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Featured Article:

The Power of Mindful Empathy to Heal Toxic Shame

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I want to explore how Mindful Empathy can help us hold and heal the sense of failure, rejection, and shame that catches us in the suffering of the belief that we are bad or unlovable.

We now actually know some of the neurobiological correlates of feeling unlovable. I'll describe this state of mind-body we call shame and the conditions that cause it to arise in our experience – universally in the human condition – and then look at how it gets stuck in our neural circuitry, our implicit memories, so that is hard to release. Then we will focus on how mindfulness – awareness and

empathic acceptance - can hold and heal it.

There's a teaching story from the Buddhist tradition. If you take a teaspoon of salt, stir it into a glass of water, and take a sip of the water from the glass — Ick! The water is too salty to drink. If you take a teaspoon of salt and stir it into a large lake, then take a glass of water from the lake and take a sip of water from that glass, the salt is completely dissolved in the vastness of the lake. You can't taste it at all.

This is a useful metaphor for working with any

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Greetings

The Wise Brain Bulletin offers skillful means from brain science and contemplative practice – to nurture your brain for the benefit of yourself and everyone you touch.

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 Richard Mendius, MD edit the Bulletin, and it's designed and laid out by Laurel Hanson. To subscribe, please contact Rick at drrh@comcast.net. afflictive experience, holding it in a spacious awareness so that the painful moment is barely a blip on the radar. When mindfulness is steady enough, and compassion for what is arising in awareness in the moment is consistent enough, we can hold, process, and let go of whatever gets stirred up again and again from the mucky bottoms of our psyches, even toxic shame.

The Basic Neurobiology of States and Traits

All experiences initiate neural firing – that is the nature of our brains. Repeated experiences cause groups of neurons to wire together with greater and greater strength. Over time, with repetition, especially when accompanied by emotional intensity, these neural circuits develop a greater probability of firing, forming our habitual responses to experience. Any state of mind can become a trait of being with sufficient reinforcement

The kinds of experiences that particularly affect us when we are young are based on the core reality that we human beings are hardwired to connect, to attach, to belong. We instinctively reach out to others for safety and protection, to be seen, understood and accepted. Those yearnings are met with responses; the yearning and responses are paired in the neural circuitry and become our internal working models of how we expect

relationships to be: "When I reach out, this will happen." If our expectations about reaching out are positive – great! We feel secure, safe, loved, and lovable. If, on the other hand, we are met with responses that push us away, give us the sense that we are unlovable or are consistently doing something wrong, then our brain function and brain structure develop in such a way that they continue to support our anticipation that relationships will hurt us in this way.

Self-Righting Shame

There can be a positive experience of shame. We use our hardwired need to connect to socialize us into behaviors that keep us within the norms of the tribe and ostracize us from the tribe if we don't behave. That keeps us regulated within the social engagement of the group and within the window of tolerance of our nervous system.

When Shame Turns Toxic

Shame begins to be toxic when the innate yearning to connect and belong, and the inborn need to be seen, to be big, to be masterful, are not met positively. This state becomes engrained when these yearnings are ignored, dismissed, rejected, when we are shamed, criticized, judged, humiliated for those longings on a regular basis. As a colleague of mine said recently, "Our innocent exuberance is slammed in mid-pirouette." Our activation to reach out and engage immediately contracts; we withdraw, shut down, hide. Our yearnings are paired with pain, literally heart ache or heart break. Toxic shame curls the once hopeful - now wounded - children inside up into a ball of pain and hurt, hiding in defensive, isolating caves, protecting themselves as best they can against

further rejection and humiliation.

We experience this shame as a collapse of the body as the chest caves inward, the head goes down and the eyes avert. We feel embarrassed or rejected. Over time, we begin to hear the critical punishing thoughts in our mind – "You're so stupid! How could you be so stupid? No one will ever love you; you don't deserve to be loved."

Disgust introjected from the other can be seen as the root categorical emotion of the compound emotion of shame. We may manifest this disgust outwardly as the shaming-blaming part is then projected onto others as a defense or manifest it inwardly as we turn on the self. That critical voice inside is now functioning as our own psyche's best effort to protect ourselves from further shame. "If I, the inner critic or judge, can keep you in hiding so you don't do anything else stupid to evoke an attack by 'them', you won't be hurt again. I will do my job and do it quickly before anything bad can happen so 'they' won't do it worse." We believe that this inner berating and constraining of self will keep us belonging within the norms of the group (or attachment figure). Of course, this sends what we call the wounded inner child into exile, feeling lonely, isolated, orphaned, even from one's self.

When shaming is repeated and not repaired, if there's not the sense from a parent of: "I love you; you're lovable; you're amazing; it's your behavior we have to address so you can stay in the tribe and not be in exile," the expectation of shaming begins to build a negative recursive loop in the neural circuitry. The growing child becomes vulnerable to perceiving everything through a shame filter, even when it's not intended that way, as the neurobiology of shame shades perception, sensation, emotion, connection.

Many coping mechanisms may be perceived as adaptive for survival while in actuality they constrict, block and de-rail the increases in complexity that are the hallmark of growth. Because of the recursive nature of the shame/defense against shame cycle, these coping mechanisms are reinforced, strengthening those synaptic connections until they become



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pathogenic, meaning a rigidity in the neural circuitry that blocks learning from any new input. Even with accomplishments, even with blessings, these implicit neural nets remain dissociated from the integrating flow of the brain, locking the person into the eternally present past of the original shaming events.

Tara Brach, in her book Radical Acceptance:
Embracing Your Life with the Heart of a Buddha,
calls this loop the "trance of unworthiness."
Another colleague of mine calls it "the abyss
of deficiency." Bonnie Badenoch calls it "tragic
recursive patterns encased in neural cement."

How enough mindfulness – enough spacious awareness and empathic acceptance of experience in the present moment – dissolve not just spoonfuls but even a swamp of shame?

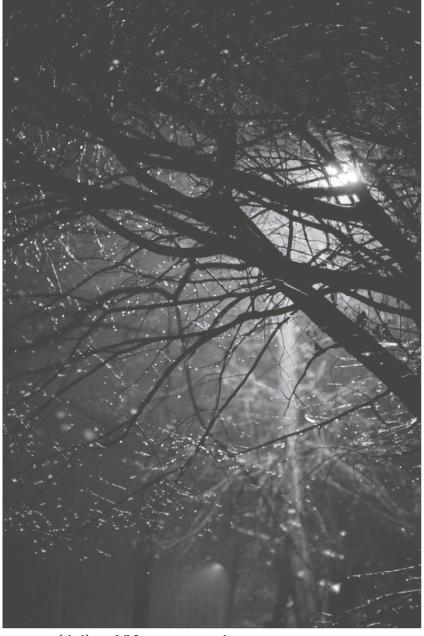
Protocol to Dissolve a Swamp of Shame

What follows is a combination of practices drawn from Sensorimotor Psychotherapy, Accelerated Experiential Dynamic Psychotherapy, and Mindfulness Based Cognitive Therapy to address shame as an implicit memory of attachment trauma. Resourced with enough mindfulness, shame can be experienced as just another implicit memory of body sensations and affect coursing through the body-brain. Shame no longer has to block our experience of ourselves as whole, flexible, resilient, in any moment now.

1. Re-sourcing

The first step, even before mindfulness, is resourcing which we can experience as re-Sourcing. To feel safe opening our minds and hearts to awareness of anything arising, we need to feel someone has our back. Here's a meditation practice from John Makransky's *Awakening through Love: Unveiling Our Deepest Goodness* that can help us increase the sense of safety.

"Place your hand on your heart. Breathe gently and deeply into your heart center. Breathe into your heart center any sense of goodness, safety,



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trust, acceptance, ease, you can muster. Once that's steady, call to mind a moment of being with someone who loves you unconditionally, someone you feel completely safe with. This may not always be a partner or a parent or a child. Those relationships can be so complex and the feelings mixed. This may be a good friend, a trusted teacher. It may be me as your therapist. It may be your grandmother, a third grade teacher, a beloved pet. Pets are great.

"As you remember feeling safe and loved with this person or pet, see if you can feel the feelings and sensations that comes up with that memory in your body. Really savor this feeling of warmth, safety, trust, love in your body. When that feeling is steady, let go of the image and simply bathe in the feeling for 30 seconds."

Why might this practice help develop an effective resource? The hand on the heart and the deep breathing activates the parasympathetic nervous system and calms us down. Evoking the image of feeling safe and loved can activate the release of oxytocin in the brain. Oxytocin is the hormone of safety and trust, of "calm and connect". Oxytocin acts as an immediate antidote to cortisol, the hormone of the stress response, quelling the stress response of fight-flight-freeze. Oxytocin is one the best resources we have to help clients recover from the effects of toxic shame and to support mindfulness practice, and we activate it by feeling loved and cherished. Doing the one-minute Hand on Heart exercise 5 times a day will actually begin to heal the heart and re-wire the brain.

2. Regulating

The second step is regulating. Even before we face the toxicity of shame directly, we use the first foundation of mindfulness -- mindfulness of the

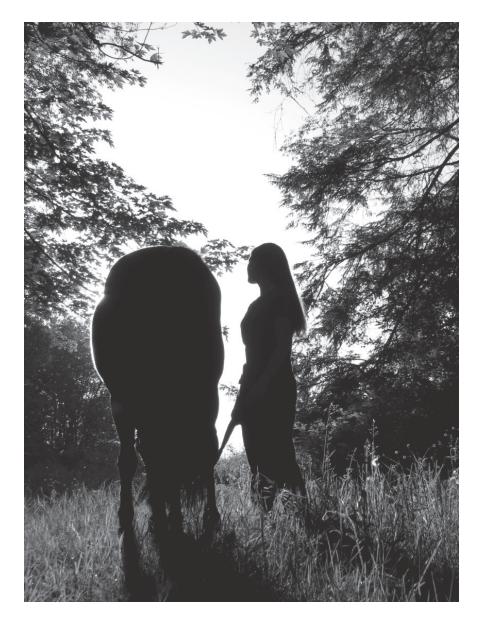
body — to train the mind to focus attention on and hold all experience without reactivity. All trauma memories, including the trauma of shame, are stored implicitly, unconsciously, as body sensation, posture, movement. Focusing attention on body sensations, especially neutral or positive body sensations, like the touch of clothing on the skin or the warmth of the hand on the heart, trains mind to hold experience with equanimity, without reactivity, without judgment.

We use the second foundation of mindfulness - mindfulness of feeling tone – to catch the initial response to any experience as positive, negative, or neutral. The amygdala, the part of the limbic system of the brain that assesses for safety/danger 24/7, also assigns an emotional valence to any experience. If we can catch the emotional valence or feeling tone of our responses before any story or belief system arises, we can let it go or intentionally shift it, and short circuit a full-blown shame attack.

The third foundation of mindfulness is noticing and naming thoughts, feelings, and beliefs as thoughts, feelings, and beliefs. When we notice what's happening and when we name what's happening - this is fear again, or this is anger again, or this is my story that I'm not good enough again, here's one part of me being disgusted and critical of another part of me again - the noticing and naming keeps the frontal lobes of the higher brain firing, the part of the brain that knows what's what, and decreases the firing of the amygdala, the part of the brain that sends us into alarm or shame.

Mindfulness is the primary tool we have to stay in and expand the window of tolerance – the Buddhist term is equanimity. If we're too anxious, too hyper aroused, we go up out of the window of tolerance; if we are too ashamed, shut down, we collapse down out of the window. With equanimity, we can be present, aware, accepting, going with the flow, rolling with the punches, embracing experience exactly as it is.

We practice settling into an open, spacious awareness of experience in the moment - no reactivity, no judgment. Just allowing and accepting, oh, this is what is. Noticing and naming what's happening without going into story. Simply, this is hearing, this is boredom, this is worrying. If there is judgment or reactivity, we practice just naming that and holding it spaciously with awareness and acceptance.



3. Experience held in compassion, selfcompassion, self-empathy

From here, we can learn to hold any experience that arises with compassion, including moments of shame, failure, humiliation, including the disgust of the inner shamer-blamer. Here is where it's important to understand the power of implicit memory. Most of the time when we are holding an experience of shame, we are holding an implicit memory of shame. Those patterns of earlier response to relational injury are stored implicitly, outside awareness. When we are triggered into an implicit memory of shame, there is no

sensation of remembering, so the experience seems related to something that is happening in the present moment. The fullon constellation of feelings, thoughts, and body sensations are there with no sense whatsoever that what we are experiencing is a memory.

So the third step is to contain the implicit memory of shame - the contraction, the collapse, the "I'm awful" or "what's really true is nobody loves me and nobody ever will" – with emerging self-compassion, self-empathy, self-acceptance. Self-empathy shelters the personal self that is having these experiences. "How painful it is that that memory of the experience of shame is here again. Oh, this is so bad; this is so awful, so painful. And I can love myself through every bit of it."

Beyond trusting that others find us lovable, we need to claim ourselves as lovable. This self-acceptance is the sine qua non of the client reorganizing our brain and healing the trauma of shame. When we have a hard time transmuting the empathy of others into empathy for ourselves, it helps to get the oxytocin flowing by first extending compassion to a beloved other rather than focusing on ourselves.

"Bring to mind someone you love, someone you can unreservedly, unconditionally love. This could be a benefactor, a dear friend, a beloved child or a beloved pet. Feel the love you feel for them in your body. Sense the flow of love from you to them. Then, when that's steady, simply slip your inner self into that flow. Keep the love and empathy. Let it flow to yourself. If you can, let yourself receive the love and empathy; receive the care, feeling loved and cared for by your larger self."

4. Reflection

The fourth step is reflection. When we step back from the experience of the moment and observe it without judgment, we are strengthening our capacity for mentalizing — the self-reflective function that helps us move from the embedded "me" – this is who I am; I will never change – to a reflective "I" that is able to hold the many states and traits of self in a larger perspective where shame is seen and known as only one state of being, not a global truth or a trait.

Remember a moment in your life when you were free of shame, a moment of delight or inner peace or serenity, when neither shame nor the shamer were anywhere to be found. Feel that feeling in your body, holding it in awareness and acceptance.

Then "step back" from that experience and "see"



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that your reflective self, your witness awareness, is holding that experience as one possible experience out of many. You can repeat this exercise with as many different emotions or states of mind as is necessary to eventually be able to "step back" from an experience of shame and "see" it also as just one possible experience out of many.

From the view of the reflective "I" we no longer have to identify with any of these experiences or states as "me." The awareness holds all these experiences, as implicit memories in the moment, with understanding and acceptance. We can then begin to work with these states to re-wire them in ways that are more adaptive.

5. Re-pairing.

The fifth step is re-wiring the shame memory, which we can think of as re-pairing. Given neural plasticity – the capacity of our brains to grow new neurons and new synaptic connections lifelong – re-pairing is the moment of brain change. We proactively re-pair the old shame memory with new experiences of self-empathy, self-compassion.

We evoke the old experience or memory of shame; activating those well-rehearsed neural networks. We cultivate self-empathy, self-compassion, and now those neural networks are firing. These two patterns of neural nets begin firing together at the same time. They wire together, and new circuitry is created in that moment, sometimes quite dramatically. The sense of shame literally dissolves in the larger self-awareness and self-empathy, like the teaspoon of salt in the lake. No more charge. No big deal. We may have to practice this over and over if we have a swamp of salt to dissolve, but this is how it works.

"Again place your hand on your heart and breathe

deeply. Evoke a memory of being loved; when that is steady, evoke a small version of an old memory of shame, a teaspoon, not a swamp. Hold that memory of shame in the larger awareness, the larger acceptance. The larger view from the goodness of our true nature holds the smaller view. You may even feel a felt sense of shift in your body as your whole body begins to deeply encode this new way of being."

We repeat this practice of re-pairing as many times as is necessary to re-wire the old neural nets of shame. The emerging flexibility in how our brains process relational experiences allows us to relate to self and others with new ease, acceptance, resilience, and love.

May all beings
Heal and awaken
Into the love and awareness
That holds and honors
The fullness of being.
- Tara Brach, Radical Acceptance

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Practical Advice for Concentration

Rick Hanson, Ph.D.

A concentrated mind is a mind that can see itself clearly – and in that seeing, undo the causes of personal suffering and harms to others.

But this is much easier said than done, given the "monkey mind" handed us by evolution: to keep our ancestors alive, they developed a jumpy, vigilant, nervous attention that scans continually for threats.

So we have to actively train our attention. Which has great fruits for daily life – staying present in long meetings or conversations, working through projects – as well as for any kind of contemplative practice.

Here are same ways how, using the preeminent training of attention – meditation – with a focus on the breath. Feel free to shift that focus of attention to something else, such as a prayer, image, or phrase.

Lundamental Elements

Posture

Find a position in which you feel both comfortable and alert. The four traditional postures are sitting, walking, standing, and lying down. If you are seated, try to keep your spine erect, with your chin slightly tucked in, and perhaps the tip of your tongue touching the palate. Relax your jaws, and your lips may part slightly.

If you itch, it's OK to scratch, and if your body starts to ache to the point of distracting you, it's fine to move. Some meditations call for perfect stillness, and they use the pains that usually arise – often intense ones – as skillful means for insight and detachment. Sometimes they work incredibly well, and people have amazing breakthroughs. But frankly, I think that a lot of the time, it's just a needless pain in the knee or back or neck, and usually a distracting one to boot. If you can, find a position that doesn't hurt.

You can leave your eyes open or closed, and there are benefits with each style, so see what works for you. If your eyes are open, let them be relaxed and fairly still, which usually means being unfocused, gazing somewhat downward, perhaps at a spot on the ground four to six feet in front of you.

If you feel sleepy you could open your eyes, stand up, or imagine bright lights.

Objects of Awareness

As noted above, there are many potential objects of concentrated attention, and you can find the ones that work for you.

Physical sensations are common objects since they help draw us out of the distracting chatter of the verbal mind. In particular, the sensations of the breath are routinely used because they are always present, coming and going, a bridge between the conscious and unconscious processes of the nervous system.

But for some people, especially those with a history of trauma, attention to body sensations can stir up frightening feelings. It's perfectly fine to shift to another focus of attention, such as an image (e.g., an actual candle burning in front of you, the memory of a peaceful mountain lake), or words such as: "Peace" or "May I be happy."

Further, if you have a temperament that tends to need stimulation, or which fatigues quickly on concentration – and that's just how it is, and no one's fault – it's fine (especially in the early stages of contemplative practice) to adapt practices to your own nature. For example, you could pay attention to the sensations of the breath throughout your body as a whole – which will be more stimulating. Or you could do more walking meditations, trying to stay aware of the

sensations in your feet and legs (which usually means walking especially slowly). The point is the results – like a steadier mind, more sense of ease and peacefulness, more happiness – not any specific method.

Still, whatever your temperament, try to stay with one object of attention as much as you can, rather than shifting from object to object. That will help strengthen the muscle of your concentration. It's a little like aerobic training: find the most challenging level you can comfortably sustain, and then build from there.

From here on I will refer to the sensations of the breath around the upper lip as the object of awareness, but feel very free to substitute any other object you like for that one

A Simple Practice

Concentration is very simple: You just keep coming back to the object no matter what. The instant you notice your attention starting to drift



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- or having flown all the way to Mars - zip! you bring it right back.

This is different from what is often called "mindfulness meditation" (though, of course, concentration is an aspect of mindfulness) in which you rest part of your attention on your breath (or another object) while preserving an open field of awareness that notices the thoughts, feelings, etc. streaming through without getting caught up in them.

In concentration practice, you are trying to engage as much of your attention as possible — aiming for complete absorption — in the object, so there is little or no room in awareness for anything else. Compared to mindfulness meditation, it is more muscular in its feeling, more relentless in its continual regeneration of the intention to be with just the one thing, more radical in its immediate abandonment of any other object of attention.

Kindness toward Yourself

But, paradoxically, the deepest concentration is aided by a soft and yielding attitude – receiving the breath, rather than chasing after it – a relaxed body, and feelings of happiness, contentment, and peace. Finding this sweet spot – balancing diligence and relaxation, focus and good humor – is the art of concentration.

It's important to be careful about pushing too hard with concentration, or getting attached to a specific result. Attitude is really important: Try to be heartfelt, emotionally open, relaxed in your body, intent without tension.

Getting annoyed with yourself or impatient will not serve. Relaxation and happiness are the immediate causes of concentration. Striving and getting "self" mixed in (e.g., I'm doing this great, I'm doing this badly) just lead to suffering. In the Zen saying, we should be with our mind like the skillful rider of a horse, with neither too tight nor too loose a rein.

This kindness toward yourself is helped by a sense of perspective. If you think about it, the natural state of mind is wandering attention, open to all sorts of internal and external inputs. The reason for this is that, in evolution, the animals that over-focused or got all blissed out didn't notice the shadow of the hawk overhead or the slither in the grass, and failed to pass on their genes.

So when you try to concentrate your attention on just one thing for many minutes in a row — whether it's a chapter in a book or a meditation — you are asking your brain to do something that goes against its grain somewhat. You're certainly not harming your brain with concentration! But you are indeed pushing it in an unfamiliar direction. All the more reason to be it nice to it, and thus yourself.

Grateful Wonder

Scaling the Universe

To put things in perspective, three simple images, but on very different scales:

- A glass bead from the moon http://antwrp.gsfc.nasa.gov/apod/ap100110.html
- Astronaut captures satellite: http://antwrp.gsfc.nasa.gov/apod/astropix.html
- The spider and the fly http://antwrp.gsfc.nasa.gov/apod/astropix.html

The Five Traditional Factors

Traditionally, five factors promote concentration – particularly to the point of the non-ordinary states of consciousness and contemplative depth known as jhanas.

- Applying your attention This is the deliberate focusing of attention on an object, whether a teacher's presentation, the sensations at the upper lip, or the interesting stillness between two thoughts. In psychology, this would be called the orienting response, such as when we bring attention to a sound that has startled us.
- Sustaining attention This means staying with the object of attention. Sometimes the metaphor of rubbing is used, like two sticks rubbing together, staying in contact throughout.

Sally Clough, a Spirit Rock teacher, combines applying and sustaining attention (especially appli-

cable for the breath) into a single metaphor from ice skating: applying attention is like planting your foot, and sustaining it means gliding along; then at the end of the inhalation (for example), you plant your foot again (= focusing on the exhalation) and then glide along the length of the exhalation, staying in contact with every part of it.

- Rapture A strong sense of bliss, felt particularly in the body, often with an energizing, upwardly moving sense to it.
- Happiness Also a definite, unmistakable feeling, that sometimes shades into a quality of contentment or perhaps tranquility.
- One-pointedness This is the mind brought to singleness, in which there is a kind of unitary state in which all elements of experience are experienced as a whole; there is often a sense when



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this factor arises of a kind of ka-chunk, of all the pieces coming together.

These factors can vary in their intensity from sitting to sitting. In particular, the factor of rapture can be experienced over time as a bit jangly and too intense, and give way increasingly to the factor of happiness.

Try to register a clear sense of each factor, so that you know what it feels like and can find your way back to it again.

To an extent (and which usually grows with practice), you can invite, call up, or invoke each factor. Traditionally, you can say in your mind, "May rapture (or happiness, etc.) awaken (or arise, or be present)." If it comes, conditions are ripe. If it does not come, be patient and keep cultivating the causes of its arising and have faith that it will come.

Additional Aids

Here are some additional techniques that many people have found to be useful.

Counting

To help yourself stay with each breath, you could try counting each one, starting with 1 and going up to 10. If you lose track, just start over with 1. And when you get to 10, start over with 1. (You can also count down, from 10 to 1.) The counting should be very gentle, in the back of your mind, just enough to help you stay with each breath.

You may notice when you typically lose focus – commonly, around the fourth breath. Noticing that, bring an extra intention to stay with the breath through that "threshold," and then on the

other side (say, the sixth breath) you may find it easier to get to 10.

If you like, you could set an audacious goal for yourself: ten counts of 10 breaths each, all in a row. Even highly experienced meditators may begin a sitting this way, to really focus their mind.

Noting

Or, to help yourself stay with the breath, let go of the counting, but gently note the breath softly in the back of your mind: "In . . . Out . . . In . . . Out." Or: "Rising Falling." The noting should be very soft, with just a small part of your awareness involved with it, and most of your awareness with the physical sensations of the breath.

You can also apply noting to other experiences, such as "planning," "worrying," "daydreaming," etc. Acknowledging them in a neutral, matter-offact way can help you detach from them, let them go, and return to the breath.

Touch Points

It's common to lose focus on the breath at the beginning or end of an inhalation or an exhalation. The absence of strong stimulation at that point makes it easy to lose focus — though that moment is an interesting window into your mind when there is a relative space or emptiness between thoughts or other stimuli. You might like to pay particular attention to that space, and see what you find there!

Additionally, you could gently touch your finger to something at the end of each inhalation and exhalation – such as forefinger to thumb, or thumb to knee – as a way to keep you present and watchful.

The Brain in a Bucket

Rick Hanson, Ph.D.

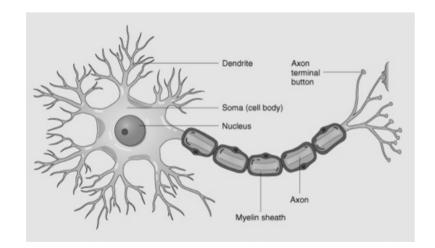
[This article is adapted from my blog for Psychology Today.]

Have you ever seen a real brain?

I remember the first time I saw one, in a neuropsych class: the instructor put on rubber gloves to protect against the formaldehyde preservative, popped the lid off of a lab bucket, and then pulled out a brain.

It didn't look like much, a nondescript waxy yellowish-white blob rather like a sculpted head of

cauliflower. But the whole class went silent. We were looking at the real deal, ground zero for consciousness, headquarters for "me." The person it came from – or, in a remarkable sense, the



person who came from it – was of course dead. Would my brain, too, end up in a lab bucket? That thought gave me a creepy weird feeling completely unlike the feeling of having my heart or hand in a bucket some day – which gets right at the specialness of your brain.

That blobby organ – just three pounds of tofulike tissue – is considered by scientists to be the most complex object currently known in the universe. It holds 100 billion neurons (see the schematic illustration just below) amidst another trillion support cells. A typical neuron makes about 5000 connections called synapses with other neurons, producing a neural network with 500 trillion nodes in it. At any moment, each node is active or not, creating a kind of 0 or 1 bit of information. Neurons commonly fire five to fifty times a second, so while you've been reading this

paragraph, literally quadrillions of bits of information have circulated inside your head.

Your nervous system – with its control center in the brain – moves

information around like your heart moves blood around. Broadly defined, all that information is the mind, most of which is forever unconscious. Apart from the influence of hypothetical transcendental factors — call them God, Spirit, the Ground, or by no name at all — the mind is what the nervous system does. So if you care at all about your mind — including your emotions, sense of self, pleasures and pains, memories,

Berspectives 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.

dreams, reflections – (and who doesn't?) then it makes tons of sense to care about what's going on inside your own brain.

Until very recently, the brain was like the weather: you could care about it all you wanted, but you couldn't do a thing about it. But new brain imaging technologies like functional MRI's have revolutionized neuropsychology much as the invention of the microscope transformed biology. According to Dr. Alan Lesher, CEO of the American Association for the Advancement of Science, our knowledge of the brain has doubled in the past twenty years.

These breakthroughs have informed – and been informed by – practical applications in psychotherapy. For example, trauma therapies have been improved by research on memory, while the results of interventions such as EMDR have suggested new lines of investigation. Like other therapists, I feel clearer about a client's mind because more is known about his or her brain.

I'm also a meditator – started in 1974, at the tail end of college – so it's been inspiring to see something similar happening with contemplative practice. Some of the most interesting studies of brain function have been done on long-term meditators, the Olympic athletes of mental training. For example, experienced meditators actually have thicker cortical layers

in the brain regions responsible for selfawareness and the control of attention.

This illustrates a fundamental point with extraordinary potential: when your mind changes, your brain changes, both temporarily – with the momentary flicker of synaptic activity – and in lasting ways through formation of new neural structures. There-

fore, you can use your mind to change your brain to benefit your whole being – and every other being whose life you touch.

The new neuroscience, combined with the insights of clinical psychology and contemplative practice, gives you an historically unprecedented opportunity to shift your brain – and thus your mind – toward greater happiness, love, and wisdom.

With just a little understanding of your own brain, you can reach down inside the enchanted loom of your very being and gradually weave greater strength, insight, confidence, contentment, and loving intimacy into the tapestry of your life. That's the great opportunity here: your brain is not in a bucket, it's alive and pulsing with possibility, waiting for the skillful touch of your mind to guide it in increasingly wonderful directions.

The Wellspring Institute For Neuroscience and Contemplative Wisdom

The Institute is a 501c3 non-profit corporation, and it publishes the Wise Brain Bulletin. The Wellspring 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/wellspring.html.