Positive Neuroplasticity:

The Practical Brain Science of Building Lasting Psychological Resources



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Rick Hanson, Ph.D.

Greater Good Science Center University of California at Berkeley www.RickHanson.net

Mental Resources for Resilient Well-Being

Well-Being

Hedonia

Eudaimonia

Shaping the Course of a Life

Challenges

Vulnerabilities

Resources

Location of Resources

World

Body

Mind

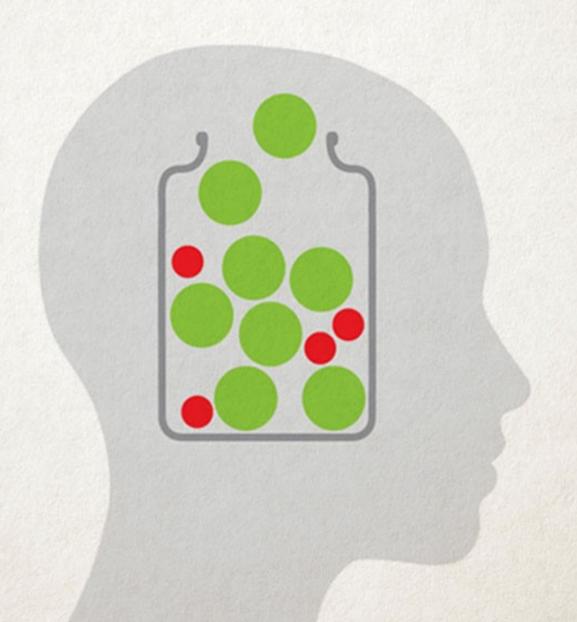
Resources for Well-Being

Grit Mindfulness Secure Attachment Self Regulation Optimism Self-Worth

Roughly half to two-thirds of the variation in psychological attributes involves non-heritable factors.

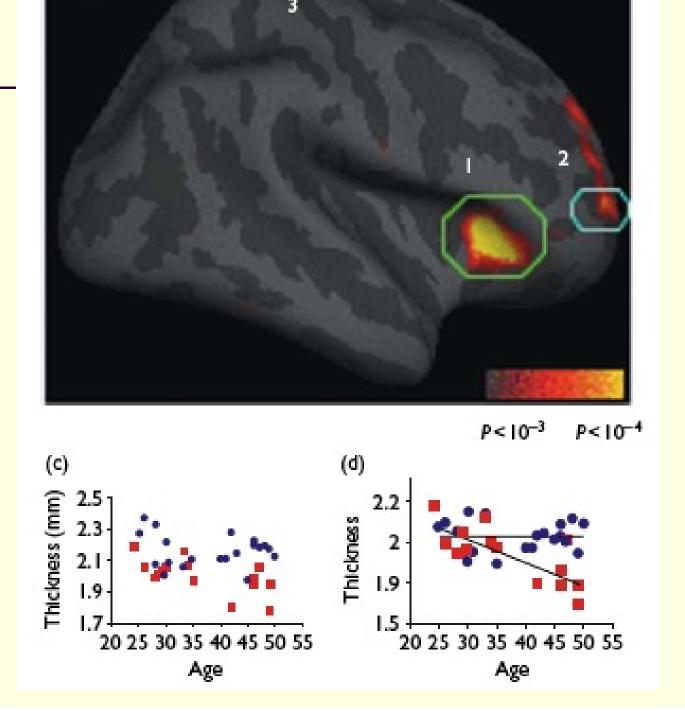
A large fraction of a typical person's mental resources are acquired – learned – rather than innate.

Mental Resources Are Acquired Through Changes in Nervous System



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

(b)



A Taste of Taking in the Good

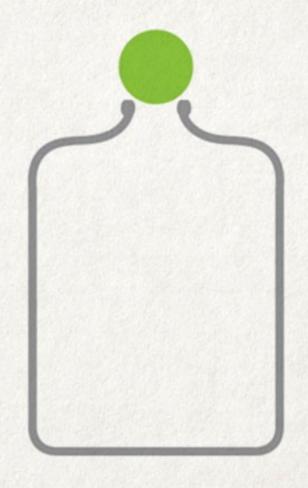
Mindful Cultivation: HEAL Process

Activation

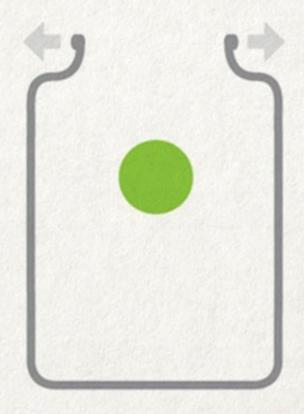
1. Have a beneficial experience

Installation

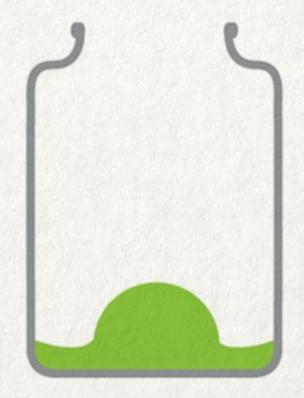
- 2. Enrich the experience
- 3. Absorb the experience
- 4. Link positive and negative material (Optional)



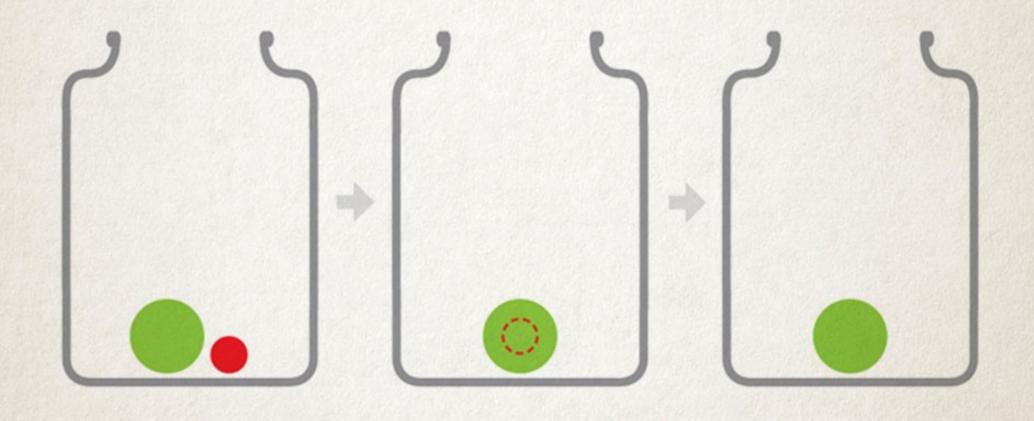
Have a Beneficial Experience



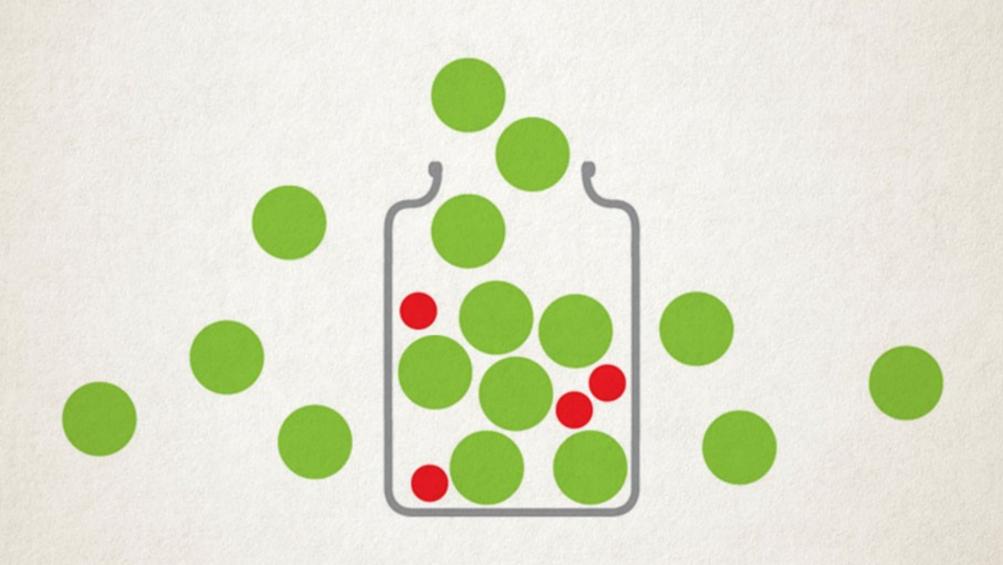
Enrich It



Absorb It



Link Positive & Negative Material



Have It, Enjoy It

Let's Try It

Notice

relaxing as you exhale

Create

an experience of gladness, gratitude

Create

an experience of caring about someone

For each of the above:

Have the experience. Enrich it. Absorb it.

Self-Directed Neuroplasticity

In the Garden of the Mind

(1) (2) (3)

Be with what Decrease Increase

Be with what is there

Decrease the negative 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."

Mental resources are acquired in two stages:

Encoding > Consolidation

Activation > Installation

State > Trait

Major Neural Mechanisms of Learning

(De)Sensitizing existing synapses

Building new synapses

Altered gene expression

Building and integrating new neurons

Increased ongoing activity in a region

Increased connectivity of regions

Altered neurochemical activity

Information from hippocampus to cortex

Modulation by stress hormones, cytokines

Slow wave and REM sleep



Mental resources are developed through experiences of them or related factors – activated states – that are installed as traits.

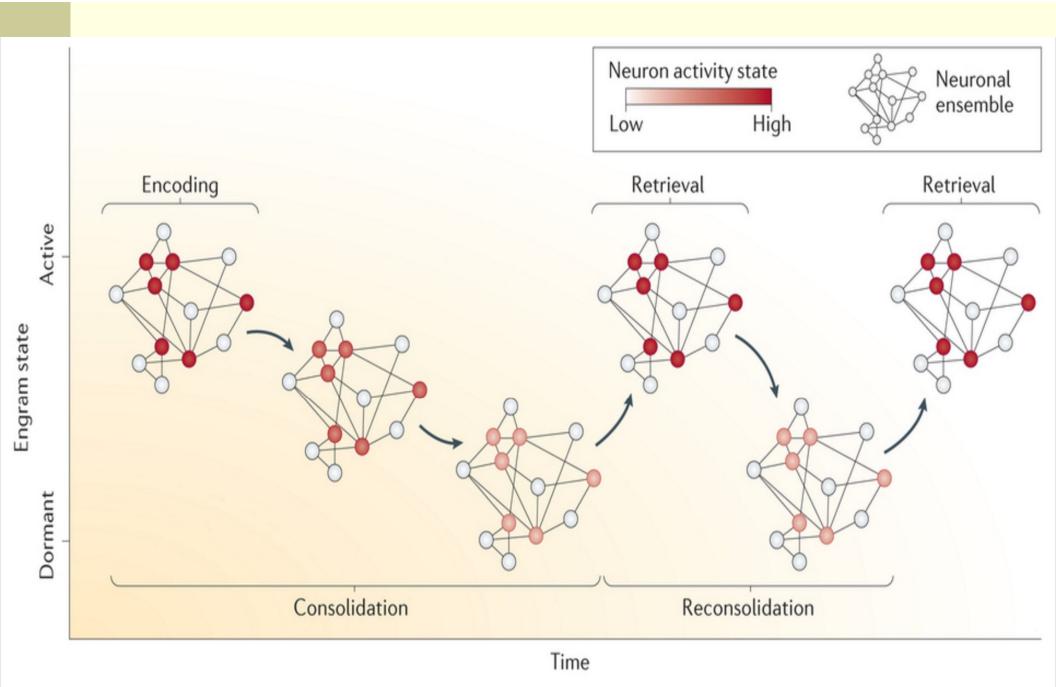
We become more **compassionate** by repeatedly installing experiences of compassion.

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

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

In a positive cycle, beneficial traits – mental resources – foster beneficial states,

which present another opportunity to reinforce the beneficial trait.



Most experiences of inner strengths – resilience, kindness, insight, mindfulness, self-worth, love, etc. – are **enjoyable**.

Positive hedonic tone is thus often a marker of an opportunity to develop a psychological resource.



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

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

The Negativity Bias

Meanwhile,

stressful, painful, harmful experiences

are being rapidly converted into lasting changes in neural structure or function.

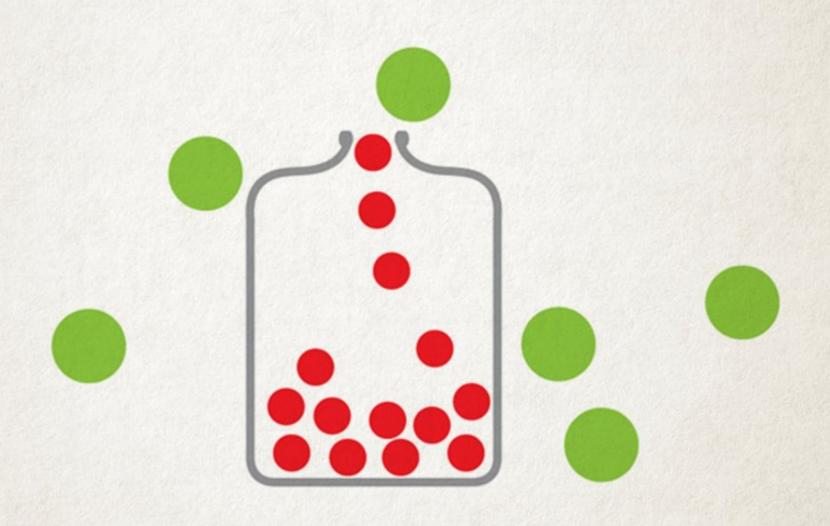
The Negativity Bias

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

Steepening Personal Growth Curves

Experiencing doesn't equal learning.

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

What fraction of our beneficial mental states ever become neural structure?

Professionals and the public are generally good at activation but bad at installation.

The same research that proves therapy works shows no improvement in outcome over the last 30 or so years.

Scott Miller

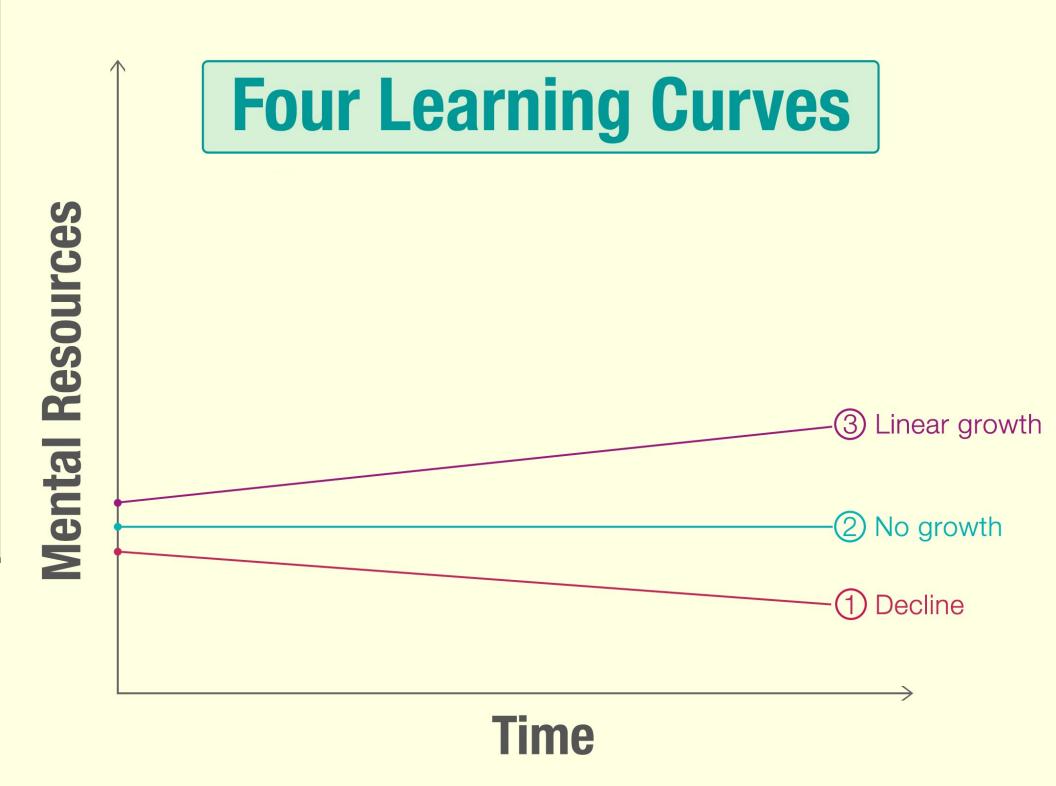


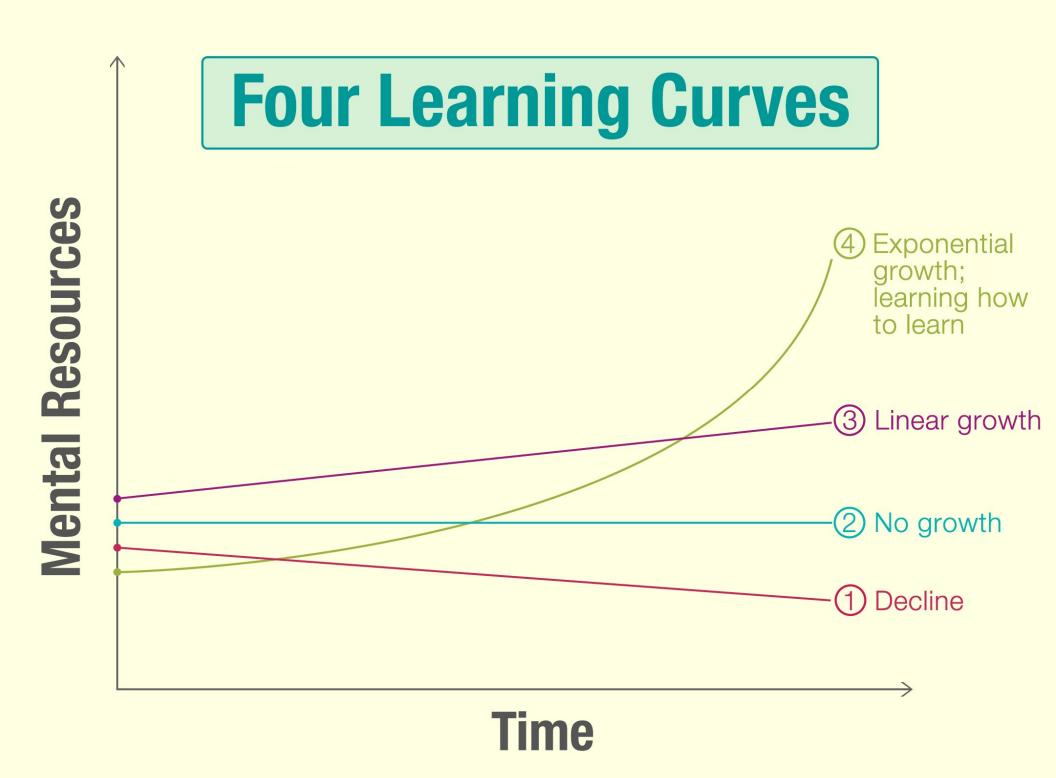
The installation phase of learning is the fundamental weakness - and opportunity in much coaching, psychotherapy, human resources training, and mindfulness programs.

Four Learning Curves



Time





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

Learning Factors

Environmental – setting, social support

Behavioral – activities, repetition

Mental – motivation, engagement

Learning How To Learn

Types of Mental Learning Factors

Contextual	Engagement
Openness	Personal relevance
Mindfulness	Alertness, sense of novelty
View of positive experience	Arousal, enactment
Growth/learning mindset	Sense of reward
Motivation	Emotion
Self-efficacy	Granularity of attention
Self-esteem	Interoception
Feeling supported	Maintenance, repetition
Sense of safety	Meaning, elaboration

Benefits of Mental Learning Factors

Benefits of both types of factors:

- Increase learning from the <u>present</u> experience
- Prime NS for <u>future</u> beneficial experiences
- Heighten consolidation of <u>past</u> experiences

Engagement factors have additional benefits:

- Regulate experience directly
- Increase initial processes of consolidation
- Are under volitional control

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)

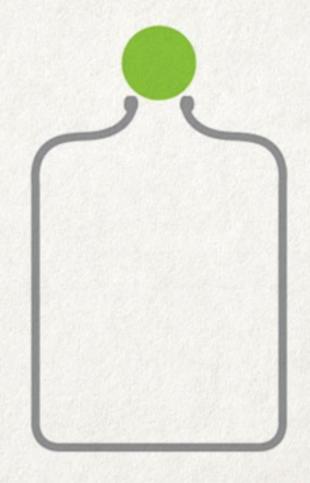
Let's Try It

Notice your own going on being:

- Foreground the experience in awareness
- Stay with it; open to it in your body; keep it fresh
- · Be mindful of what is rewarding; sense it sinking in

Create an experience of compassion:

- Wish that beings not suffer, with warm concern
- Let it pervade the mind; find personal relevance
- · Give over to it; imagine it spreading inside you



Have 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

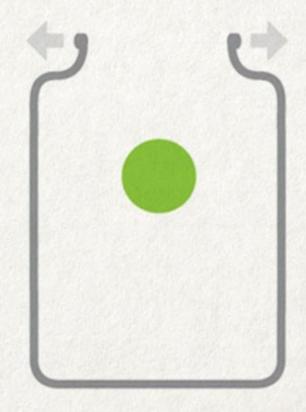
Two Aspects of Installation

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



Enrich It

Factors of Enriching

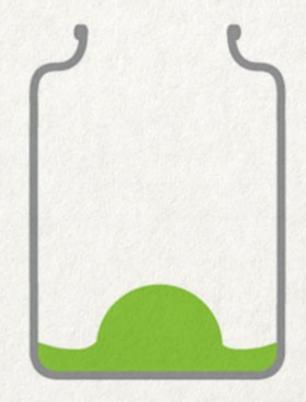
Duration – maintenance, repetition

Intensity – arousal

Multimodality – multiple aspects of experience

Novelty – alertness, sense of freshness, granularity of attention

Salience – personal relevance



Absorb It

Factors of Absorbing

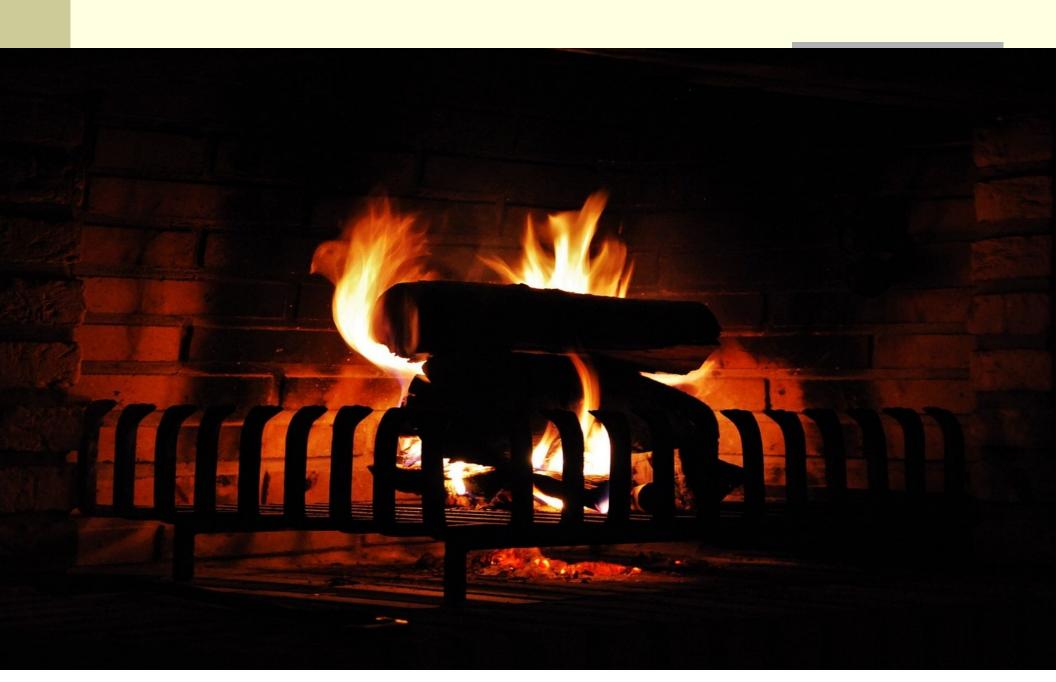
Intend to internalize the experience (priming).

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)

Like a Nice Fire



Let's Try It

Notice

a pleasant sound or sight

Create

an experience of letting go

Create

an experience of being in nature

For each of the above:

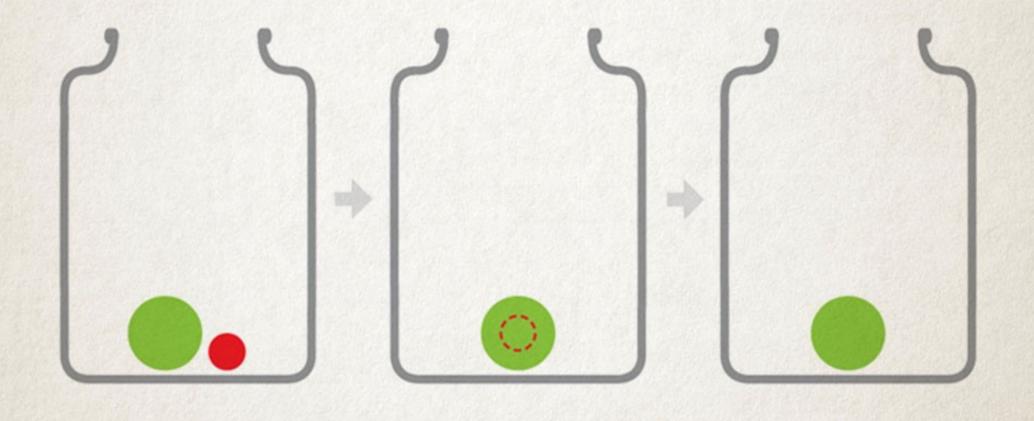
Have the experience. Enrich it. Absorb it.

This is the fundamental **how** of "experiential gain" that can be applied to any <u>what</u> – any psychological resource (including the results of healing) that a person would like to grow.

Aspects of Enriching and Absorbing are present in any effective psychotherapy, coaching, human resources training, and mindfulness program.

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

And there has been no systematic training in the mental factors of emotional, somatic learning.



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.

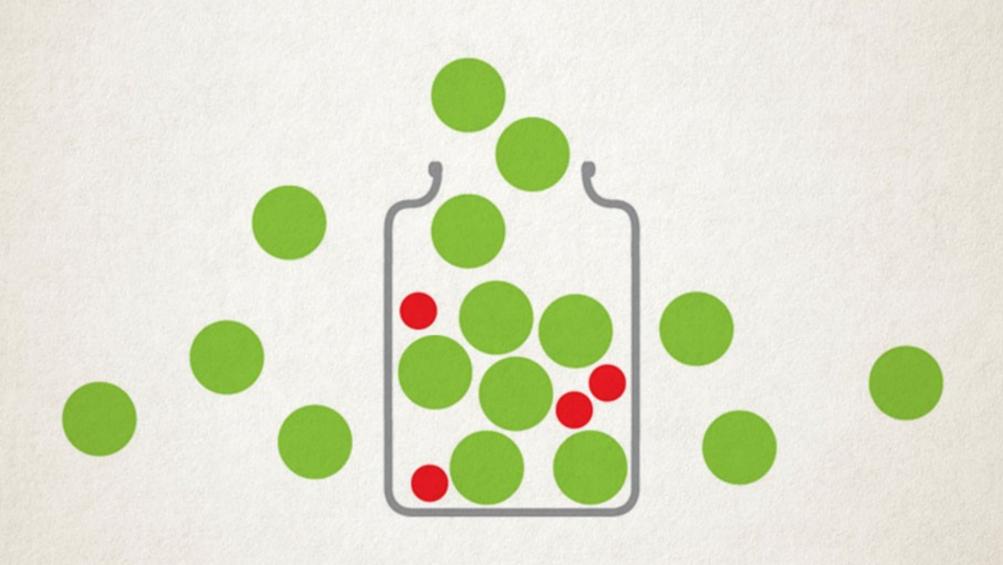
Three conditions:

- 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 <u>felt sense</u> 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



Pilot Study on a Training in Mental Factors of Learning

Randomized waitlist control group study of the "Taking in the Good Course"

Six 3-hour classes over 7 weeks; 46 subjects; not yet peerreviewed

Compared to controls, participants reported more Contentment, Self-Esteem, Satisfaction with Life, Savoring, and Gratitude.

After the course and at 2-month follow-up, pooled participants reported less Anxiety and Depression, and more Love, Compassion, Self-Compassion, Mindfulness, Self-Control, Positive Rumination, Joy, Amusement, Awe, and Happiness.

Link with Self-Compassion

Compassion is the wish that beings not suffer, with warm-hearted concern. Compassion is sincere even if we can't make things better.

Self-compassion simply applies this to oneself.

To encourage self-compassion:

1

Get the sense of being cared about.

2

Bring to mind beings you care about. Find compassion for them. 3

Shift the compassion to yourself.

"Anthem"

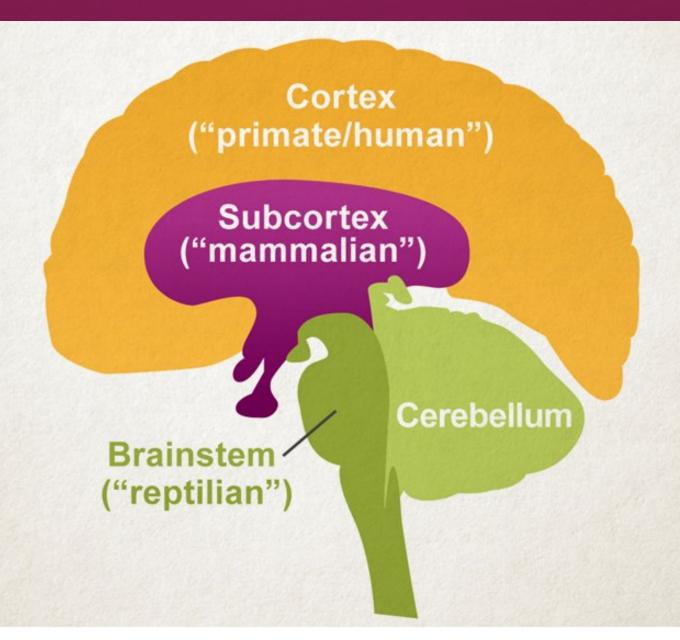
Ring the bells that can still ring
Forget your perfect offering
There is a crack in everything
That's how the light gets in
That's how the light gets in

Leonard Cohen



Body and Mind At Rest

The Evolving Brain



Three Fundamental Needs







Safety

Approach Rewards

Satisfaction Connection

Avoid Harms

Attach to Others

When Needs Feel Met

When there is a core sense of needs met – of **fullness** and **balance** – the brain defaults to its homeostatic resting state.

The body conserves resources, recovers from stress, refuels, and repairs itself.

In terms of safety, satisfaction, and connection, the mind is colored by a sense of **peace**, **contentment**, and **love**.

This is the body, brain, and mind in its Responsive mode – the "Green Zone."

When Needs Do Not Feel Met

When there is a core sense of needs unmet – of **deficit** and **disturbance** – the brain is perturbed into an allostatic drive state ("craving").

The body burns resources, agitates its systems, halts long-term building, and accumulates stress load.

In terms of safety, satisfaction, and connection, the mind is colored by a sense of fear and anger, frustration and drivenness, and hurt and aggression.

This is the body, brain, and mind in its Reactive mode – the "Red Zone."

People have long asked, what is human nature? We have two natures: Responsive and Reactive.

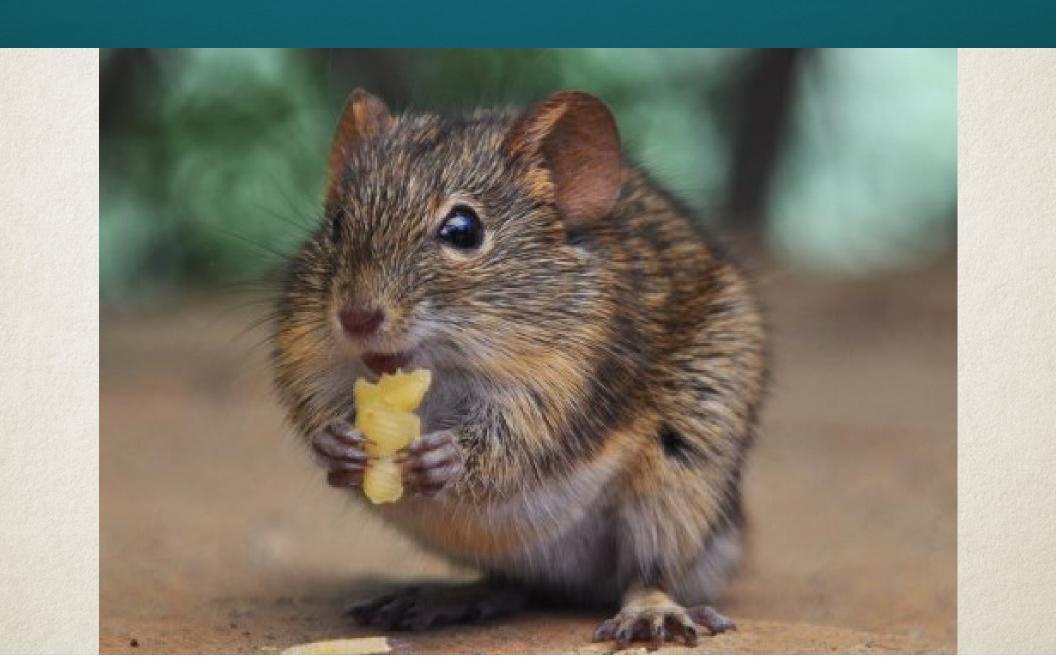
The Reactive mode helped our species evolve in harsh settings, and may sometimes be needed today.

But most of the time, our Stone Age brain in the Red Zone causes much suffering, health problems, and conflict, even war.

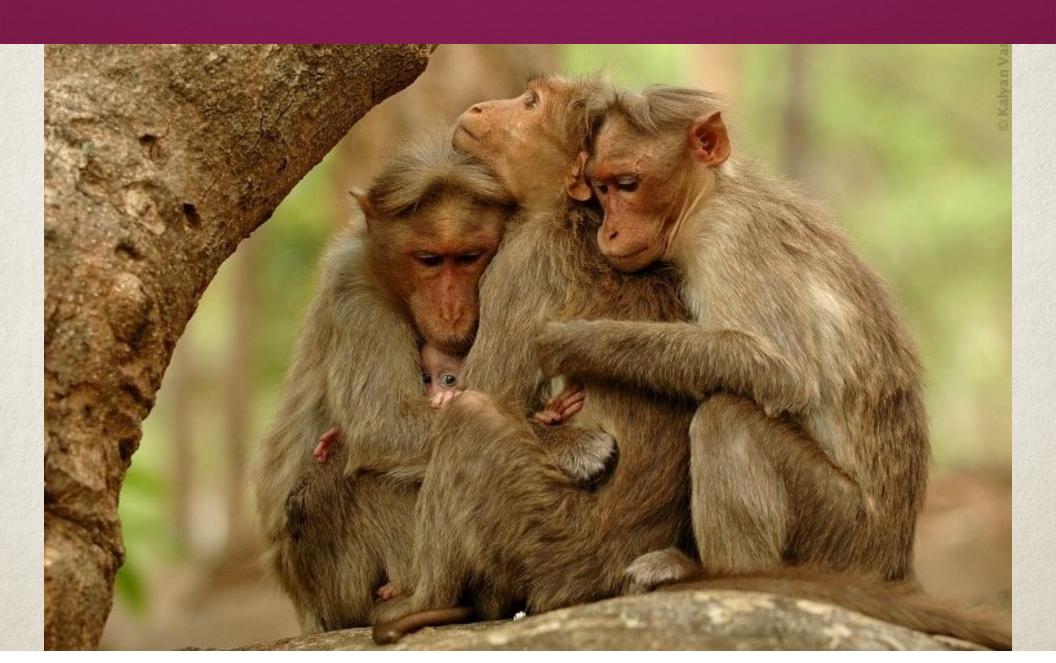
Pet the Lizard



Feed the Mouse



Hug the Monkey



Coming Home

Peace Contentment Love

Key Resources for Fundamental Needs

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?



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 these questions:

What are some of the challenges in your life these days? (in the world, body, or mind)

What mental resources do
- or could – help you with these challenges?

Matching Resources to Needs

Safety

Alertness Grit Resolution **Protections** Calm Relaxation

Peace

Satisfaction Connection

Gratitude Gladness **Capabilities** Restraint **Ambition Enthusiasm**

Contentment

Empathy Compassion **Kindness** Assertiveness Self-worth Confidence

Love

The Tip of the Root

In the fourth step of TG, you could try to get at the youngest, most vulnerable layer of painful material.

The "tip of the root" is commonly in childhood. The brain is generally more affected by the negative experiences that occur in early childhood than by ones occurring later in life.

Prerequisites:

<u>(1)</u> <u>(2)</u> <u>(3)</u>

Understanding the need to get at younger layers

Compassion and support for the inner child

Capacity to "presence" young material without flooding

Feeling Basically Alright Right Now

- Tuning into the body's signals that all is well right now
- Aware of breathing going fine . . . the heart beating . . . awareness itself keeps on going no matter what arises . . .
- Letting go of the past, not worrying about the future. Noticing that at least in this moment you are OK.
- Being alright, you can let go of any need to struggle with anything unpleasant.
- Feeling alright sinking into places inside that haven't . . .

Explore this setting for things that are beautiful (or otherwise pleasureable) to you: sounds, sights, tastes, touches, smells, and thoughts. Look for little things.

Really **take** in the sense of beauty (or the sense of pleasure in general).

Feeling of Worth

• It is natural and important to feel that you have worth as a <u>person</u> – which does not mean arrogance or ego.

You develop this sense of worth through:

- Others including, appreciating, liking, and loving you
- You respecting yourself

Take in experiences of being:

- Capable, skillful, talented, helpful
- Included, wanted, sought out, chosen
- Appreciated, acknowledged, respected
- Liked, befriended, supported
- Loved, cherished, special



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 these questions:

What have you learned so far?

What has been important for you?

While listening, be as empathic as you can with your partner.

Using HEAL With Others

Resources for HEAL

Intention; willing to feel good

Identified target experience

Openness to the experience; embodiment

Mindfulness of the HEAL steps to sustain them

Working through blocks

The Four Ways to Offer a Method

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)

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.



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 these questions:

What mental resources in others you know could help them?

* How could you encourage greater installation of those resources?

Coming Home

Peace Contentment Love

Thank You



References

Suggested Books

See RickHanson.net for other good books.

- Austin, J. 2009. Selfless Insight. MIT Press.
- Begley. S. 2007. Train Your Mind, Change Your Brain. Ballantine.
- Carter, C. 2010. Raising Happiness. Ballantine.
- Hanson, R. (with R. Mendius). 2009. Buddha's Brain: The Practical Neuroscience of Happiness, Love, and Wisdom. New Harbinger.
- Johnson, S. 2005. Mind Wide Open. Scribner.
- Keltner, D. 2009. Born to Be Good. Norton.
- Kornfield, J. 2009. The Wise Heart. Bantam.
- LeDoux, J. 2003. Synaptic Self. Penguin.
- Linden, D. 2008. The Accidental Mind. Belknap.
- Sapolsky, R. 2004. Why Zebras Don't Get Ulcers. Holt.
- Siegel, D. 2007. The Mindful Brain. Norton.
- Thompson, E. 2007. Mind in Life. Belknap.

See www.RickHanson.net/key-papers/ for other suggested readings.

- Atmanspacher, H. & Graben, P. (2007). Contextual emergence of mental states from neurodynamics. Chaos & Complexity Letters, 2, 151-168.
- Bailey, C. H., Bartsch, D., & Kandel, E. R. (1996). Toward a molecular definition of long-term memory storage. *PNAS*, *93*(24), 13445-13452.
- Baumeister, R., Bratlavsky, E., Finkenauer, C. & Vohs, K. (2001). Bad is stronger than good. *Review of General Psychology*, *5*, 323-370.
- Bryant, F. B., & Veroff, J. (2007). Savoring: A new model of positive experience. Mahwah, NJ: Erlbaum.
- Casasanto, D., & Dijkstra, K. (2010). Motor action and emotional memory. Cognition, 115, 179-185.
- Claxton, G. (2002). Education for the learning age: A sociocultural approach to learning to learn. Learning for life in the 21st century, 21-33.
- Clopath, C. (2012). Synaptic consolidation: an approach to long-term learning. Cognitive Neurodynamics, 6(3), 251–257.

- Craik F.I.M. 2007. Encoding: A cognitive perspective. In (Eds. Roediger HL I.I.I., Dudai Y. & Fitzpatrick S.M.), Science of Memory: Concepts (pp. 129-135). New York, NY: Oxford University Press.
- Davidson, R.J. (2004). Well-being and affective style: neural substrates and biobehavioural correlates. *Philosophical Transactions of the Royal Society*, 359, 1395-1411.
- Dudai, Y. (2004). The neurobiology of consolidations, or, how stable is the engram?. *Annu. Rev. Psychol.*, *55*, 51-86.
- Dweck, C. (2006). Mindset: The new psychology of success. Random House.
- Fredrickson, B. L. (2013). Positive emotions broaden and build. *Advances in experimental social psychology*, 47(1), 53.
- Garland, E. L., Fredrickson, B., Kring, A. M., Johnson, D. P., Meyer, P. S., & Penn, D. L. (2010). Upward spirals of positive emotions counter downward spirals of negativity: Insights from the broaden-and-build theory and affective neuroscience on the treatment of emotion dysfunctions and deficits in psychopathology. *Clinical psychology review*, 30(7), 849-864.

- Hamann, S. B., Ely, T. D., Grafton, S. T., & Kilts, C. D. (1999). Amygdala activity related to enhanced memory for pleasant and aversive stimuli. *Nature neuroscience*, 2(3), 289-293.
- Hanson, R. 2011. Hardwiring happiness: The new brain science of contentment, calm, and confidence. New York: Harmony.
- Hölzel, B. K., Ott, U., Gard, T., Hempel, H., Weygandt, M., Morgen, K., & Vaitl, D. (2008). Investigation of mindfulness meditation practitioners with voxel-based morphometry. *Social cognitive and affective neuroscience*, *3*(1), 55-61.
- Hölzel, B. K., Carmody, J., Evans, K. C., Hoge, E. A., Dusek, J. A., Morgan, L., ... & Lazar, S. W. (2009). Stress reduction correlates with structural changes in the amygdala. Social cognitive and affective neuroscience, nsp034.
- Jamrozik, A., McQuire, M., Cardillo, E. R., & Chatterjee, A. (2016). Metaphor: Bridging embodiment to abstraction. *Psychonomic bulletin & review*, 1-10.
- Kensinger, E. A., & Corkin, S. (2004). Two routes to emotional memory: Distinct neural processes for valence and arousal. *Proceedings of the National Academy of Sciences of the United States of America*, 101(9), 3310-331⁶.

- Koch, J. M., Hinze-Selch, D., Stingele, K., Huchzermeier, C., Goder, R., Seeck-Hirschner, M., et al. (2009). Changes in CREB phosphorylation and BDNF plasma levels during psychotherapy of depression. Psychotherapy and Psychosomatics, 78(3), 187-192.
- Lazar, S., Kerr, C., Wasserman, R., Gray, J., Greve, D., Treadway, M., McGarvey, M., Quinn, B., Dusek, J., Benson, H., Rauch, S., Moore, C., & Fischl, B. (2005). Meditation experience is associated with increased cortical thickness. Neuroreport, 16, 1893-1897.
- Lee, T.-H., Greening, S. G., & Mather, M. (2015). Encoding of goal-relevant stimuli is strengthened by emotional arousal in memory. Frontiers in Psychology, 6, 1173.
- Lutz, A., Brefczynski-Lewis, J., Johnstone, T., & Davidson, R. J. (2008). Regulation of the neural circuitry of emotion by compassion meditation: Effects of meditative expertise. PLoS One, 3(3), e1897.
- Madan, C. R. (2013). Toward a common theory for learning from reward, affect, and motivation: the SIMON framework. Frontiers in systems neuroscience, 7.

- Madan, C. R., & Singhal, A. (2012). Motor imagery and higher-level cognition: four hurdles before research can sprint forward. *Cognitive Processing*, 13(3), 211-229.
- McGaugh, J.L. 2000. Memory: A century of consolidation. Science, 287, 248-251.
- Nadel, L., Hupbach, A., Gomez, R., & Newman-Smith, K. (2012). Memory formation, consolidation and transformation. *Neuroscience & Biobehavioral Reviews*, 36(7), 1640-1645.
- Pais-Vieira, C., Wing, E. A., & Cabeza, R. (2016). The influence of self-awareness on emotional memory formation: An fMRI study. *Social cognitive and affective neuroscience*, *11*(4), 580-592.
- Palombo, D. J., & Madan, C. R. (2015). Making Memories That Last. The Journal of Neuroscience, 35(30), 10643-10644.
- Paquette, V., Levesque, J., Mensour, B., Leroux, J. M., Beaudoin, G., Bourgouin, P. & Beauregard, M. 2003 Change the mind and you change the brain: effects of cognitive-behavioral therapy on the neural correlates of spider phobia. NeuroImage 18, 401–409.

- Rozin, P. & Royzman, E.B. (2001). Negativity bias, negativity dominance, and contagion. Personality and Social Psychology Review, 5, 296-320.
- Sneve, M. H., Grydeland, H., Nyberg, L., Bowles, B., Amlien, I. K., Langnes, E., ... & Fjell, A. M. (2015). Mechanisms underlying encoding of short-lived versus durable episodic memories. *The Journal of Neuroscience*, 35(13), 5202-5212.
- Talmi, D. (2013). Enhanced Emotional Memory Cognitive and Neural Mechanisms. *Current Directions in Psychological Science*, *22*(6), 430-436.
- Thompson, E. (2007). *Mind in life: Biology, phenomenology, and the sciences of mind*. Harvard University Press.
- Wittmann, B. C., Schott, B. H., Guderian, S., Frey, J. U., Heinze, H. J., & Düzel, E. (2005). Reward-related FMRI activation of dopaminergic midbrain is associated with enhanced hippocampus-dependent long-term memory formation. *Neuron*, 45(3), 459-467.

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■ Yonelinas, A. P., & Ritchey, M. (2015). The slow forgetting of emotional episodic memories: an emotional binding account. *Trends in cognitive sciences*, 19(5), 259-267.

Supplemental Materials

RESOURCES FOR AVOIDING HARMS

Challenge

Weakness

Helplessness

Freezing, immobilization

Inflated threats

Alarm

Tension

Worry, fear

Irritation, anger

Resource

Strength

Agency

Action, venting

Accurate appraisal

Protection, calming

Relaxation

Feeling alright now,

making a plan

Big picture, peace

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RESOURCES FOR APPROACHING REWARDS

Challenge

What I don't have

Scarcity

Disappointed, sad

Frustration, failure

Bored, numb

Grief

Giving up

Drivenness

Resource

What I do have

Enoughness, fullness

Gratitude, gladness

Accomplishment

Pleasure, excitement

Loved and loving

Aspire, lived by good

Already satisfied 106

RESOURCES FOR ATTACHING TO OTHERS

Challenge

Left out, excluded Inadequacy, shame Ignored, unseen Lonely

Resentment Envy, jealousy

Feeling stifled

Resource

Belonging, wanted

Appreciated, respected

Receiving empathy

Friendship, caring to others <u>and</u> oneself

Recognize it hurts you

Self-compassion, take action, good will

Skillful assertiveness

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

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.
- 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