Indeed, the sage who’s fully quenched
Rests at ease in every way;
No sense desire adheres to him or her
Whose fires have cooled, deprived of fuel.

All attachments have been severed,
The heart’s been led away from pain;
Tranquil, he or she rests with utmost ease.
The mind has found its way to peace.

The Buddha
Equanimity:

In the Dharma and in Your Brain

Spirit Rock Meditation Center
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Topics

- Perspectives
- Self-Directed Neuroplasticity
- The Negativity Bias
- Neurobhavana
- Self-Compassion
- The Power of Mindfulness
- Stop Throwing Darts
- Liking and Wanting
- The Avoiding System
- The Approaching System
- The Attaching System
- Eddies in the Stream
- The Fruit and the Path
Perspectives
What Is Equanimity?

- **Balance** - not reacting to the fleeting stream of experience
- **Steadiness** - sustained through all circumstances
- **Presence** - engaged with the world but not troubled by it; guided by values and virtues, not reactive patterns

The ancient circuitry of the brain continually triggers reactions. Equanimity is the circuit breaker that prevents the craving (broadly defined) that leads to suffering.

Equanimity is thus at the center of Buddhist practice.
Penetrative insight

joined with calm abiding

utterly eradicates

afflicted states.

Shantideva
Common - and Fertile - Ground

Neuroscience  Psychology

Buddhism
Self-Directed Neuroplasticity
The Natural Mind

Apart from the hypothetical influence of a transcendental X factor . . .

Awareness and unconsciousness, mindfulness and delusion, and happiness and suffering must be *natural* processes.

Mind is grounded in life.
We ask, “What is a thought?”

We don’t know,

yet we are thinking continually.

Venerable Tenzin Palmo
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.
The Opportunity

We can use the mind

To change the brain

To change the mind for the better

To benefit ourselves and other beings.
Working with Causes and Effects

Mental and physical phenomena arise, persist, and pass away due to causes.

Causes in the brain are shaped by the mental/neural states that are activated and then installed within it. States become traits.

The neural traits of inner “poisons” (e.g., hatred, greed, heartache, delusion) cause suffering and harm.

The neural traits of inner strengths (e.g., virtue, mindfulness, wisdom, resilience, compassion, etc.) cause happiness and benefit for oneself and others.
The Causes of Inner Strengths

How do we build the neural traits of inner strengths?

Inner strengths are mainly built from positive experiences.

You develop mindfulness by repeatedly being mindful; you develop compassion by repeatedly feeling compassionate; etc.

The brain is like a VCR or DVR, not an iPod: you must play the song to record it - you must experience the strength to install it in your brain.
A Bottleneck

For Growing Inner Strengths

The problem is that, for survival reasons, the brain is poor at turning positive states into neural traits.

It is bad at learning from good experiences compared to how good it is at learning from bad experiences.

This design feature of the brain creates a kind of bottleneck that reduces the conversion of positive mental states to positive neural traits.
The Negativity Bias
Evolutionary History

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

- **Avoid Harms:**
  - Primary need, tends to trump all others

- **Approach Rewards:**
  - Elaborated via sub-cortex in mammals for emotional valence, sustained pursuit

- **Attach to Others:**
  - Very elaborated via cortex in humans for pair bonding, language, empathy, cooperative planning, compassion, altruism, etc.
The Homeostatic Home Base

*When not disturbed by threat, loss, or rejection [no deficit 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.
Neurobiological Basis of Craving

*When disturbed by threat, loss, or rejection [deficit 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:
- **Hatred** (the Avoiding system)
- **Greed** (the Approaching system)
- **Heartache** (the Attaching system)

This is the brain in allostatic, Reactive, craving mode.
Choices . . .

Or?

Reactive Mode

Responsive Mode
The Negativity Bias

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

- 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
Considering the Costs and Benefits

- As we evolved, the short-term benefits of the negativity bias outweighed its long-term costs.

- But now - when we want to live long and well, and when we are exposed to chronic mild to moderate Reactive stressors with little time for Responsive recovery - this design feature is a kind of “bug” for human brains in the 21st century.

- This is also a key weakness of therapy, human potential trainings, and character education: many hard-won positive states are wasted on the brain.
Stone age brains in the 21st century
Neurobhavana
Two wolves in the heart
Cultivation in Context

- Three 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 primary, it’s often isolated and privileged in mindfulness-based practices.

- Skillful means for decreasing the negative and increasing the positive have developed over 2500 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)
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.
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
It’s Good to Take in the Good

- Development of specific inner strengths
  - “Antidote experiences” - “By love they will quench the fires of hate” (the Buddha)

- Implicit benefits:
  - Being active rather than passive
  - Treating yourself like you matter
  - Training of attention and executive functions

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

Lao Tsu
Self-Compassion
The root of Buddhism is compassion,

and the root of compassion is compassion for oneself.

Pema Chodren
Self-Compassion

- Compassion is the wish that someone not suffer, combined with feelings of sympathetic concern. Self-compassion simply applies that to oneself. It is not self-pity, complaining, or wallowing in pain.

- Self-compassion is a major area of research, with studies showing that it buffers stress and increases resilience and self-worth.

- But self-compassion is hard for many people, due to feelings of unworthiness, self-criticism, or “internalized oppression.” To encourage the neural substrates of self-compassion:
  - Get the sense of being cared about by someone else.
  - Bring to mind someone you naturally feel compassion for
  - Sink into the experience of compassion in your body

- Then shift the focus of compassion to yourself, perhaps with phrases like: “May I not suffer. May the pain of this moment pass.”
“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
Cultivation Undoes Craving

- All life has goals. The brain continually seeks to avoid harms, approach rewards, and attach to others - even that of a Buddha.

- It is wholesome to wish for the happiness, welfare, and awakening of all beings - including the one with your nametag.

- We rest the mind upon positive states so that the brain may gradually take their shape. This disentangles us from craving as we increasingly rest 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.
The Power of Mindfulness
The Power of Attention

- **Attention** is like a spotlight, lighting what it rests upon.

- Because neuroplasticity is heightened for what’s in the field of focused awareness, attention is also like a vacuum cleaner, pulling its contents into the brain.

- Directing attention skillfully is therefore a fundamental way to shape the brain - and one’s life over time.

- One of the many benefits of mindfulness training is the development of skillful attention.
The education of attention would be the education *par excellence*.

William James
Basics of Meditation

- Relax; find a posture that is comfortable and alert
- Simple good will toward yourself
- Awareness of your body
- Focus on something to steady your attention
- Accepting whatever passes through awareness, not resisting it or chasing it
- Gently settling into peaceful well-being
Whose mind is like rock, steady, unmoved, dispassionate for things that spark passion, unangered by things that spark anger:

When one’s mind is developed like this, from where can there come suffering & stress?

The Buddha, Udāna 4.34
Stop Throwing Darts
The First and Second Dart

- The Buddha called unavoidable discomfort the “first dart.”

- Then we add our reactions to it, e.g., fear of pain, anger at hurt.

- Sometimes we react with suffering when there is no first dart at all, simply a condition there’s no need to get upset about.

- And sometimes we react with suffering to positive events, such as a compliment or an opportunity.

- The Buddha called these reactions “second darts” - the ones we throw ourselves.
Adaptive and maladaptive responses to challenges


How stress changes the brain
Liking and Wanting
Liking and Wanting

- Distinct neural systems for liking and wanting

- In the brain: feeling/hedonic tone --> enjoying (liking) --> wanting --> pursuing
  - Wanting without liking is hell.
  - Liking without wanting is heaven.

- The distinction between *chandha* (wholesome wishes and aspirations) and *tanha* (craving)

- But beware: the brain usually wants (craves) and pursues (clings to) what it likes.
It occurred to me: that whatever pleasure and joy there is in the world, this is the **gratification** in the world; that the world is impermanent, bound up with suffering, and subject to change, and this is the **danger** in the world; and that the removal and abandonment of desire and lust for the world is the **escape** from the world . . .

So long as I did not directly know, as they really are, the gratification in the world as gratification, its danger as danger, and the escape from the world as escape, for so long I did not claim to have awakened to the unsurpassed perfect enlightenment.

The Buddha, Anguttara Nikaya, 3:101

*With sensual pleasures as the cause, people indulge in misconduct of body, speech, and mind: a danger in the case of sensual pleasures, a mass of suffering visible in this present life . . . And what is the escape? It is the removal of desire and lust, the abandonment of desire and lust for sensual pleasures.*

The Buddha, Majjhima Nikaya, 13
Practicing with Wanting

- Help chandha replace tanha; flowers crowd out weeds.

- Surround pleasant or unpleasant feeling tones with spacious awareness - the “shock absorber” - without tipping into craving.

- Regard wants as just more mental content. Investigate them. Watch them come and go. No compulsion, no “must.”

- Be skeptical of predicted rewards - simplistic and inflated, from primitive subcortical regions. Explore healthy disenchantment.

- Pick a key want and just don’t do it.
I make myself rich by making my wants few.

Henry David Thoreau
If you let go a little, you will have a little happiness.

If you let go a lot, you will have a lot of happiness.

If you let go completely, you will be completely happy.

Ajahn Chah
In the deepest forms of insight, we see that things change so quickly that we can’t hold onto anything, and eventually the mind lets go of clinging.

Letting go brings equanimity. The greater the letting go, the deeper the equanimity. In Buddhist practice, we work to expand the range of life experiences in which we are free.

U Pandita
The Avoiding System
Cooling the Fires

- Regard stressful activation as an affliction.

- Lots of methods for stimulating the parasympathetic nervous system to down-regulate the SNS:
  - Big exhalation
  - Relaxing the body
  - Yawning
  - Fiddling the lips

- Get in the habit of rapidly activating a damping cascade when the body activates.

- Regard bodily activation as just another compounded, “meaningless,” and impermanent phenomenon; don’t react to it.
Not Harming

- The fundamental tenet of morality in Buddhism and other traditions
- Applies to oneself as well as others
- Precepts; Right Speech, Action, Livelihood
- The emphasis on abandoning ill will
- The distinction between moral action in the world and succumbing to anger and ill will
- The reframing of not-doing in active, doing terms
Feeling Alright Right Now

- Tuning into bodily signals that you’re OK
- Recognizing protections
- Not afraid of paper tigers
- Feeling strong
The Approaching System
Feeling Already Full

- Sensing enoughness for the body
- Feeling buoyed and nurtured by the natural world
- Awareness of phenomena filling the mind
- Feeling filled by each moment’s arisings even as they pass away.
Good Facts for Gladness and Gratitude

- The small pleasures of ordinary life
- The satisfaction of attaining goals or recognizing accomplishments - especially small, everyday ones
- Feeling grateful, contented, and fulfilled
- Recognizing your positive character traits
- Spiritual or existential realizations
The Attaching System
Feeling Cared About

As we evolved, we increasingly turned to and relied on others to feel safer and less threatened.
- Exile from the band was a death sentence in the Serengeti.
- Attachment: relying on the secure base
- The well-documented power of social support to buffer stress and aid recovery from painful experiences

Methods:
- Recognize it’s kind to others to feel cared about yourself.
- Look for occasions to feel cared about and take them in.
- Deliberately bring to mind the experience of being cared about in challenging situations.
Understanding Inter-Being

- Nothing arises on its own; everything is connected to everything else.

- The world emerges from stardust.

- The body emerges from the world (sunlight lifts the cup) and from nature, joined with all life.

- The mind emerges in the body, culture, and family.
The Buddha’s Words on Lovingkindness

Wishing: In gladness and in safety, may all beings be at ease.

Omitting none, whether they are weak or strong, the great or the mighty, medium, short, or small, the seen and the unseen, those living near and far away, those born and to-be-born: May all beings be at ease.

Let none through anger or ill-will wish harm upon another. Even as a mother protects with her life her child, her only child, so with a boundless heart should one cherish all living beings; radiating kindness over the entire world: spreading upwards to the skies, and downwards to the depths, outwards and unbounded, freed from hatred and ill-will.

One should sustain this recollection.

This is said to be the sublime abiding.
A Serenity Prayer

May I find the serenity to accept the things that cannot be changed, the courage to change the things which should be changed, and the wisdom to distinguish the one from the other.

Living one day at a time,
Enjoying one moment at a time,
Accepting hardship as a pathway to peace,
Taking this imperfect world as it is,
Not as I would have it,
Trusting in my refuges,
May I be reasonably happy in this life,
And supremely happy forever some day.

Adapted from the Serenity Prayer, by Reinhold Niebuhr (1892-1971)
Eddies in the stream
Blissful is passionlessness in the world,  
The overcoming of sensual desires;  
But the abolition of the conceit I am --  
That is truly the supreme bliss.

The Buddha, Udāna 2.11
To study the Way is to study the self.

To study the self is to forget the self.

To forget the self is
To be enlightened by all things.

Dogen
For one who clings motion exists, but for one who does not cling there is no motion.

Where no motion is, there is stillness.
Where stillness is, there is no craving.
Where no craving is, there is neither coming nor going.
Where no coming or going is there is neither arising nor passing away.
Where neither arising nor passing away is, there is neither this world, nor a world beyond nor a state between.
This verily, is the end of suffering.

The Buddha, Udana 8:3
“Bahiya, you should train yourself thus.”

In reference to the seen, there will be only the seen. To the heard, only the heard. To the sensed, only the sensed. To the cognized, only the cognized.

When for you there will be only the seen in reference to the seen, only the heard in the heard, only the sensed in the sensed, only the cognized in the cognized, then, Bahiya, there’s no you in that.

When there’s no you in that, there’s no you there. When there’s no you there, you are neither here nor yonder nor between the two.

This, just this, is the end of all suffering.
The Fruit and the Path
“Taking the Fruit as the Path”

Peace

Happiness

Love
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
Great Books

See www.RickHanson.net for other great books.

Key Papers - 1

See www.RickHanson.net for other scientific papers.


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


Key Papers - 4


