self, world, past and future
- **Behaviors** - reportoire; inclinations
Kinds of “Good” to Take in

- The small pleasures of ordinary life
- The satisfaction of attaining goals or recognizing accomplishments - especially small, everyday ones
- Feeling grateful, contented, and fulfilled

- Things are alright; nothing is wrong; there is no threat
- Feeling safe and strong
- The peace and relief of forgiveness

- Being included, valued, liked, respected, loved by others
- The good feelings that come from being kind, fair, generous
- Feeling loving

- Recognizing your positive character traits
- Spiritual or existential realizations
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 “Us”
- Attunement, inclusion --> Not seen, rejected, left out
- Recognition, acknowledgement --> Inadequacy, shame
- Friendship, love --> Abandonment, feeling unloved or unlovable
Why It’s Good to Take in the Good

- Rights an unfair imbalance, given the negativity bias

- Gives oneself today the caring and support one should have received as a child, but perhaps didn’t get in full measure; an inherent, implicit benefit

- Increases positive resources, such as:
  - Positive emotions
  - Capacity to manage stress and negative experiences

- Can help bring in missing “supplies” (e.g., love, strength, worth)

- Can help painful, even traumatic experiences
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
“Anthem”

Ring the bells that still can ring
Forget your perfect offering
There is a crack in everything
That’s how the light gets in
That’s how the light gets in

Leonard Cohen
The Naturally Resilient Brain
Evolutionary History

The Triune Brain - (P. MacLean 1990)
Three Stages of Brain Evolution

- **Reptilian:**
  - Brainstem, cerebellum, hypothalamus
  - Reactive and reflexive
  - *Avoid* hazards

- **Mammalian:**
  - Limbic system, cingulate, early cortex
  - Memory, emotion, social behavior
  - *Approach* rewards

- **Human:**
  - Massive cerebral cortex
  - Abstract thought, language, cooperative planning, empathy
  - *Attach* to “us”
"With all due respects, I find your disparaging remarks about the 'reptilian brain' unnecessary"
Home Base of the Human Brain

When not threatened, ill, in pain, hungry, upset, or chemically disturbed, most people settle into being:

- **Peaceful** (the Avoid system)
- **Happy** (the Approach system)
- **Loving** (the Attach system)

This is the brain in its natural, *Responsive* mode.
The Responsive Mode
## Responsive Mode

<table>
<thead>
<tr>
<th></th>
<th>View</th>
<th>Action</th>
<th>Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Avoid</strong></td>
<td>Resources, challenges-in-context</td>
<td>Govern/restrain, truth-to-power, forgive</td>
<td>Strength, safety, peace</td>
</tr>
<tr>
<td><strong>Approach</strong></td>
<td>Sufficiency, abundance, disenchantment</td>
<td>Aspire, give, let go</td>
<td>Glad, grateful, fulfilled, satisfied</td>
</tr>
<tr>
<td><strong>Attach</strong></td>
<td>Connection, belonging, social supplies</td>
<td>Open to others; join; be empathic, compassionate, kind, caring; love</td>
<td>Membership, closeness, friendship, bonding loved and loving</td>
</tr>
</tbody>
</table>
But to Cope with Urgent Needs, We Leave Home . . .

- **Avoid**: When we feel threatened or harmed
- **Approach**: When we can’t attain important goals
- **Attach**: When we feel isolated, disconnected, unseen, unappreciated, unloved

This is the brain in its *Reactive* mode of functioning - a kind of inner homelessness.
The Reactive Mode

Avoid
Hatred
Ignorance
Suffering
Heartache
Attach
Approach
Greed
## Reactive Mode

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</tr>
</thead>
<tbody>
<tr>
<td><strong>Avoid</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harms present or lurking</td>
<td>Fight, flight, freeze</td>
<td>Fear, anger, weakness</td>
</tr>
<tr>
<td><strong>Approach</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scarcity, loss, unreliability, not expected rewards</td>
<td>Grasp, acquire</td>
<td>Greed, longing, frustration, disappointment</td>
</tr>
<tr>
<td><strong>Attach</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Separated, being “beta,” devalued</td>
<td>Cling, seek approval, reproach</td>
<td>Loneliness, heartbreak, envy, jealousy, shame</td>
</tr>
</tbody>
</table>
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”
Negativity Bias: Causes in Evolution

- "Sticks" - Predators, natural hazards, social aggression, pain (physical and psychological)

- "Carrots" - Food, sex, shelter, social support, pleasure (physical and psychological)

During evolution, avoiding “sticks” usually had more effects on survival than approaching “carrots.”

- **Urgency** - Usually, sticks must be dealt with immediately, while carrots allow a longer approach.

- **Impact** - Sticks usually determine mortality, carrots not; if you fail to get a carrot today, you’ll likely have a chance at a carrot tomorrow; but if you fail to avoid a stick today - whap! - no more carrots forever.
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.
A Poignant Truth

Mother Nature is tilted toward producing gene copies.

But tilted against personal quality of life.

And at the societal level, we have caveman/cavewoman brains armed with nuclear weapons.

What shall we do?
We can deliberately use the mind to change the brain for the better.
Choices . . .

Or?

Reactive Mode

Responsive Mode
True Nature

Peaceful

Happy

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

Lao Tsu
Great 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


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