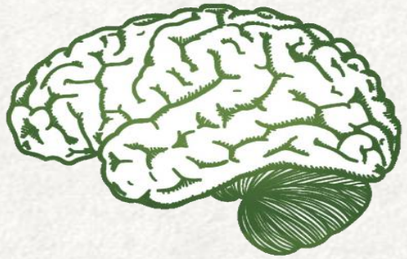
Using Positive Neuroplasticity For Change That Lasts



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Foundations

Grounded in the living body,
how does lasting positive change happen
in psychotherapy – or in life in general?

What can we do with our clients
to increase the rate of durable healing,
recovery, growth, and transformation?

Shaping the Course of a Life

Challenges

Vulnerabilities

Resources

Location of Resources

World

Body

Mind

Inner Strengths For a Challenging World

Some Key Inner Strengths

Grit

Gratitude

Compassion

Mindfulness

Interpersonal skills

Emotional intelligence

The harder a person's life,

the more important it is
to have inner strengths.

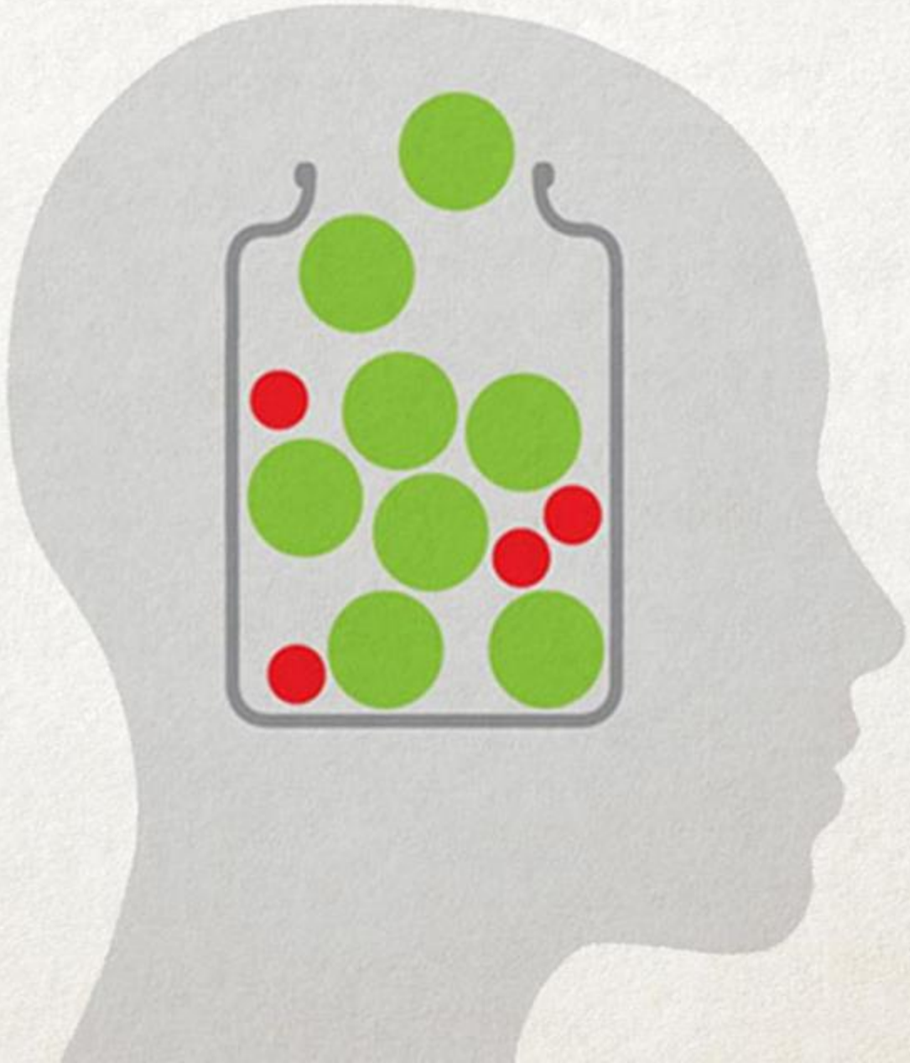
People focus on identifying and using psychological resources such as character strengths –
but what about **developing** them in the first place?

The majority
of our inner strengths
are acquired,

through emotional, somatic,
social, and motivational
learning –

which is fundamentally hopeful.

And Which Means Changing the Brain For the Better . . .



An Overview of Current Research

Much research on people that psychological practices lead to psychological benefits, presumably via changing their brains.

Much research on other animals that various stimuli lead to many kinds of changes in their brains.

Some research that psychological practices change people's brains.

Scattered research on deliberate internal mental factors that lead to individual differences in gains from experiences.

"The absence of evidence is not evidence of absence."

The Brain – is wider than the Sky –
For – put them side by side –
The one the other will contain
With ease – and you – beside –

Emily Dickinson

Positive Neuroplasticity

Experience-Dependent Neuroplasticity

Mental activity involves neural activity.

Repeated patterns of mental activity
involve repeated patterns of neural activity.

Repeated patterns of neural activity
can produce lasting changes
in neural structure and function.

Mental resources are acquired in two stages:

Encoding	›	Consolidation
Activation	›	Installation
State	›	Trait


Neurons that fire together,
wire together.

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

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

We become more **mindful** by repeatedly installing experiences of mindfulness.

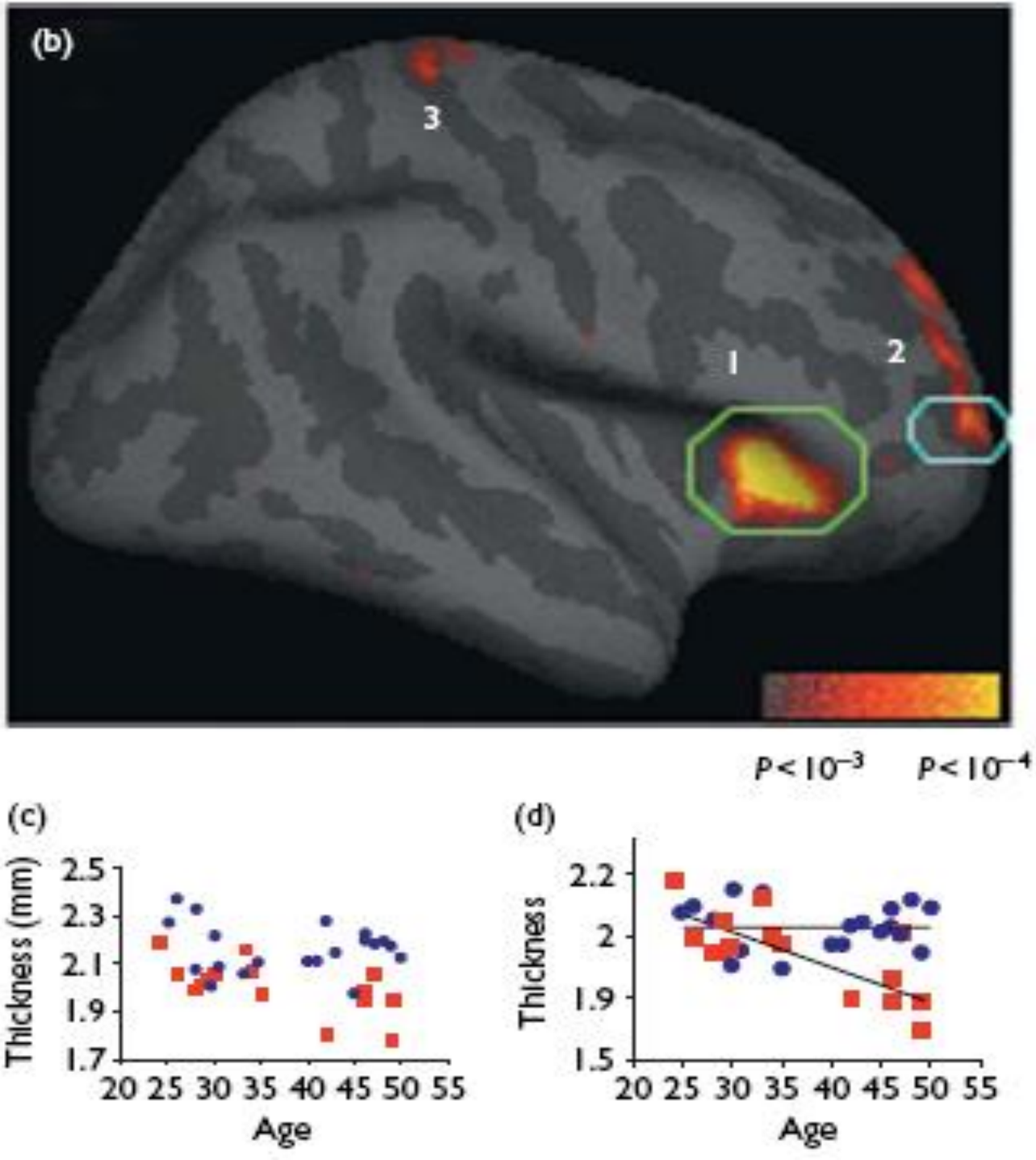
Key Mechanisms of Neuroplasticity

- (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

Meditation experience is associated with increased cortical thickness.

Lazar, et al. 2005.

Neuroreport, 16, 1893-1897.



Every day gives us opportunities
to heal a little bit, to grow a little bit,
to become wiser and stronger and
happier and more loving.

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 usually focus more on activation than installation.

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

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

Scott Miller

The Negativity Bias

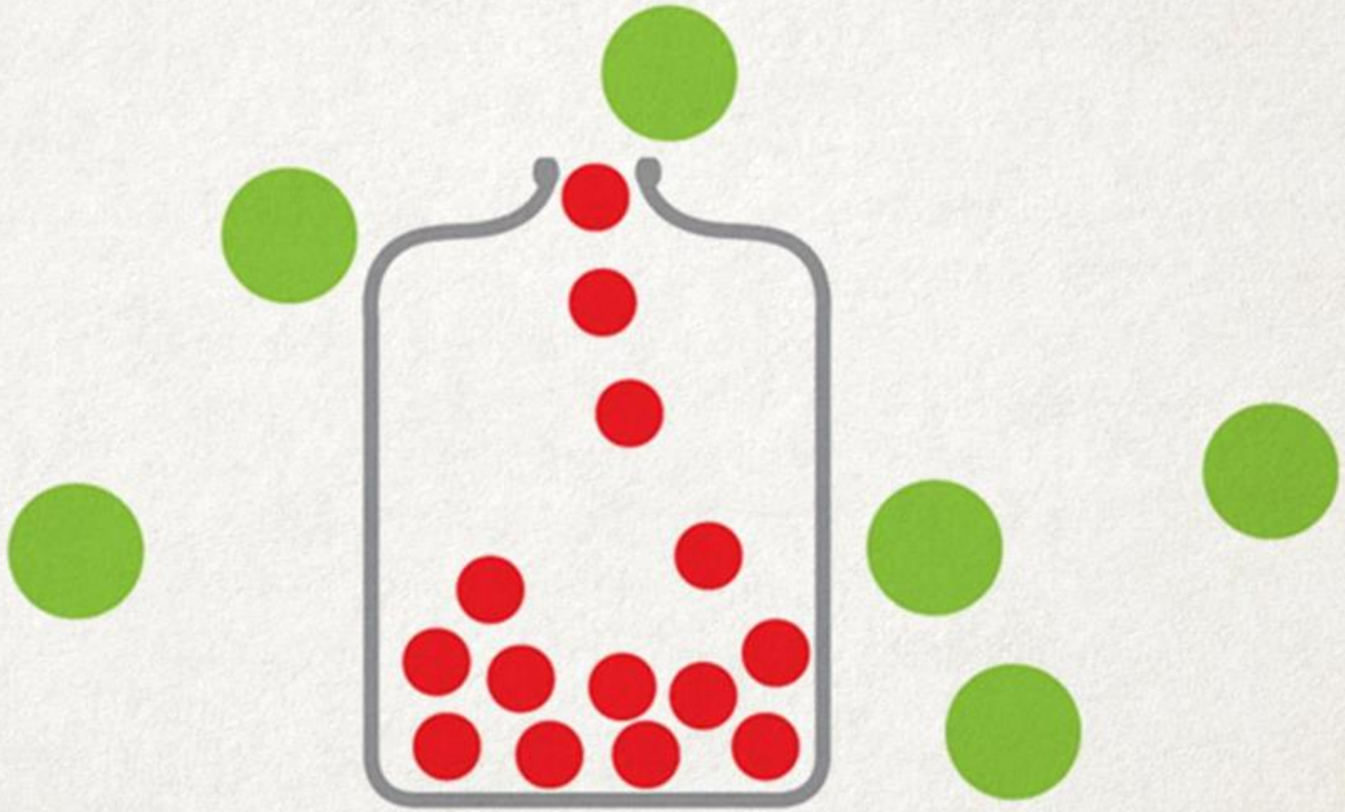
Stone age brains in the 21st century

The Negativity Bias

As the nervous system evolved, 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. Turn it quickly into (implicit) memory,
5. Sensitize the brain to the negative, and
6. Create vicious cycles with others.

Velcro for Bad, Teflon for Good



The Negativity Bias

The brain is good
at learning from bad experiences
but relatively bad
at learning from good ones.

Even though
learning from good experiences
of inner strengths
is how to grow them
and have them with you every day.

What can we do
to promote **lasting**
healing, growth, and learning?

Self-Directed Neuroplasticity

Learning Factors

Environmental – setting, social support

Behavioral – activities, repetition

Mental – motivation, engagement

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 present experience
- Prime NS for future beneficial experiences
- Heighten consolidation of past experiences

Engagement factors have additional benefits:

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

HEAL: Turning States into Traits

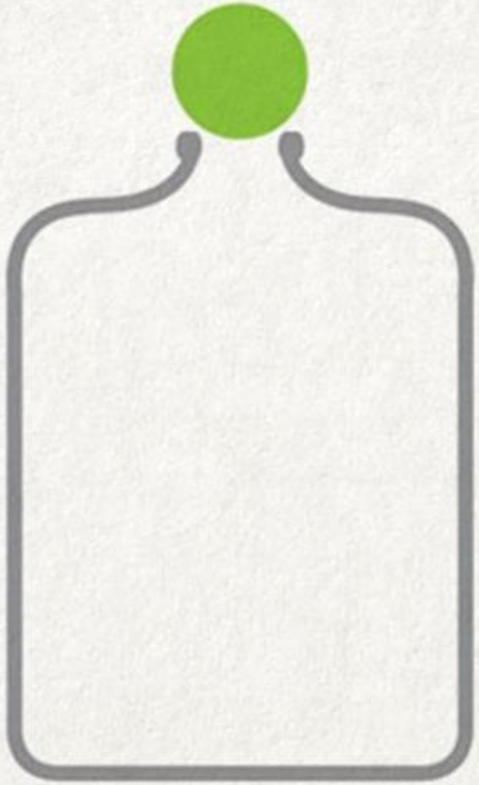
Activation

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

The Two Ways To Have a Beneficial Experience

1. Notice one you are already having.
   - In the foreground of awareness
   - In the background
2. Create one.

Two Aspects of Installation

Enriching

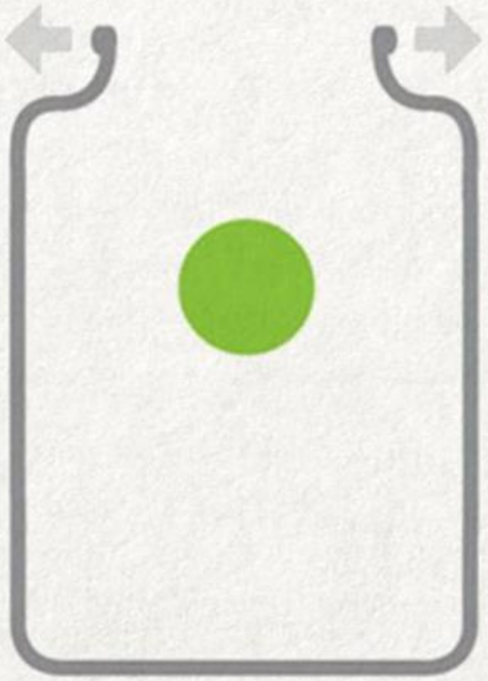
Mind – big, rich, protected experience

Brain – intensifying and maintaining neural activity

Absorbing

Mind – intending and sensing that the experience is received into oneself, with related rewards

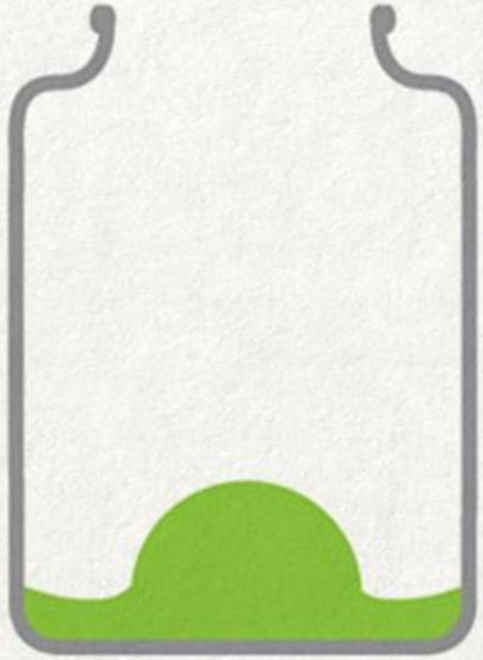
Brain – priming, sensitizing, and promoting more effective encoding and consolidation



Enrich It

Enriching an Experience

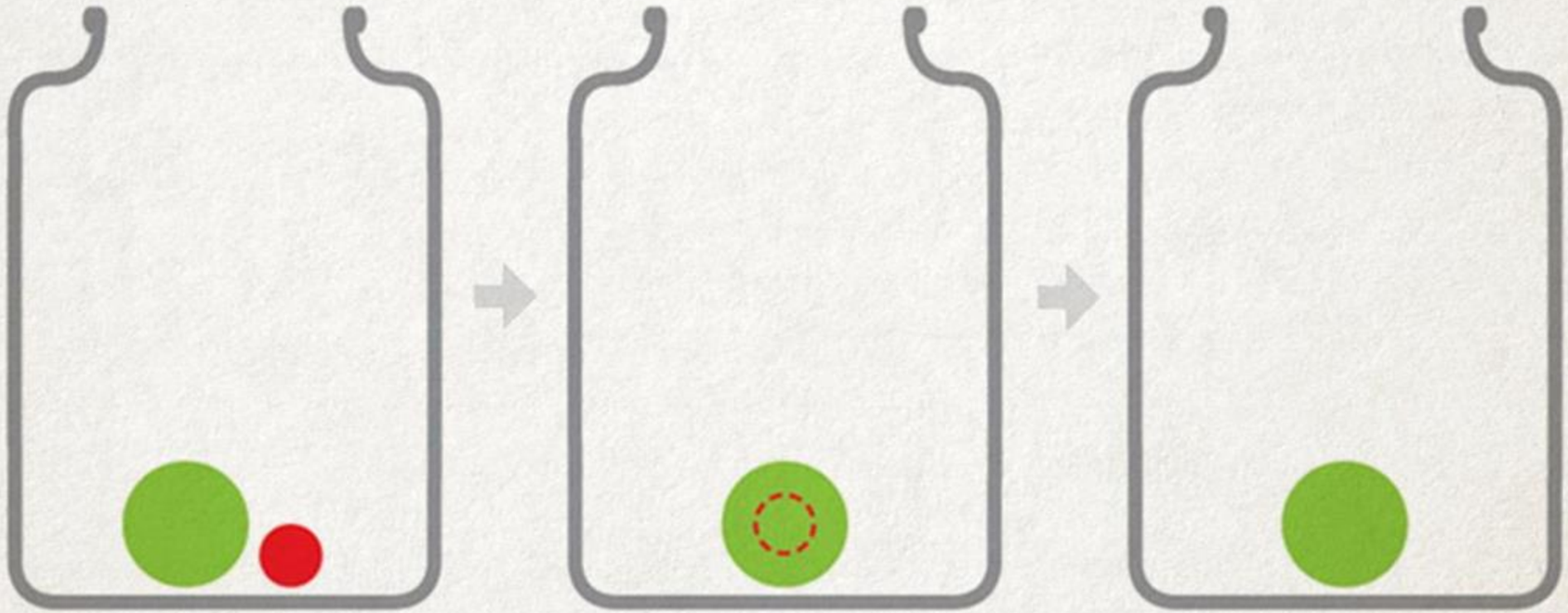
- **Duration** – 5+ seconds; protecting it; keeping it going
- **Intensity** – opening to it in the mind; helping it get big
- **Multimodality** – engaging multiple aspects of experience, especially perception and emotion
- **Novelty** – seeing what is fresh; “don’t know mind”
- **Salience** – seeing why this is personally relevant



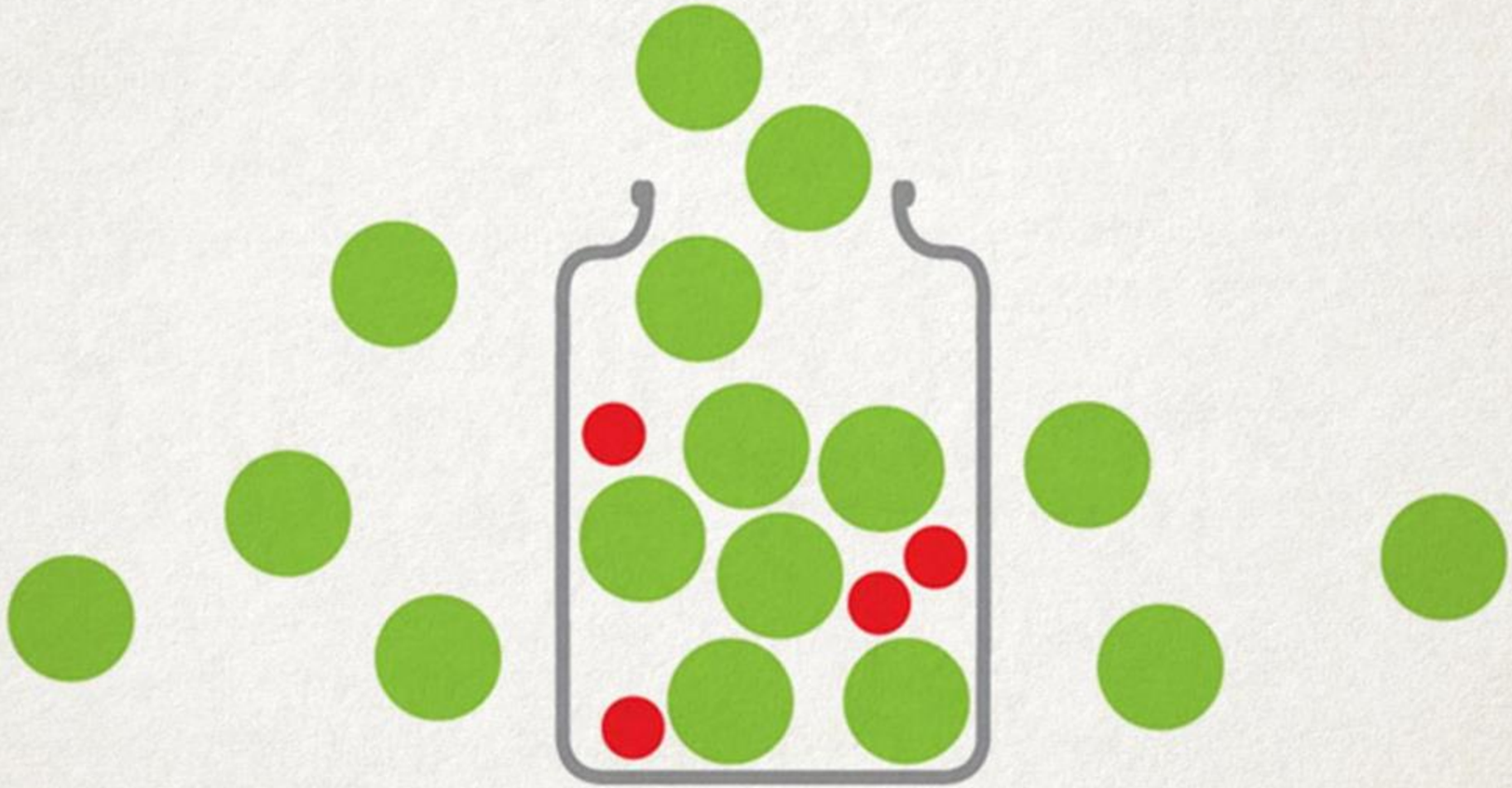
Absorb It

Absorbing an Experience

- Intend to receive the experience into yourself.
- Sense the experience sinking into you.
  - Imagery – Water into a sponge; golden dust sifting down; a jewel into the treasure chest of the heart
  - Sensation – Warm soothing balm
  - Give over to it; let it change you.
- Be aware of ways the experience is rewarding.



Link 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:

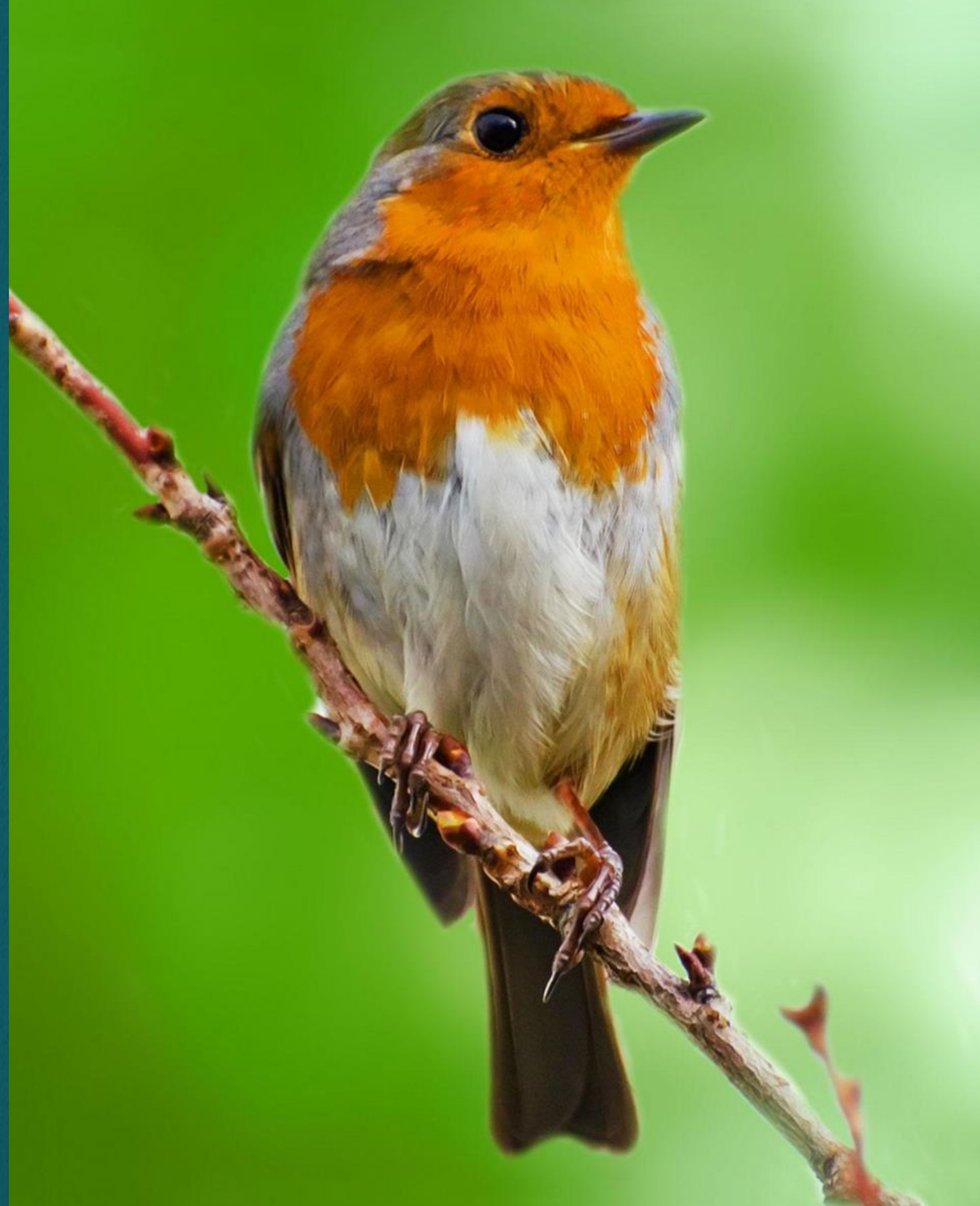
- Training attention and executive functions
- Treating oneself kindly, that one matters

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.

Chinese Proverb



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.**

During Psychotherapy

Implicit HEAL in Therapy

Being watchful for beneficial experiences occurring “organically”

Drawing attention to beneficial facts

Encouraging beneficial experiences of beneficial facts

Drawing attention to key aspects of an experience

Slowing the client down; not moving on

Returning to the beneficial experience as appropriate

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

Growing Key Strengths

What – if it were more present in the mind of a person – would really help?

How could a person have and install more experiences of these mental resources?

Matching Resources to Needs

Safety

See actual threats
See resources
Grit, fortitude
Feel protected
Alright right now
Relaxation
Calm

Satisfaction

Gratitude
Gladness
Feel successful
Healthy pleasures
Impulse control
Aspiration
Enthusiasm

Connection

Empathy
Compassion
Kindness
Wide circle of “us”
Assertiveness
Self-worth
Confidence

Peace

Contentment

Love

Questions for Identifying Resources

What would have made all the difference in the world – in your childhood, first job, last relationship, etc.? (Focus on the **experience** of state or trait that would have resulted from better relationships, settings, events.)

What does your heart still long for?

What's happening inside you when you are in a really good place?

What's happening in the mind of someone you know who handles your issue well?

What’s the client’s “vitamin C?”

Added to specific inner resources,
we can develop an underlying sense
of needs sufficiently met already -

an unshakable core
of resilient well-being.

Pet the Lizard

Feed the Mouse

Hug the Monkey

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.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See RickHanson.net for other good books.

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

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Supplemental Materials

In the Garden of the Mind

1

Be with what is there

2

Decrease the negative

3

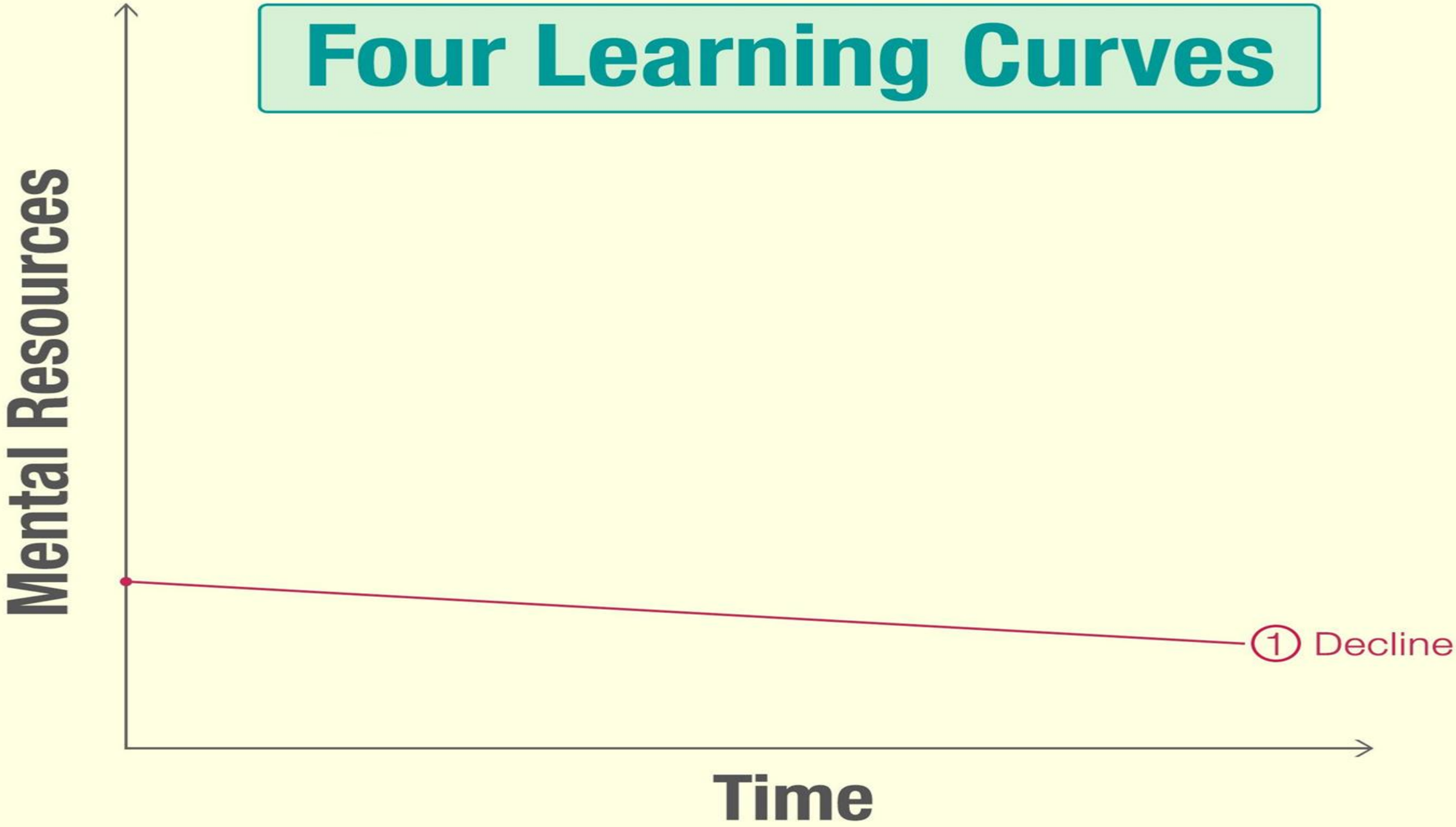
Increase the positive

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."

Four Learning Curves



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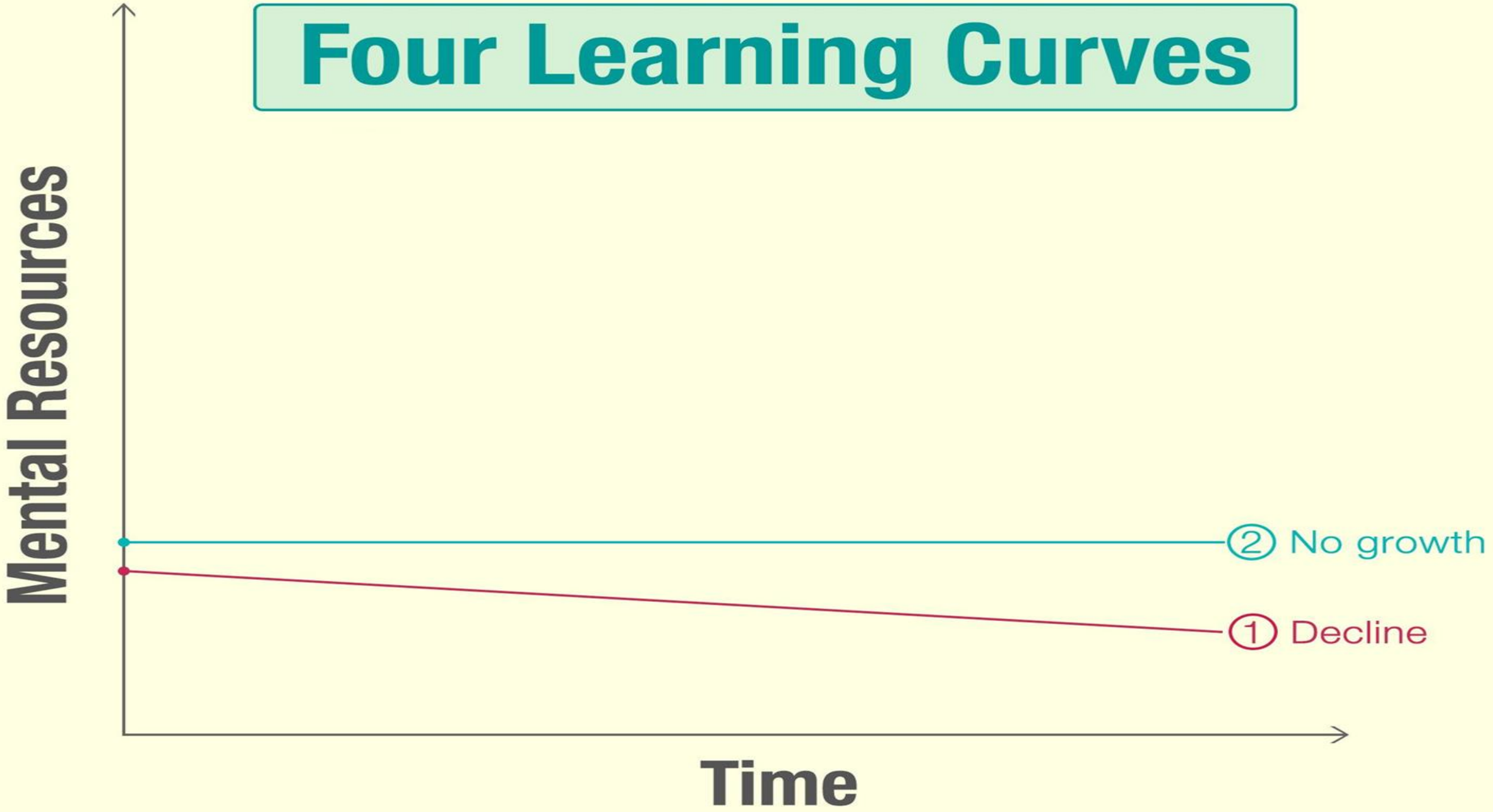

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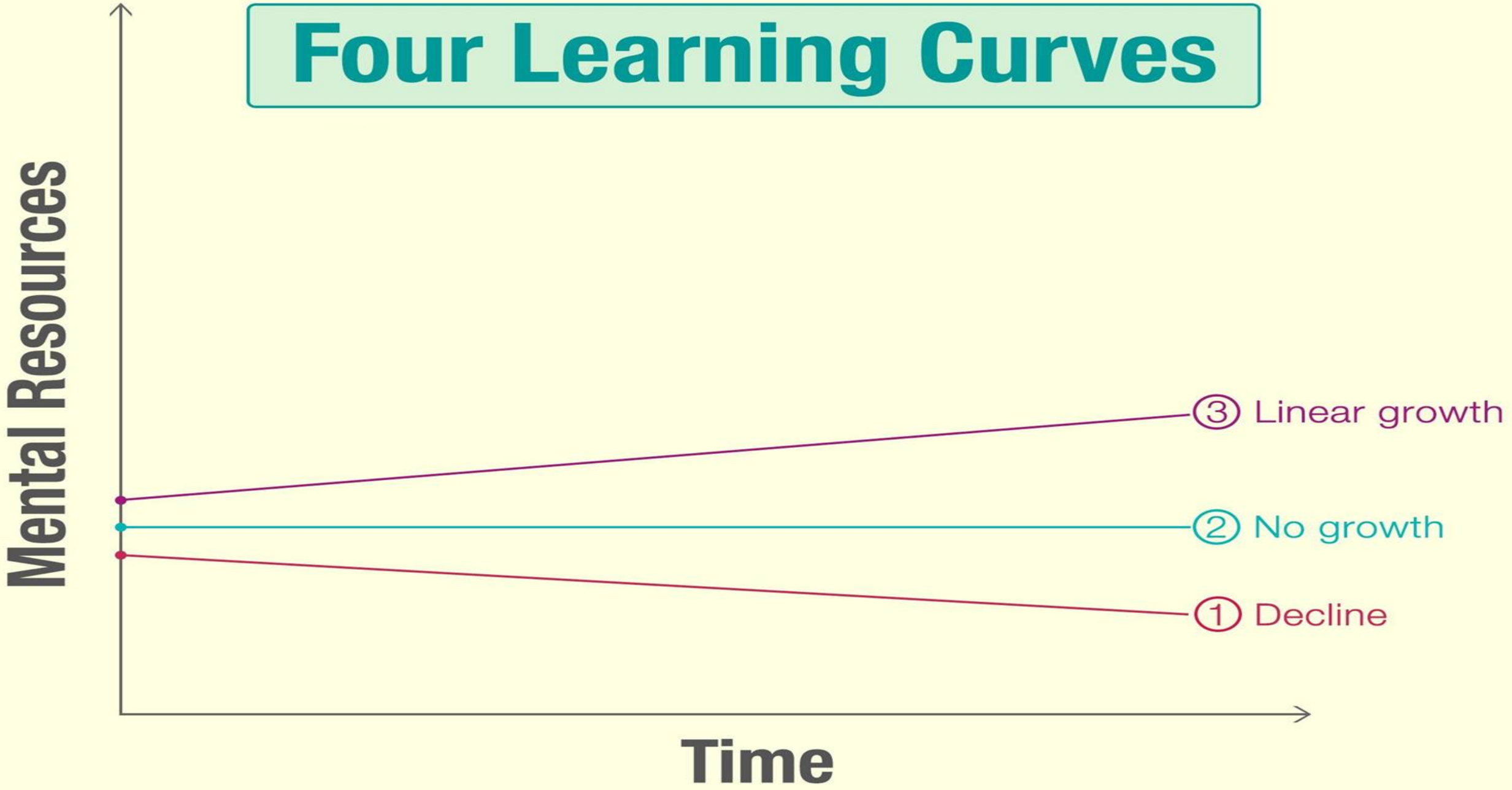

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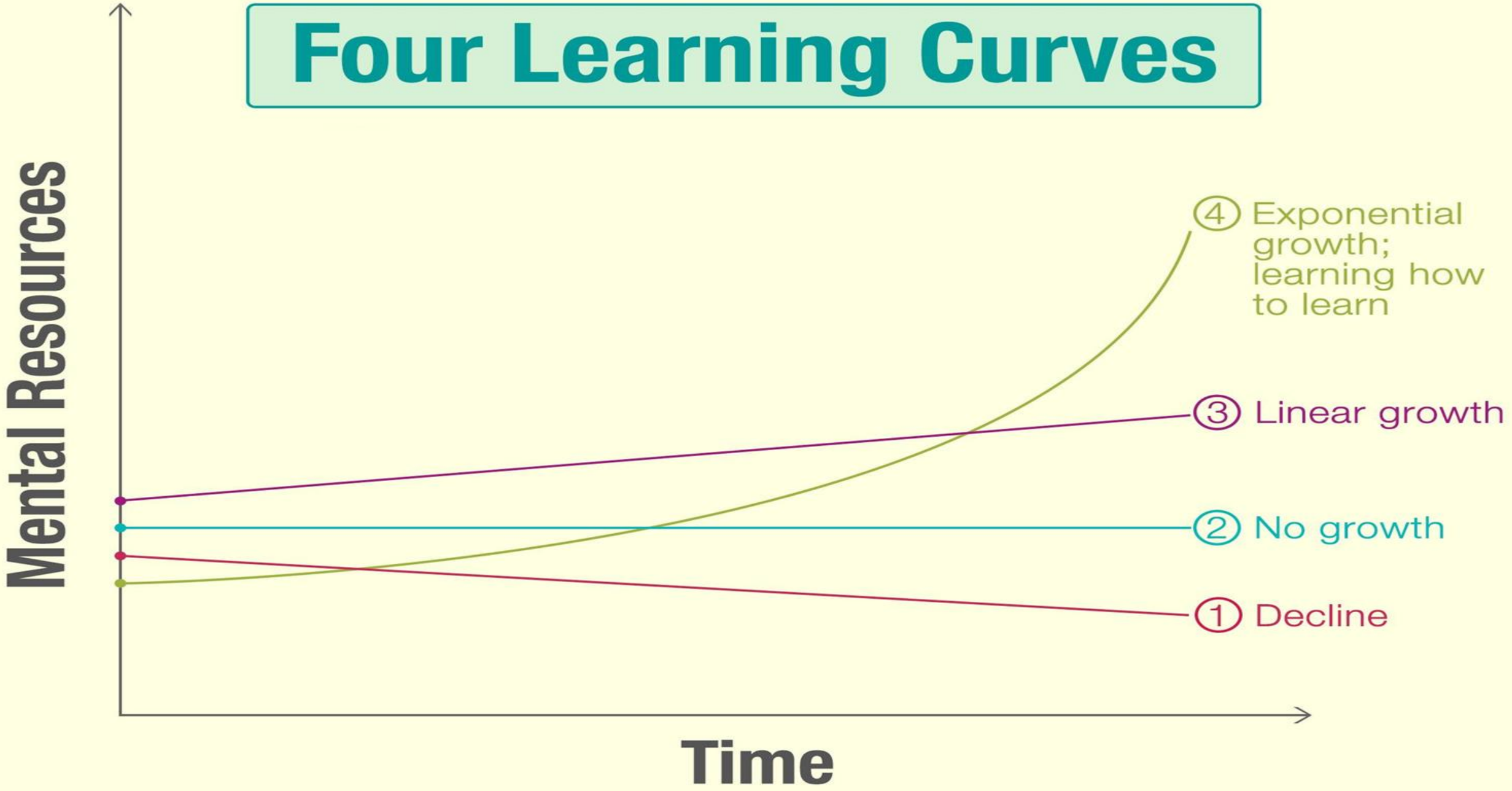

Using HEAL with a Couple

- 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