

The Wise Brain Bulletin

News and Tools for Happiness, Love, Effectiveness, and Wisdom

Featured Article:

Smile like the Buddha

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Introduction

How would it feel to stand and face the Buddha, as he smiles compassionately at you? Would you feel warm and loved? Would you feel his wisdom and compassion? Would it influence your life for the better? What if you yourself could smile like the Buddha, as a happy, trustworthy, compassionate person, inspiring those emotions in others as well?

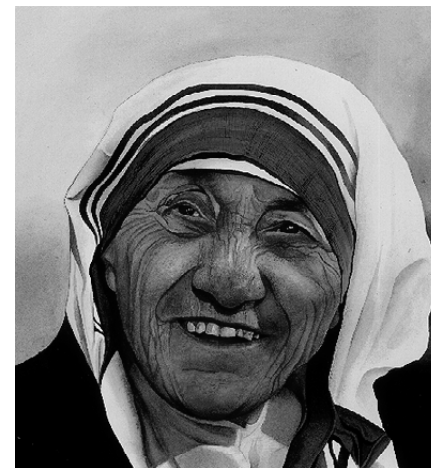


Feelings Follow Actions

Decades of research in psychology and neurology have shown that when we learn to smile like a Buddha, that helps us feel like a Buddha.

First, simply smiling activates many networks of related

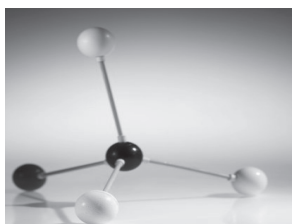
thoughts and feelings and memories, most of which have positive associations. Second, emulating an admired figure – as in smiling like the Buddha or anyone else you respect – calls up our associations to that figure, which also have positive qualities.



•Third, over the last 10 years, it's been found that we have brain circuits called mirror neurons that simulate in ourselves the actions of others. That leads us to experience directly and non-verbally what another person is doing, which then can help us experience what that person is feeling. It is believed that mirror neurons are evolutionary devices to help primates learn non-verbally, without going through complex

Also in this issue:

Your Biochemical
Foundation
pg. 5



Offerings
pg. 6



Greetings

The Bulletin offers skillful means from brain science and contemplative practice – helping you to work with your brain for the benefit of yourself and others.

The Bulletin is offered freely, and you are welcome to share it with others. Past issues are archived at www.WiseBrain.org.

Rick Hanson, PhD and Rick Mendius, MD edit the Bulletin. We welcome your contributions, and to subscribe, please contact Rick at drh@comcast.net.

descriptions of “how to crack a coconut” or “how to raid an ant hill.” In humans this talent has evolved further – in concert with the development of related linguistic, emotional, and social abilities, which have been the primary target of neurological evolution – to allow us to feel greater empathy and to make cooperation easier with other humans. These special neurons were discovered when Vittorio Gallese and colleagues noticed that certain neurons running

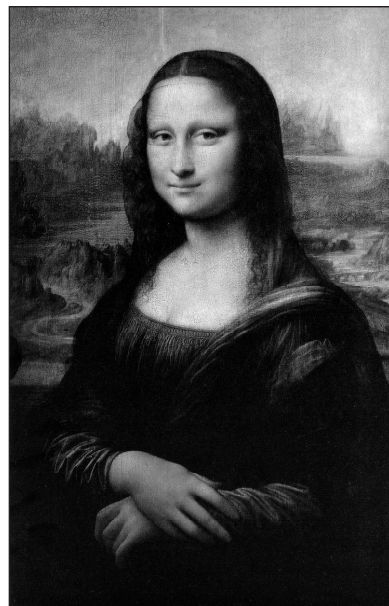
from the parietal lobes to the motor cortex area of monkeys responded strongly when the monkey reached for an apple. But they responded almost as strongly when the monkey watched the researcher reach for the apple. These networks have also been found in humans, and Gallese named them “mirror neurons” because they seemed to act like a virtual mirror of the actions of others, stimulating in the brain the same sensory-motor systems that are activating inside the person being observed. These findings have thrilled many researchers, because they point to a very specific

neural mechanism for how people learn about others directly and without words. More detailed readings on mirror neurons are in the box at the end of this article.

Nonverbal Communication

Scientists have calculated that more than half of all human communication is non-verbal, because the same words can take on very different meanings depending on the speaker’s expression, tone, and pose. Movie directors know that, too, so they do close-ups of a star’s face during highly emotional scenes to help you experience that person’s emotion directly. Unfortunately, many movies show faces steeped in horror or terror – emotions that you wouldn’t want to cultivate over a lifetime, though they may be fun for an hour when you know you aren’t in real danger.

But how do you cultivate positive, compassionate, and wise emotions over a lifetime? Asian Buddhists seem to take advantage of multiple psychological and neurological



Train Your Brain

This course teaches practical, down-to-earth ways to activate the brain states that promote: Steady Awareness, Whole-some Feelings, Good Intentions, Caring Heart, and Wise Action. It is taught in a 24-month cycle which you can enter at any time. Talks and materials from past class sessions are archived at www.WiseBrain.org.

The class meets on the 2nd Tuesday of every month, 7 – 9:15 pm, at the Unitarian Universalist church in Terra Linda (San Rafael), at 240 Channing Way. The atmosphere is warm, informal, and focused. The fee for each month of the program is \$40 (please contact Rick Hanson if you would like a scholarship; no one will be turned away for lack of funds). To register, contact Guisela Luster at drh@comcast.net or simply arrive fifteen minutes early.

Upcoming dates and topics:

- 6/12/07 – Concentration: The neurology of stable attention; challenges from the modern hectic world; how to steady the mind, even to the point of blissful absorption
- 7/10/07 – Mindful Presence: Accepting change and being with what is; mindfulness in daily life; the neurology of Buddhism’s Four Foundations of Mindfulness
- 8/14/07 – Positive Emotions and Taking in the Good: The benefits of feeling good; happiness as skillful means; how to make positive experiences a permanent part of yourself
- 9/11/07 – Letting Go: Releasing is profoundly important, both psychologically and spiritually; this class will cover both conventional and contemplative methods for letting go of challenging feelings, thoughts, and desires.

Words of Wisdom

It is not the critic who counts; not the man who points out how the strong man stumbles, or where the doer of deeds could have done them better. The credit belongs to the man who is actually in the arena, whose face is marred by dust and sweat and blood, who strives valiantly; who errs and comes short again and again; because there is not effort without error and shortcomings; but who does actually strive to do the deed; who knows the great enthusiasm, the great devotion, who spends himself in a worthy cause, who at the best knows in the end the triumph of high achievement and who at the worst, if he fails, at least he fails while daring greatly. So that his place shall never be with those cold and timid souls who know neither victory nor defeat.

Teddy Roosevelt:

Everyone can be great, since everyone can serve.

Martin Luther King, Jr.

One of the most important things you want to be able to say in this world is a very simple thing: "I was alive when I died."

Andrew Sullivan

Time held me green and dying
Though I sang in my chains like the sea.

Dylan Thomas, Fern Hill

systems to do this, including their mirror neurons, when they "gaze at the Buddha's image" in statues and paintings during meditation. The mirror neurons (along with other circuits that make emotional and cognitive associations) can help the meditator adopt the posture and expression of the Buddha, all without any words. And the mirror neurons stimulate some of the same neurons as if we ourselves are smiling his smile. Christian contemplatives have also used this technique as they gaze at Christ's image to

gather his qualities.

This article describes two exercises to use your mirror neurons, and related neuropsych systems, to increase your own positive emotions of compassion, confidence, and tranquility. These exercises are done in silence to help develop your non-verbal abilities, but in everyday communication it is optimal to use both verbal and non-verbal channels: our brain is a marvelous parallel processor, and you can convey and extract the deepest and most thorough meanings by using both channels. In contrast, Western thought has downplayed non-verbal

communication since the invention of the printing press, which made words cheaper to communicate than images (though the new visual media are beginning to change that.)

Exercise 1: Gazing at Your Heroes

The first exercise is to find a picture (or video) of a hero and take a few minutes to just gaze at him or her. You don't need to think or plan anything, just keep gently bringing your attention back to your hero's image. Not "thinking" on the verbal level "clears the decks" so your non-verbal circuits can operate without interference.

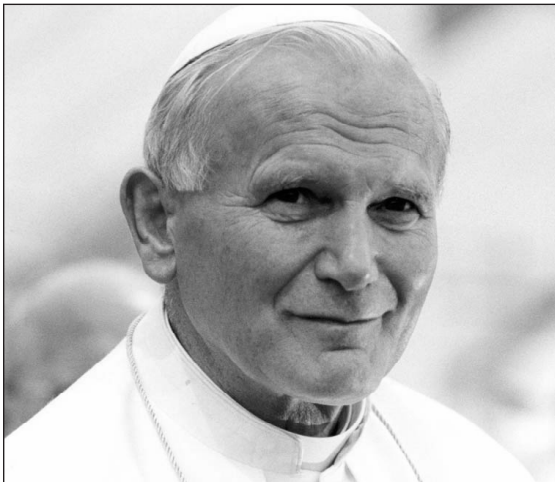


This article contains the images of four famous, heroic individuals. Take a minute to gaze at your favorite. The first is the Compassionate Buddha (as artists imagine him): handsome and in the prime of life, with a subtle smile. The second is Mother Theresa. In contrast to the usual image of the Buddha, she had skin like an old saddle and teeth like crooked fence posts, but she too brought courage and love to thousands, and inspired many to do likewise. She proves that you don't need a "Hollywood face" to have an inspiring smile. Martin Luther King led non-violent resistance in the face of violent injustice and inspired millions to do likewise. And Pope John Paul II touched millions with his love for ordinary people, forgave his assassin in 1982, and mended relations with Jews, Muslims, and Christians.

So pick your favorite hero from this group, or even better, find a photo or video of your own hero, and keep it near you. Spend a minute every day gazing at your hero. You may find

Perspectives on Self-Care

Be careful with all self-help methods (including those presented in this Bulletin), which are no substitute for working with a licensed healthcare practitioner. People vary, and what works for someone else may not be a good fit for you. When you try something, start slowly and carefully, and stop immediately if it feels bad or makes things worse.



that your face takes on some of their character as you gaze. (In fact researchers find that your face muscles do indeed change to take the expression of the face you gaze at.) But don't

consciously force your face to change. It happens deeper, at a non-verbal level. And you may notice that you feel some of the positive emotions that are showing in your hero's face, too.

Exercise 2: Gazing at the Light in Your Own Eyes

There is a paradox in great smiles: they come from the eyes more than the lips. A smile can be faked by simply moving the lips upward, but it is much harder to fake the many subtle movements in the eye. Note that the photos shown of both the Buddha and the Mona Lisa show very little smile from the lips, but instead the smile shines from their eyes. Poets always claim that "the eyes are windows of the soul," and now neurologists are agreeing that the eyes, more than any other organ, are inextricably linked to the deep brain. For example, Frank Werblin and Botond Roska of UC Berkeley wrote in 2007 in *Scientific American*: "The [eye's] retina is a tiny crescent of brain matter that has been brought out to the periphery to gain more direct access to the world."

The next exercise teaches how to use your own eyes to show honesty, compassion, and empathy.

1. Pick a location where you can sit quietly in front of a mirror attached to the wall, so that you can see your whole face. (Don't use a hand mirror because your arm will tire and wobble your image.) Sit close to the mirror – one foot away is ideal.
2. Sit quietly and meet your eyes squarely, with no tilting of your face up or down.
3. The first impulse for most people is to dart their eyes around their face, checking their hair, looking for skin imperfections, making plans to add makeup, change their hair, etc. If you find yourself doing that, just bring your eyes gently back and look into your own eyes with a soft

focus, eyes relaxed. You don't need to impress yourself. You are just here to look quietly and compassionately at you. The Buddha said "No one in the universe is more deserving than you," so take 5 minutes and give yourself appreciation and compassion directly from your eyes.

4. Your eyes may go in and out of focus, blink, and move around to look at other things. All this is OK, but when you notice you are doing it, gently bring yourself back to look squarely and softly into your own eyes. Your eyes and your face have been with you longer than any friend has. Your eyes have quietly done their work for you, despite poor vision, tired eyes, and difficult circumstances.

5. Look for the "light in your eyes." Every eye is a shimmering jewel that reflects light from every window and light source. When you look back at your own reflection, that light usually shows not on your pupil but on the iris (the colored part surrounding the dark center). Place your attention on the light in your eyes. This exercise makes it much easier to see the light in others' eyes.

6. Observe how non-verbal parts of your brain appreciate your own eyes looking back at you.

Did You Know?

Personal growth and social change are inextricably intertwined. As each of us sincerely develops skills and wisdom for our own benefit and that of all beings, we do so in relationship with a world characterized by facts like the ones just below, from the Harper's Index, June, 2007.

Percentage change since 2000 in the number of Americans living at less than half the federal poverty line: +32

Number of states in 1990 and 2005, respectively, where more than 14 percent of adults were clinically obese: 0, 50

Percentage of white-collar Americans who brought work with them on vacation in 1995: 23

Percentage last year: 43

Percentage change since 1900 in Americans' average amount of leisure time: 0

Number of recent computer models that a team of climate experts studied to assess Arctic warming: 15

Number of the models that showed the North Pole having ice-free summers by 2100: 7

7. Don't make conscious eye movements. Just be there, let your eyes do what they want, and give them your appreciation and compassion.

I do this exercise for five minutes before I begin my traditional eyes-closed meditation, and it has helped me to communicate with others non-verbally as well as verbally. Others I talk to seem touched more deeply because they feel my compassion and honesty through non-verbal as well as verbal brain circuits. I taught this exercise to my sister, and within four practices she noticed results: "It's incredible the response from people – they immediately open up and feel comfortable and understood. At first, it was scary – I was afraid of releasing my own demons – but with practice, it has become more and more nourishing."

Everyone agrees that the words of our spiritual heroes are important, but their words were reinforced by a non-verbal charisma that touches other parts of our brain. In our consumer culture, non-verbal charisma has been more the province of actors and advertisers than of real heroes. It's

time that intelligent and kind people use these skills, too, for the sake of their own happiness as well as others. Smile like the Buddha!

More Information

For more information about the neurology and psychology behind this article, you can read:

"Mirrors in the Mind." Scientific American, (Nov. 2006) p. 54-61. by Giacomo Rizzolatti, Leonardo Fogassi and Vittorio Gallese.

"Why are Smiles Contagious? An fMRI study of the interaction between perception of facial affect and facial movements." Psychiatry Research: Neuroimaging, Vol. 123 (2003) p.17-36. by Barbara Wild, Michael Erb, Mathias Bartels, and Wolfgang Grodd.

"Voluntary Facial Action Generates Emotion-Specific Autonomic Nervous System Activity." Psychophysiology, Vol. 27 No. 4 p.363-384. by Robert Levenson, Paul Ekman, and Wallace Friesen.

Biochem Corner:

Your Biochemical Foundation

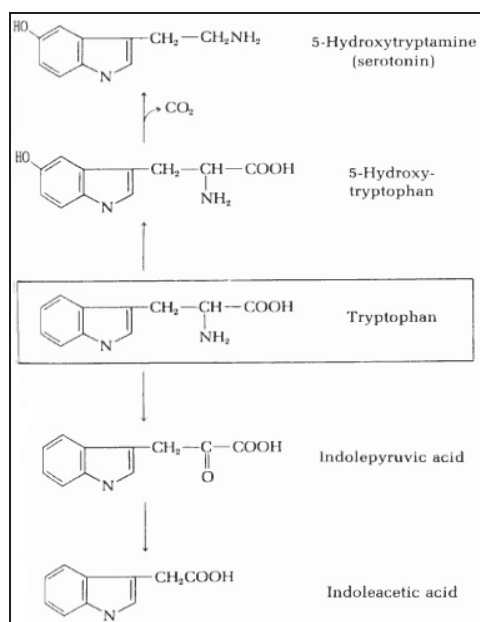
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To have the best possible foundation for psychological well-being and spiritual growth, we all need to nurture the physical substrate of our body. And that means good nutrition, since that is how you get the building blocks of that substrate into your body. There is simply no other way.

Nutrition Is Molecules

At the physical level, when we talk about nutrition, we are talking about molecules.

For example, take a look at the serotonin molecule in the center



of the page (at the top of the picture). I picked serotonin since it's in the Molecule Hall of Fame for its central role in your well-being and contemplative depth. But in order to have lots of these marvelous molecules rolling around in your brain – and in your digestive tract and other important sites in your body – you need to ingest lots of tryptophan and iron and vitamin B6 and other co-factors that help convert tryptophan to serotonin.

In other words, we need to eat the right molecules to have the

right molecules.

We also need to avoid foods that supply molecules that interfere with the body's effectiveness.

By the way, it's interesting that this is the biochemical equivalent of Right Effort in Buddhism – which of course shows up in other wisdom traditions: increase the causes of the wholesome and decrease the causes of the unwholesome.

So, to tend to those good causes for our own body, we need to think about the interactions among important molecules in our body. Making the right thing happen in

the body requires many, many things to be available and go right.

Here are some foundational suggestions, below, and in the next Wise Brain Bulletin (#8), I will go over targeted nutritional interventions for low mood, anxiety, focus and concentration, and memory.

Food Basics

1. Eat protein with every meal, especially breakfast.
2. Eat more vegetables.
3. Eat carbs that are not made of sugar or flour (e.g., sweets, bread, cereal, pasta). Carbs should come from vegetables, fruits, and whole grains (ideally, not turned into flour).

From our Contributors

It is when I am quiet
that I remember
how familiar you are;
like wood,
the entire edge of the forest.
You are oak and fir.

You stood tall in the North Wind
when they buried me at sea.
You saw eagle descend
and land behind me.

I hurry and I imagine
something you could do
RIGHT NOW
to make me feel more whole.

It is when I am quiet
that I remember
wholeness has many forms;
wood, water, eagle, death,
now this,
this humanness,
this longed-for reunion,
our enlightened discrepancies.

It is when I am quiet
that I remember
losing everything I love
and finding you.

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Grateful Wonder

Beauty.

So easy to turn into a cliché, or take for granted, or simply ignore. But at the end of the day – or life – our encounters with beauty will have opened our eyes and hearts, filled them with magnificence and awe, and always moved us to make our mind and our world a better place.

Wherever you find it – as in these links that move from the local to the celestial – true beauty embodies something mysteriously infinite.

#1 <http://www.eyeconart.net/history/impressionism.htm>

#2 <http://antwrp.gsfc.nasa.gov/apod/ap070514.html>

#3 <http://antwrp.gsfc.nasa.gov/apod/ap070513.html>

4. Stay away from food allergens. The foods that a person is most likely to have difficulty with are, in descending order of risk: dairy products, gluten grains (wheat, oats, rye, barley, spelt, kamut), soy, eggs, corn, citrus, and nightshade vegetables (potatoes, tomatoes, peppers, eggplant).

Supplement Basics (every day)

1. Take a basic multi-vitamin/multi-mineral supplement. For women who are having a cycle, these should probably include iron. A good vitamin will have levels of most B-vitamins that are many times the government "Recommended Daily Value" (DV), and minerals at the level of the DV.
2. Supplement omega-3 essential fatty acids in fish oil that has been "molecularly distilled" for purity (Nordic Naturals is excellent); take enough capsules to get about 500 mg each of two key ingredients, DHA and EPA, which will be listed on the label.
3. Take a B-vitamin complex, a B-50 or B-100.
4. Take at least one to two grams of vitamin C.
5. Take 1000 – 1500 mg of calcium and 400 – 600 mg of magnesium. (Some of this could be in your multi-vitamin.)

A Healthy Digestive Tract

Avoid food allergens, and supplement with beneficial bacteria – acidophilus and bifidus.

Offerings

Rick Hanson, PhD, and Rick Mendius, MD

1. On Friday, May 18, at the Kara/VA conference on “Good Grief: Vibrant Responses to Death and Loss,” Rick Hanson will present a session on “Grief Recovery: Implications of Neuroscience and Contemplative Wisdom.” This will be held at the SRI conference center in Menlo Park, CE credits are available, and for more information, go to www.kara-grief.org.

2. On Wednesday evening, June 13, Phillip Moffitt and Rick Hanson will speak on “Taking in the Good” at Spirit Rock Meditation Center, co-sponsored by the Institute for Spirituality and Psychotherapy. Making positive experiences, ideas, and people a part of yourself is central

to psychological and spiritual growth.

These resources inside help you cope, feel happy, heal from trauma, and cultivate bhavana, bodhichitta, and other spiritually wholesome qualities. Phillip and Rick will explore methods for taking in the good from Eastern religions and Western psychology – and how they can support each other. And

they’ll discuss ideas from the new neuroscience about ways to change your brain to liberate your mind. (CE credits are available.)

3. The two Ricks (los dos Ricardos) will be teaching two daylong workshops at Spirit Rock in 2007, and you can go to www.SpiritRock.org for information and to register:

- August 11 - The Neurodharma of Love: Using Brain Science and Buddhist Wisdom to Illuminate the Heart of Important Relationships – Through integrating

contemplative teachings about healthy relationships with current neurological research, we’ll offer practical tools for activating the brain states underlying wholesome mind states of empathy, compassion, and lovingkindness. Additionally, we’ll explore ways to preserve your equanimity in rough-and-tumble relationships, and to ride (gracefully) the roller-coaster of romance, sexual desire, and the long-term shift to a calmer love.

- November 10 – On One Wing and Two Prayers: Practicing with a Wounded Brain – This will be taught with James Baraz, a founding teacher of Spirit Rock and the source of the fantastic Awakening Joy course. It is for people interested in well-being and contemplative depth who are also grappling with depression, significant anxiety (or trauma), ADD/ADHD, head injury, or dementia – and for caregivers who work with them.

4. On September 8, we will do a small “dress rehearsal” of what will become an annual, inter-faith conference – working title: “This Is Your Brain on God” – applying neuropsychology to the similarities and differences in contemplative practice in Buddhism, Christianity, Judaism, Islam, Hinduism, and shamanism. We’ll use the dress rehearsal (and maybe another one) to plan the first official conference, scheduled for the Fall, 2008, in partnership with major institutions. The principal organizer of the conference is Dr. Andrew Dreitcer, a professor at the Claremont School of Theology and the Graduate University.

5. On October 6, with Christina Feldman – a senior Vipassana teacher and a wonderful person – we’ll present

The Heartwood Institute For Neuroscience and Contemplative Wisdom

The Institute is a 501c3 non-profit corporation, and it publishes the Wise Brain Bulletin. The Institute gathers, organizes, and freely offers information and methods – supported by brain science and the contemplative disciplines – for greater happiness, love, effectiveness, and wisdom. For more information about the Institute, please go to www.WiseBrain.org/Heartwood.html.

San Rafael Meditation Group

Open to beginners and experienced practitioners, we meet on Wednesday evenings at the A Sante day spa in downtown San Rafael. Meditation is available from 6:45, with formal instruction at 7:00, ending at 7:30, with a dharma talk and discussion ending at 8:30. It is co-led by Rick Hanson and Manny Mansbach, and for more information, contact Rick at drh@comcast.net.

a workshop on deepening equanimity from psychological, neurological, and dharma perspectives. Yes, equanimity is definitely not a sexy topic. But it is a profound one, at the heart of both handling painful experiences and liberating the mind from clinging. Please let us know if you're interested in this subject, and we will keep you posted with the details.

6. On Thursday evening, October 25, we will be presenters at the annual 108 Blessings fund-raiser for the Spirit Rock scholarship fund. We feel very humbled by this honor, and we encourage you to come to this event and support this worthy cause; more information will be available on the Spirit Rock website.

7. On October 26, we will be presenting a daylong

workshop on "The NonDual Brain" at the Conference on Nondual Wisdom and Psychotherapy, which is co-sponsored by The Center for Timeless Wisdom, the California Institute of Integral Studies (CIIS), and other organizations. Continuing ed units will be offered, and you can register by contacting CIIS. While there will be a focus on using nondual brain tools in caregiving settings, this workshop is appropriate for anyone.

8. Probably, in 2008 and at Spirit Rock, we will co-lead the Neurodharma of Love workshop with Sylvia Boorstein. Sylvia, as you may know, is quite extraordinary – sort of a cross between a Jewish grandmother and the Dalai Lama – and this workshop is likely to be memorable. We'll let you know the date when it's solid.



Fare Well
May you and all beings be happy, loving, effective, and wise.