



The Wise Brain Bulletin

News and Tools for Happiness, Love, and Wisdom
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Featured Article:

The Neurology of Awareness and Self: Darwinian and Non-dual Perspectives, and Tools for Transcendence of the “Self”

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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

It is sometimes said that the three greatest – and toughest, and most significant – remaining scientific questions are these:

- What caused the Big Bang?
- What is the “Grand Unified Theory” that integrates quantum mechanics and general relativity?
- What is the conscious self?

It’s interesting that the last question is up there with the first two: it’s that difficult and that important to answer. And from a contemplative perspective, including a Buddhist one (our own home ground), the self is often seen as a major source of suffering.

With complicated and challenging subjects, a good strategy is to start simple, and build on one solid step after another. For example, Rick Hanson once worked for a mathematician doing probabilistic risk analyses of really messy problems (e.g., what’s the likelihood of a nuclear power plant melting down?). He told Rick that there was a saying: “A real mathematician is someone who wakes up every morning and asks, ‘What is a number, actually?’”

In that spirit, we have structured this essay in six parts. We will begin by considering how the most rudimentary forms of awareness developed in the animal kingdom, and then evolved into their full flowering of human consciousness, including current theories about the neural networks that enable it. Next, we’ll step back to consider what are often called “non-dual” perspectives on consciousness, which will require clarifying what is “duality,” and the three different kinds of nonduality; you could find this section an exhilarating intellectual roller-

coaster or a murky quagmire or even both, and feel free to fly over it if you like.

In Part Three, we will introduce an exercise that could help you get an experience of the changing nature of the self. (As with any exercise, take care of yourself, and if you become uncomfortable, step back from it.) In Part Four, we'll tour the distributed and variably activating circuitry of self functions in the brain, and also touch on out-of-body experiences and related remarkable states. Next, we will explore the evolution of "self," from its

primitive roots in simple animals to its manifestations in higher animals such as dogs and monkeys . . . and human beings. Finally, in Part Six, we'll go through a variety of methods for relaxing the sense of self.

This is a relatively long article for the Bulletin, but it is actually a succinct summary of a subject that fills library walls, and we think it will reward your time.

Here we go.

Part One:

The Evolution of Awareness

To determine by what modes or actions light produceth in our minds the phantasm of colour is not so easie.

– Isaac Newton

ness in the human brain is built on a series of layers – like floors in a building – that have been laid down during billions of years of evolution on this planet, and especially during the last 650 million years of multi-celled animal evolution.

Greetings

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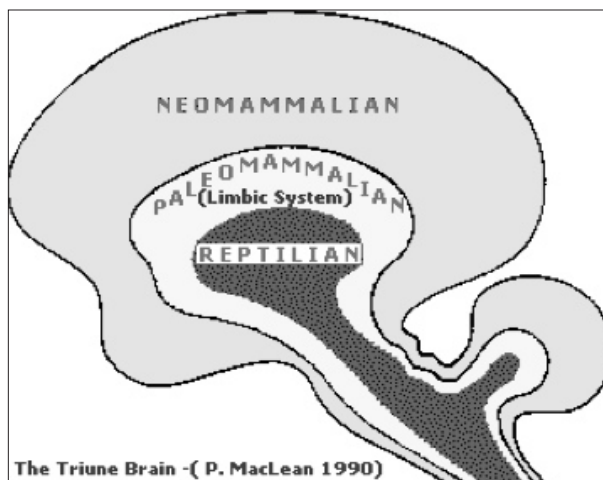
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Introduction

Since the term, consciousness, has a rich history in philosophy and theology that give it many associations which can complicate making sense of it – and associations that are not meant by us here – we will generally stay with the more biologically-grounded term, awareness.

And we will situate the biology of awareness in an evolutionary context. The reason is that the neurological architecture of aware-

Awareness in the Animal Kingdom



Understanding how awareness is constructed in our own brains means understanding our kinship – layer by layer

– with other members of the animal kingdom.

So - You may have heard of the zen koan, “Does a dog have Buddha nature?” Well, here’s a less profound one, but one that is answerable within science today: “Does a dog have ‘awareness nature?’”

Let’s try to answer that question from the ground up, moving from very simple life forms to mammals and primates.

In the study of animals, “aware” is usually considered a transitive verb, in the sense of “aware of _____.” So, the operational definition of “aware of” is essentially “perceives.” And how can you tell if the animal perceives something? Typically, by an adaptive response to the stimulus.

In the world of microbes, a one-celled amoeba will receive chemical signals from smaller microbes that trigger an engulfing response by the amoeba. In an operational sense, the amoeba perceived the other microbe and responded adaptively, and was thus “aware” in a limited sense of the other microbe. We don’t think of this as

true awareness yet, but it does establish the basement, as it were, of the most elemental enabling of perception and adaptive responses.

Then, moving up the evolutionary ladder, let’s consider a worm or a spider. These relatively large creatures have rudimentary nervous systems, in which something marvelous is occurring, a radical breakthrough in evolution: information is being represented in neuronal tissues.

That capacity for representation is a state change, and it opens up a whole world of possibilities.

For one, the representations – the information – of perceptions and responses can be stored to guide the organism’s future behavior . . . and now we have the beginnings of memory and expectations.

Second, the organism can represent its representations . . . and represent its representations of its representations . . . and so on. As we will see, this architecture of second-order, and third- and fourth-, etc. order representations creates the capacity for representing past and present experiences together in a kind of global work

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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 suggested fee for each month of the program is \$20 - \$40, but no one will be turned away for lack of funds. Please arrive ten to fifteen minutes early so you will have ample time to register for the class.

Upcoming dates and topics:

- 2/12/08 – From Sadness to Contentment

Healthy mourning, grieving, and “the wound of the heart” – and unhealthy melancholy and depression.

- 3/11/08 – The Power of Intention

“Everything rests on the tip of motivation.” Frontal lobe controls. Methods for clarity of purpose: verbal, imagistic, theatrical

space in the brain.

The worm perceives dryness in the soil and moves away from it, the spider feels the trembling in its web and moves toward its source: each creature is perceiving and responding adaptively, and is therefore, in increasingly complex ways, aware.

In the same general way, a frog is aware of the movement of the fly it zaps with its tongue. The shark is aware of even just a few molecules of blood in the water. The squirrel is aware of the shadow of the hawk overhead, and the hawk is aware of the squirrel in the tree.

Closer to home, if your dog hears the familiar can opener and smells that lovely glop and comes running over to eat – we’d say that the dog was aware of the food, right? He perceived it and responded to it. That’s awareness in a nutshell.

Further, dogs seem able to be aware of some of the internal states of their human companions. For example, look over at the can opener in the morning, and your

dog will follow your gaze and start getting excited since he infers your intention to get his breakfast; or look over at the leash and he’ll jump and down thinking he’s about to go for a walk.

Recent studies of chimpanzees and other primate species have shown the same thing: for example, those animals will infer that an experimenter intentionally used his elbow to open a food compartment only if his hands were clearly available but not used.

Similarities and Differences

The neurology that supports our six senses – through which we perceive and are aware of the external world, plus the interoceptive sense that registers internal states – is not categorically different from the neurology that supports the six senses in other primates . . . and in most other mammals . . . and even in many vertebrates, including birds, reptiles, and fish.

Similarly, the neurology that supports the representation of the internal states of mind – the emotions and intentions – of other members of our species has the same



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foundational circuitry as other highly social animals, especially other primates.

Therefore, our awareness of the environment, of the internal state of the body, and of the feelings and desires of others – enabled and constrained by the neurology we have been discussing – is probably not categorically different from the awareness of the world of many other animals, particularly the ones that are nearest to us in the tree of evolution.

Where humans do differ from other animals, in terms of awareness, is in at least four areas:

- The contents of awareness (e.g., language, concepts)
- The ability to be aware of awareness, both in the moment and in the review of the memory of past moments of awareness
- The ability to deliberately control and direct awareness
- The textures and complexities of the experiencing subject that is aware; the human personality, or psyche, or self is obviously much more complex than the self – if that term is even usable – of other animals.

Nonetheless, to put it bluntly, we appear to be aware in many of the same fundamental ways that other animals – especially “higher” ones – are aware.

Recognizing this similarity can both demystify some

aspects of consciousness – err, awareness – and draw us further into an ethical sense of connection with other living beings besides those of our own species.

Neurology of Core Consciousness

So in that context – and in kinship with our furry friends (and perhaps those as well who are feathered or scaly – let’s consider the neuroanatomy of awareness – or what is called more formally, or technically: the apparent neural correlates of consciousness.

The simplest, barest awareness of the external environment and the internal state of the body seems rooted in the activities of neural structures resting at the cross-roads between the brain stem and the more modern “neocortex. These include the thalamus, the insula, and the same structures deep in the brain stem.

This awareness is sometimes called “core consciousness,” a term used by Antonio D’Amasio in his book, *The Feeling of What Happens*.

Technically, D’Amasio’s quite interesting theory is that “level one” sensors register the state of some aspect of the organism, let’s say the amount of heat on the skin.

Level two sensors register changes in the state of level one sensors, providing a moving picture of what is happening to the organism, such as it is getting hotter on the skin.

And level three sensors register changes in level two sensors: when the rate or direction of those are “out of range” and therefore “alarming” in an operational sense, those sensors signal other parts of the brain, which then initiate responses, such as pulling the hand back from the stove.

In D’Amasio’s proposal, it is at level three sensing that awareness – that core consciousness – begins. In other words, the most basic form of awareness involves the

ongoing representation of the equilibrium and the disequilibrium of the body.

Interestingly, the neurological regions that handle core consciousness are particularly involved with interoception, the sensing of the internal state of the body.

For example strokes in the frontal lobes or in the verbal centers of the temporal lobes or in the sensory-motor regions of the parietal lobes may all disrupt or impair autobiographical consciousness while leaving core consciousness intact. But strokes or other forms of brain damage to those interoceptive regions can shut off consciousness altogether and put the individual into a vegetative state.

Why is interoception so primary to awareness, to consciousness? It is not as if ancient organisms in the wild – swimming around, let's say, in the primordial seas 500 million years ago – could afford to be unaware of their external environment.

It's speculation to be sure, but we think that interoception came first since the very first multi-celled animals had very primitive external sensors. But they sure needed to know if they were hungry or thirsty or tired, or getting too hot or too cold.

In the neural architecture of awareness, internal sensing is foundational, and everything got build up from there. By the way, this link between sensing the internal state of the body and the deep layers of awareness can aid contemplative practice, because interoception draws one down into core consciousness.

So, what are the qualities of core consciousness?

Core consciousness is bare, endlessly

engaged in the present, unable to project into the future or consider the past, and without much sense of self or personal history.

It lacks language – or more exactly – its language is the vocabulary and syntax of the most evolutionarily ancient and fundamental elements of our experience: sensation, emotional shadings, primal desires.

This bare awareness is like – in the Zen metaphor – the surface of a still pond upon which the shadows of geese fall.

Individuals forced into a state of nothing but core consciousness – they are typically through injury or a transient neurological condition – are aware, but quite impaired in terms of being able to direct their life or interact with others or be known to themselves in meaningful ways.

Autobiographical Consciousness

Now, upon this architecture of core consciousness are built more elaborated neurological networks that reach into the cingulate gyrus and the frontal and temporal lobes.

The Neurology of "Core Consciousness"

- The most basic awareness of stimuli depends on structures of brain stem and limbic system.
- Level 1 sensors receive stimuli.
- Level 2 sensors register changes in Level 1.
- Level 3 represents signals from Level 2: the first awareness of the equilibrium of the body.
- These three levels rely heavily on neural circuits handling interoception, the internal sensing of the state of the organism
- Core consciousness is simple, in the present, with little sense of self or personal history.
- Core consciousness alone may feel peaceful, but without the capacity for "autobiographical consciousness," a person is seriously impaired.

The theory is that those circuits are the basis for more complex forms of “autobiographical consciousness.” In that mode of awareness, there is more access to all the records and subtleties of the psyche, and more opportunity to evaluate and direct the course of one’s life.

You have probably had the experience of being aware, at a deep level, of the simultaneous self-referencing verbal processes of rumination. In the brain, that is likely core consciousness systems receiving inputs from autobiographical consciousness systems. Or, to paraphrase Carl Jung and put a deeper spin on this, “The [capital S] Self is that subject to which the ego is an object.”

In reality, like so much about the brain, there is probably a continuum of contributors to consciousness, rather than just two types – core and autobiographical – but D’Amasio’s work is a great start.

And to extend this humbling recognition, let’s be clear: we have outlined a general description of the major structures in the brain that seem to be required for awareness. But the actual details of how an image of a red light is produced in the brain, let alone the subjective experience of the color, are far, far from clear. That is what has been called “the hard problem in consciousness,” and it is far from solved in any detail.

Part Two:

Nondual Perspectives on Awareness

... consciousness, or awareness, and its object are one.

– Stephen Bodian

Introduction

In the nondual literature, the terms duality, nonduality, and awareness can mean different things in different contexts.

We found that a little confusing, plus it makes it easier to stumble into what the Buddha called “a thicket of views.” So we thought it would be helpful to clarify these four domains:

- Ordinary duality
- Objective oneness
- Subjective oneness
- Transcendental oneness

Defining the Four Domains

In brief:

- Ordinary Duality refers to the everyday distinctions apparent in the world between things such as hand and cup, wolf and rabbit, and sperm and egg. All life requires a fundamental distinction between organism and environment. The brain operates fundamentally through the distinction between excitatory and inhibitory processes, and through distinctions between the functions of different parts of it.

For mental health, some dualisms are beneficial, such as those involving theory of mind – that the inner states of other people can differ from those of oneself. Other dualisms are harmful, such as setting parts of the self against each other.

- Objective Oneness refers to the fundamental property of all the contents of the physical universe that they

all arise interdependently, with no absolute distinctions between any of them. Consequently, as we shall see, the world and the body and the brain and the mind are all one . . . not dual.

- Subjective Oneness refers to the integration of the contents and processes of mind. It can also reflect a kind of philosophical position that the apparent physical, objective reality does not actually exist but is entirely made up by mind in some metaphysical way. The subtle version of Subjective Oneness is that the physical universe exists, but it is skillful means to relate to it entirely as it is constructed and represented in the mind by the brain.

- Transcendental Oneness refers to the view of reality that underpins numerous religious traditions, including Vedanta in Hinduism, Dzogchen and other schools of thought within Buddhism, and some forms of Christian mysticism, as well as recent expressions in teachers such as Nisargadatta, Adyashanti, Byron Katie, Adi Da, and Ken Wilber. To quote Richard Miller: “I use the concept, Awareness, interchangeably with Consciousness, Presence, Being, Unborn, True Nature, Self, and God to represent the nonmental, nonphysical ground that everything is made of.”

Ordinary Duality – “I am not the spoon.”

As we all know, at one level of analysis, dualities clearly exist. For example, past is distinct from present, the wolf is not the rabbit, we walk through the door instead of the wall, and we put the spoon in the hot soup but not the hand.

The sensible, or wholesome, usage of dualities enables all living beings to exist, including humans.

In physical terms, from viruses and protozoa on up to dinosaurs and NFL linebackers every successful organism needs to maintain a kind of boundary between inside and outside.

It needs that boundary to organize internal states, to protect itself from its environment, and to define a kind of platform – a “secure base,” in the terms of developmental psychology – from which it can act upon its environment and get what it needs from it.

In short, that boundary establishes a fundamental dualism of “self” and “world” that is absolutely necessary for survival. We are here in this room today because our ancestors maintained that dualism and because we ourselves have maintained it throughout our lives.

In neurological terms:

- There is a fundamental distinction between excitatory and inhibitory neuronal activity. At the micro level of individual synapses, and at the macro level of large-scale circuits comprising billions of synapses interacting together, the brain is essentially organized by that distinction between excitation and inhibition.

- Different regions of the brain have different functions. For example, one small portion of your left temporal lobe is responsible for generating complex speech while another small portion is responsible for comprehending complex speech.

- Signals are distinguished from a background field on ongoing noise.

In psychological terms, numerous activities are based on the presumption of dualistic distinctions in the physical world, and on the presumption of an individual self distinct from the world and other individual selves.

Many of these have wholesome results. For example, to take just three:

- Agency – The organism must act upon the world, if only to swat away the fly or bring the baby to the breast. That requires an actor distinct from the object upon which it acts.

Further, through their use of tools, humans have refined agency to an extraordinary degree: the one stone is used to chip the other into a blade, the blade is used to sharpen a stake into a spear, the spear is used to hunt and kill the deer for dinner.

- Theory of mind – The important developmental accomplishment by age 4 or so that recognizes that other people have mental states distinct from one's own. Similarly, empathy – so beautiful and so important for a human life – has its power because we “feel felt” by another person.
- Unilateral virtue – When we resolve to be kind no matter how others act, that distinguishes self from other selves. Similarly, when we commit ourselves to anything – such as making the Bodhisattva vow, or taking refuges – that is meaningful precisely because a particular person is identifying with, claiming ownership of, those aspirations.

On the other hand, we know as well that many aspects

of psychological duality have unwholesome results. As a quick sampler, consider:

- Setting self against the world (e.g., trying to make the impermanent permanent, not accepting what is)
- Setting self against other selves (e.g., “us” vs. “them,” harsh speech, contentiousness with others)
- Setting self against self (e.g., disowning or repressing parts of the psyche, being ashamed of parts of oneself)
- The three poisons named in Buddhism – greed, hatred, and delusion – all involve dualities.

Objective Oneness –

“My hand and the spoon are one.”

Of course, the dualities we just explored are all contained within several kinds of non-dualities, or kinds of oneness.



First, there is what one might call “objective oneness.”

This is what we see when we consider the universe in its physical, and physically-based qualities, and take the philosophical stance called “Materialism” that there is an objective reality which includes our body and brain.

For example, as observed by many people, including the Buddha, Einstein, the quantum physicists, and many poets: everything is connected to everything else. Nothing in the physical universe arises entirely on its own, but depends on preceding causes and conditions.

For example, the iron in our blood, the calcium in our bones, and the oxygen we breathe were all born in the heart of an exploding star 5 to 10 billion years ago.

As a result, nothing has an inherent, absolute self-nature, so all apparent dualities are “empty.”

This means that there is no ultimate distinction between one person and another, between, let’s say, you and your best friend, between therapist and client, between Democrat and Republican, and so on. There is no “us” and “them.” It’s all “us.”

In the same way, our bodies are not fundamentally separate from the environment. They depend on continuing exchanges of energy and matter – which are, as we know, themselves one – with the environment.

Similarly, the brain is not fundamentally separate from the rest of the body which feeds and breathes and carries and protects it.

Therefore, the brain is not separate from the world. In a deep sense, the brain and the world are one.

And as we have written about extensively elsewhere (see www.WiseBrain.org), the most prevalent, scientific view of the mind and the brain is that they are also one integrated system.

This means, of course, that the mind and the world are also one unified process.

The mind – including much mental activity we will never be aware of – is continually stimulated by the world, continually receives the world. And it acts upon the world in turn, including through action



plans built up from lower-level activities both inside and outside the field of awareness.

The mind and world are one. Not based on a mystical view, but the conclusion of a straightforward empirical, scientific analysis.

There are many pathways to realizing this experientially, even to the point of being liberated permanently from the illusion of self fundamentally separate from world.

The clear conviction derived from your own reasoning that mental activity apparently “in here” – sensing, thinking, feeling, wanting, etc. – is truly not apart from the physical movements of the world “out there” can serve you greatly in just about all of those paths of liberation.

And, to make the obvious point in passing, all of the apparent dualities named a little earlier are contained within Objective Oneness.

We might also add that the view of Objective Oneness is the one that predominates in the Pali Canon (Pali being the language in which the earliest surviving record of the discourses of the Buddha were written), which is the basis for the Theravadan strand of Buddhism (which also includes many streams of teaching from the perspectives of Subjective and Transcendental Oneness).

In terms of everyday personal psychology, regarding the mind and brain as a unified process grounded in material reality can promote benefits such as:

- Accepting, including all aspects of self, all contents in awareness. Not disowning, not repressing. A sense of being undivided.
- Emphasizing the direct, embodied awareness of experience, with minimal conceptualization of it.
- Finding rest and peace and insight in abiding as choiceless awareness, conscious of the various contents

of mind without grasping after or resisting any one of them.

Subjective Oneness – “There is no spoon.”

This is the view that treats all of the contents of awareness as purely subjective phenomena.

First, the strong version of this view is that subjectivity is indeed the fundamental nature of existence, that the ontological nature of reality is that exists only in the mind.

In philosophy, one classic debate in the early 1700’s regarding this view, called Idealism in contrast to Materialism, involved the question whether the rock you stub your toe upon is real, independent of your own mind.

More recently, variations of this view are given in books like *The Secret*, or some interpretations of the est training in the 70’s, that you create your own reality.

Personally, we think there are a lot of problems with the strong claim. For example, it violates the principle of Occam’s Razor – “take the simpler of two explanations” – in its presumption of both all the material components of the universe and the purely mentalistic fabrication of these; why add the mentalistic fabrication part when a purely materialistic explanation will do?

The strong claim can also be used to imply that the Jews created the Holocaust, that the millions of children who die each year from hunger made that happen, or that your friend is the cause of her breast cancer.

But, there is no way to prove which view is right, Materialism or Idealism, since in principle, even a proof of Materialism could be fabricated within the imagination.

Second, there is a subtler version of Subjective Oneness, which says that there could be an objective reality “out there” – but we can only know it through our own

perceptions.

Therefore, the subtle version says we may as well treat our phenomenal reality as the “real” reality, and move on from there.

There is some absurdity to taking this viewpoint too seriously, since we routinely act upon objects “out there” – like the food you ate this morning – but it is certainly consistent with the way the brain works.

For example, our sense organs can receive only a tiny fraction of the information available in the electromagnetic and auditory wavelengths. We do not see in the ultraviolet or infrared ends of the spectrum, nor hear the ultrasonic sounds a dog might. Similar facts exist for our senses of smell, taste, and touch.

To extend the metaphor of the spotlight of awareness surrounded by a vast and shadowy stage of unconscious mental activity – that stage itself is surrounded by a far larger realm of events that the brain will never know directly.

And then, within the spotlight of what we could be aware of, most of it is filtered out of actual awareness at any one moment. Otherwise, we would be overwhelmed with incoming data – and less likely to notice the slither in the grass or the shadow overhead that might ruin our chance of having grandchildren . . .

In addition to the ways in which this subtler

version of Subjective Oneness is valid, in terms of the brain, it can also be employed as a skillful means – independent of whether it is true or not.

In other words, treating the phenomenological reality – the one we experience – as the only meaningful reality is an effective means to the end of several benefits:

- It makes us more open to what we don’t know about the world, and less likely to jump to conclusions; more capable of resting in “don’t know mind.”
- It can help bring us to peace with the world – since we feel ourselves to be it in our subjectivity, from the inside out.
- It can help us take appropriate responsibility for what happens in our phenomenal world, since we are so intimate with it.
- It can enable us to treat important contents of awareness – such as perceived images of celestial beings – as real, just as real as the perception of an orange in our



hand. By giving them that heft of “real reality,” we naturally become more open to their influences.

You can find versions of both the strong and the subtle view of Subjective Oneness in Vedanta, and in the Mahayana and Vajrayana (Tibetan) strands of Buddhism – especially the emphasis on this view as a skillful means to awakening, independent of whether it is actually true.

In these traditions, the logical extension of the radically subjective view – combined with Objective Oneness, that recognizes the emptiness of the apparent individual self – gets us to our next subject, Transcendental Oneness.

Transcendental Oneness – “God is the spoon.”

In this view, “Thou art That.”

By whatever name – the Deathless, God, the Divine, the Mystery, the One Self, Buddha Nature – something/some process/some consciousness/some bliss/some ??? Transcendental is the Ground of both the material and the mental realms.

It infuses these realms, and is them in a fundamental way.

It is the underlying nature of the universe and consciousness. All apparent physical and mental phenomena are simply the play of the Transcendental.

They are all, at bottom, the Transcendental. It is in this sense that Ramana Maharshi said, “There are no others.”

Commonly, this union of conventional reality and Transcendental Ground is most immediately sensed in the meeting of personal, psychoneurologically rooted awareness and universal Awareness.

Our understanding is that much nondual psychotherapy is the facilitation of that meeting.

Our personal belief is that there is indeed a transcendental oneness that contains material and subjective oneness, and all apparent dualities. We can think of nothing more important or more sublime than to become ever more transparent to that Light, ever more animated by that blissful Love.

In terms of the brain, two capabilities stand out as useful for that process, which are aspects of the two central subjects of this essay:

- Abiding steadily as awareness
- Releasing the self

And if one stops short of presuming a transcendental principle – which is certainly an intellectually respectable position, as well as one’s right – it is still valuable to become increasingly capable of steady awareness and self release within the frames of ordinary duality, objective oneness, and subjective oneness.

The Nondual Brain

So, to re-cap the central points of the discussion in Part One of the neurology of awareness, from a nondual perspective:

- Awareness is produced by physical structures and processes within the brain.
- The architecture of those structures and processes is built up in layers, moving from simple to complex, that track our evolutionary history.

Be still
Listen to the stones of the wall
Be silent, they try
To speak your

Name.
Listen to the living walls.
Who are you?
Who
Are you? Whose
Silence are you?

Thomas Merton

- Much as there is a continuum within the animal kingdom of the neurological machinery enabling awareness, there is likely a continuum among animal species of awareness capacities – and thus a continuum of the experience of awareness . . . from the awareness of a spider to that of a dog to that of anyone here in this room.

- Within the brain, many sub-systems work together to enable awareness. There is no single place where awareness is constructed within your brain – or inside the brain of a dog or a shark.

- That which is represented and the representing of it within the nervous system co-occur simultaneously in the brain. This is remarkably consistent with what the Buddha taught with regard to the elemental moment of experience he called “contact,” which he defined as the meeting of sense-object, sense-organ, and sense-consciousness: the known and the knowing co-arise based on preceding causes and conditions.

In other words, within the normal functioning of the brain, there is no awareness without an object of aware-

ness. The object of awareness may be the quiet background hum of bodily maintenance activities, such as the “nadi sound” that Ajahn Sumedho refers to, which is likely the resonant frequency of some of the auditory circuitry of the brain.

Or even more subtly, in the “formless jhanas” described in the Buddhist canon, the object may be “the base of infinite space,” or “neither-perception-nor-no-perception.”

It is noteworthy that even in these profound, even mystical states, there is still always an object of awareness – and never awareness without an object.

It is only when one moves beyond the jhanas, into what is called cessation, that one enters territory that is by definition indescribable – perhaps all that can be said is that you’re not in Kansas any more! And that the ordinary mental and neural processes of awareness are suspended.

And from a much more down to earth, purely evolutionary perspective, this integration of awareness and object within the brain makes sense, since there is little to no apparent survival benefit in being purely aware.



Part Three:

Taking the Body for a Walk

*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

Introduction

That was all pretty intellectual, so let's shift gears a bit to explore an exercise about the experience of the self, and the experience of releasing it to some extent. Then in Part Four, we will explore the evolution and the neurology of the apparent self.

While the development of self-identity – and the individual personality that goes with it, linked to a unique personal history – is natural, and innate in the normal brain . . . it also makes us suffer, and causes harms to others when we set our own self against theirs.

The problem is not so much that there is a patterning of self in the mind and thus the brain – but that we identify with that patterning, grow attached to it, and cling to desires in terms of it.

In the exercise, we suggest that you start with a fairly brief meditation, and then get up and walk around some. But here's the emphasis: try to do the meditation and the walking with as little sense of personal "I" as possible.

For example, in the meditation, we will start with a chance for you to set the intention of letting go of self during the exercise, and then focus for a few minutes on the sense of letting go via the exhalation. Then we will suggest that you explore giving up all control over your breath, to the point that your body has to take over – don't worry, it will do so, just like it does every night when you are sleeping.

And then in the walking, you might explore whether there needs to be an "I" there for the body to walk, avoid bumping into walls, etc.

Throughout, even without much "self," there could still be awareness present that is somewhat localized to a particular body, including the perspectives available, literally, from that body's eyes. And executive functions present that decide to walk more quickly or slowly. And motor circuits present that guide movements and help you avoid tipping over.

But in all that there need not be the autobiographical self present, the personality with a history, "Rick" or "John" or "Stephanie."

So when we use the term "you" in the exercise, we are referring to a person in the sense of a specific body with a nervous system and awareness all co-arising, but not to a personality identified with that body and the history of events it has lived through.

You might have a sense of the activation of the personal self increasing and decreasing over the course of the

exercise. Just turn the record button on in your mind when we begin and let go from there. Anything important will be available for you to recall when we come back and talk about what you experienced.

Like any of the inner exercises we do, it's alright to experience whatever you get. And if it ever gets uncomfortable, pull out of it and shift your attention elsewhere. It's also OK to ignore these suggestions, and go with what feels most valuable for you.

We suggest that you read through the instructions a couple

times to familiarize yourself with them, and then glance at them as you need along the way. Pace yourself as you like, speeding up in certain parts and taking your time with others.

Instructions

Relax, with your eyes open or closed.

Taking a moment to come into your body . . .

Establishing the intention to let go . . . to let go of personal self . . .



Attention resting more and more in the sensations of breathing . . .

Feeling safe in this protected setting, among good people . . . Able to relax vigilance about the outer world and bring attention inward to the breath . . .

The breathing ongoing, the other contents of awareness just flowing on through . . . Without grasping after them or aversion toward them . . .

Continually letting go . . . The exhaling especially being a bodily letting go . . . Letting go of personal self with every exhalation . . .

If you like, relaxing any sense of top-down control of your breathing . . .

Allowing your body entirely to control your breath, just like it would if you were sleeping . . .

Letting go to the body . . . Letting go of any control of the breath . . . The body simply breathing . . . Releasing any personal attachment to the breath . . .

In this place of letting go, breathing continues. . . .

Awareness continues . . .

Spacious awareness with little or no sense of personal self . . .

Peaceful and pleasant . . . no need for self . . .

Awareness and the world ongoing . . . alright without a self . . .

Now if you like, experiment with opening your eyes, if you haven't already, to explore vision occurring without needing a personality present to receive it

Perhaps move your gaze around gently, experimenting with the objects of your gaze needing no self to receive them . . .

Now if you like, experiment with small movements, without a sense of personality, or self, directing them . . .

Perhaps a finger moving a little . . . or a shoulder shrugging slightly . . .

Intentions perhaps, directions perhaps, prompting those simple movements, but without needing a personality to guide them . . . If you like experiment with this . . .

Now if you like, experiment with gently standing up, without needing self to guide the standing . . .

Explore standing, and awareness of standing, without needing a personality to make standing happen . . .

There is awareness there, standing there . . . but does there need to be a self there?

And if you like you could explore moving a little, in that space, awareness and movement happening without needing an owner . . .

Now if you like, you could explore walking or moving about . . . without needing self . . . awareness without any identifying with experiences . . . we'll do this for five minutes in silence . . . and feel free to come sit down sooner

Now that we are about to come to an end of the exercise, if you like, take a minute quietly to be aware of self itself as an object of spacious awareness . . .

Penetrative

insight

joined

with calm

abiding

utterly

eradicates

afflicted

states.

- Shantideva

What reflections arise as awareness considers self . . . as awareness considers that personality with a certain name attached . . . ?

Perhaps compassion arises in awareness for that personality construction . . . that self . . . Trying so hard over the years . . . Compassion arising in awareness for the confusions of that self . . . For its frustrations and suffering . . .

Perhaps insight arises in awareness about freedom from self . . . Selfing arising in awareness like any other content of awareness . . . With no problem attached to it . . .

Reflections after the Exercise

It can be a little hard to move from the places you may have experienced during the exercise back into the realm of speech and verbal thought.

You might explore the sense of words and speech comprehended in the mind without needing self to do that Or even words being produced without needing a personality to make them

With respect, we'd like to offer these questions for you to consider:

Who are you?

Is there a self in awareness?

What caused self to activate, to become more prominent in the mind? Worry or fear? Anger? Desire?

Does the presence of self in the mind increase and decrease and increase again? Does self seem to be very minimal, even entirely absent, from time to time? Is self actually a fixed and permanent fixture of mind?

Is self unitary, or made up of parts? What holds those parts together? What is present when one or more of those parts is absent?

Is self a pleasant experience? Is there an inherent sense of contraction and tension always present with self?

Is self necessary to breathe? Is self necessary to walk? Is self necessary for sensations or thoughts or emotions to arise?

Is self necessary to express natural goodness into the world?

Part Four:

The Neurology of "Self"

No self, no problem.

– Monks . . . and death row inmates

Properties of "Self" in Your Experience

So what do we have so far?

"Seeing for yourself," as the Buddha and other teachers have advised, what have we observed about the properties of the self as it is directly experienced, such as in the exercise in Part Three?

It is:

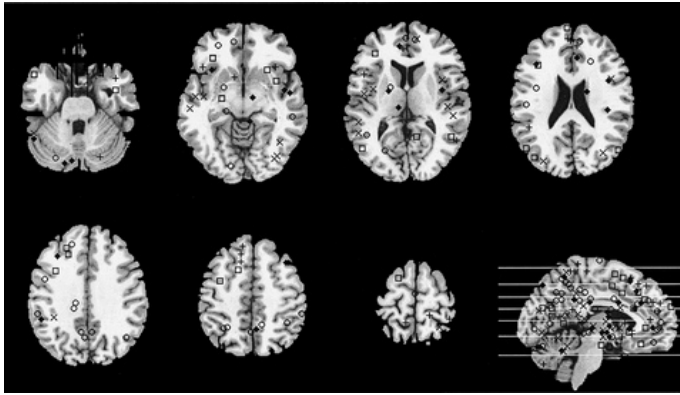
- An object of awareness – not awareness itself
- Associated with the events experienced by a particular body

and brain

- Activating and deactivating as a means to the ends of the organism, circuits lighting up to survive, then settling back down again when survival needs diminish . . . there is a process of selfing rather than a static, fixed, unchanging entity.
- Especially triggered by greed and hatred – by clinging . . . notice how desire generates selfing
- Variable, inconstant – impermanent
- Made up of parts – compounded
- Linked to a sense of tension and contraction – suffering

Properties of “Self” in the Brain

These properties of the self which we experience ... correspond to properties of the brain which can be observed.



Brain activations of “selfing” - Gillihan, et al., Psychological Bulletin, 1/2005

In the image just above, the different symbols – little squares, circles, diamonds, and “x’s” – indicate where different parts of the brain activate when different aspects of the self are engaged, such as recognizing a picture of oneself, recalling a personal memory, or making a difficult decision.

In other words, in the brain:

- Self functions are widely distributed, and not localized in one spot, like the homunculus in ancient thinking.

This means, by the way, that reducing self-oriented thoughts, perspectives, or frameworks dials down a major engine of mental activity, enabling the resources of the brain to be unified with the breath.

- The neural structures and activities that enable self to arise are just as physically real as the structures and activities that enable language to arise, or the smell of a rose, or the feeling of happiness.

In the sense that it is information represented in matter, self is just as real as an emotion, or a commit-

ment to social justice, or love, or awareness.

The point is not that self is unreal – but, as we shall see in a moment, that its neural nature, just like its phenomenal nature in our experience, is compounded and contingent – and thus empty of an inherent existence – volatile and impermanent, and saturated with suffering.

- Since the functions of the self are spread throughout the brain, as we just saw in the slide, self is clearly built up from and out of many sub-systems and sub-sub-systems. In other words, self is compounded in the brain.
- Consequently, self depends upon its component parts and all the sub-systems and activities that underlie those component parts. In other words, it depends upon many underlying conditions – it originates dependently. Self has no inherent existence in the brain apart from the structures and activities that constitute it, upon which it depends.
- Selfing activates in the brain like lights flickering and sparkling spread across a Christmas tree ... coming and going depending on conditions. It is fluid, transient in the brain, activating here, now fading, and activating there ... In word: impermanent.
- Self activates primarily in goal-directed activities. In the brain, it shows up particularly when the organism is pursuing an object – “greed” – and when it is resisting an object – “hatred.”

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 at the corner of Brooks and 3rd. “Early-bird” meditation starts at 6:45 with formal instruction at 7:00; meditation ends at 7:30, followed by a brief break, and then a dharma talk and discussion, ending at 8:30. It is led by Rick Hanson, and for more information, check out www.WiseBrain.org/sanrafaelmeditation.html. Newcomers are always welcome!

To put this in terms of Buddhist psychology, self activates as a response to the feeling tone of experience, especially when it is positive or negative (the neutral feeling tone does not call for an immediate and energized response).

Self approaches the pleasant and avoids the unpleasant.

This is why equanimity – in the technical sense of not reacting to the feeling tone . . . you are not reacting to your reaction of “This is pleasant” or “this is unpleasant” – is a vital practice that undermines clinging, and in particular, the clinging that comes via the activation of “me,” of “mine.”

- In sum, the experiential qualities of your self – “empty,” impermanent, and suffering – correspond to underlying properties of your brain.

Now, this is probably a good point to offer a brief comment about “out-of-body” experiences (OBE’s), or similar visions, “felt presences,” psychedelic experiences, etc.

On the one hand, OBE’s and related experiences are a powerful opening into what we have argued in this essay is in fact true, that there is both objective and subjective oneness – and, in our personal opinion, transcendental oneness as well. On the other hand, it is also the case that OBE’s can be triggered in a research lab by manipulating the localization of body-in-space that is constructed by the parietal lobes of the brain. OBE’s and the sense of a felt presence also accompany many epileptic seizures.

Because OBE’s are remarkable and often associated with personally meaningful interpretations, to point out their associations with neural activities – and sometimes dysfunctional neurology at that – can be taken as undermining their potential profundity. We do not mean to do that here. Our view is that whatever it is that pops open “the doors of perception,” in Aldous Huxley’s phrase, does not change or taint what one finds on the other side. Perhaps some brain states that are arguably pathological paradoxically enable a person to sense deeper truths of existence that are ordinarily obscured by normal brain activities, much as the stars in the daytime are obscured by the sun – but still always present.



Part Five:

The Evolutionary Origins of Self

The dualistic ego-mind is essentially a survival mechanism, on a par with the fangs, claws, stingers, scales, shells, and quills that other animals use to protect themselves. By maintaining a separate self-sense, it attempts to provide a haven of security . . . Yet the very boundaries that create a sense of safety also leave us feeling cut off and disconnected.

- John Welwood

Introduction

To help ourselves – and others, perhaps – to transcend the self, it helps to understand why the self arises in the brain – in other words, to understand the survival functions of the self and their evolutionary origins.

By addressing those needs of the organism through ways other than self, we can – in effect – thank self for its vigilance and its labors throughout the years, and then say, “Good night sweet prince,” and put self to bed, at least for a time – and, perhaps with liberation, forever.

So, where did this self come from, anyway?

Origins of Rudimentary Self

Our account of the development of self in evolution – and its related architecture in the brain – is straightforward, but it can get a little thorny, so we are going to take it step by step, with numbers, no less.

The key question we will try to answer is, How does the brain construct the two fundamental properties of self: identity and

agency?

1. As D’Amasio and others have noted, with rudimentary core consciousness – imagine that of a worm or a fly – there are basic representations of the state of an organism’s body.

Those representations comprise the experience of the organism.

2. With rudimentary memory functions, repeated representations of experiences become summarized and represented themselves as the experiential history of the organism. These representations embody expectations about the future given certain pasts.

For example, learning that enables an organism to survive – such as a flatworm learning to turn left in a maze to avoid an electric shock – is a representation of a part of the experiential history of that organism.

3. In each representation of the state of the organism’s body, there is a built-in reference to a particular body distinct from the environment and other organisms. In a worm or a fly – or deep in a human brain stem – this reference is certainly not conceptual, but an implicit, embedded localization of where those states of the body are occurring.

Further, this localization, this particularity, is enriched and strengthened by the association of different sensations of the body with each other, since they happen at the same time.

4. Over time, there is a continuity of implicit references to a particular body, giving rise to representations of the ongoing existence of a particular organism. Again: not conceptual representations, but more like the way that dot-dot-dot – point-point-point – of moments of references to a particular body soon look like a continuous line.

5. These representations of bodily individuality and continuity likely form a kind of architecture, with most elemental representations at the bottom, and increasingly summary representations-of-representations – and representations-of-representations-of-representations-of-representations, and so on – built up from more elemental levels.

For example, as an embodied learning that helps an organism to survive, there are likely clusterings of similar references-to-a-particular-persisting-body, such as: the-body-at-rest, the-hungry-body-seeking-food, the-body-mating, etc.

In turn, these references to a particular body in particular states become cross-referenced and represented summarily as

a particular body persisting through multiple states.

6. So then what we have is stability of a particular body against a backdrop of change. At a rudimentary and fundamental level, that stability gets represented as a specific physical identity distinct from the world.

7. This representation aids goal-directed survival activities. In effect, in a very basic sense, this representation supports intentions which, if they were put into words, would be along the lines of: “avoiding painful things happening to this body and pursuing pleasant things.”

At the most basic level, those intentions are probably represented as a sequence of representations of the body acting upon the world. In essence, this is a representation of an agent acting upon an object.

8. In addition to these representations of states-of-body, at some fairly low level of neurological complexity, there begin to be representations of states-of-mind – starting with the



most elemental experiences of pain and relief from pain, and then as one moves up the evolutionary ladder, becoming more elaborated and nuanced with emotions and socially-related experiences such as basic empathy.

The capacity to represent states of mind gives an organism significant survival advantages, through offering more things to learn from, and through widening the repertoire of what could be motivating for an organism and thus encouraging of adaptive activities.

And it enables linked intentions: “avoiding painful mental states and pursuing pleasant mental states.”

Like physical intentions, these mental intentions probably also take the form of sequences of action-toward-mental-state, which also have the inherent, implicit structure of agency applied to object.

9. These mental states are presumably associated with simultaneous bodily states. So then we assume that there develops an architecture of representations of linked mental-and-physical states, culminating in a specific physical-and-mental identity distinct from the world.

10. In parallel with mental and physical states, there is the experiencing of those states. Not, at the level of a worm, necessarily by a subject in any sense that we would use that term as applied to a human, or even an ape or a dog – but as a bare, completely stimulus-bound registration of sensations in the most elemental awareness.

Since the nervous system is fairly stable, there is a likely a similarity from moment to moment of the attributes of experiencing itself. In a sense, the experience of experiencing is pretty consistent, pretty stable, over time.

The stability of experiencing is thus distinct from the variability of the contents of experience – which are physical and mental states – and so experiencing, and thus the awareness

that is woven into experiencing, also seems to have a relatively stable identity over time.

10. Further, awareness also gets associated with simultaneous bodily and mental states. In the ways we have just discussed, presumably those associations get represented and an architecture of representations of representations forms, culminating in a specific physical-and-mental-and-awareness identity distinct from the world – and associated with intentions to avoid painful experiences and seek pleasant ones, which means being an agent, an actor, in the world.

And thus the self is born.

At least in its most elemental form.

Evolution of Complex Self

Moving up the evolutionary ladder, the brain stem architecture of self that we have described so far gets more stories as the layers of the reptilian brain and the limbic system get added on.

With added neurological equipment come added capabilities. For example, territoriality and possessiveness come on-line: red ants try to kill black ants, sea turtles protect their nests, and rats fight over food, and so on.

Presumably, the elemental self gets associated in the brain with its territories and possessions, and the representation of that association is the beginnings of identification: “you mess with my eggs, buster, and you’re messing with me.”

Then, with the development of the neomammalian and then the primate brain, more stories get added, and we have a tall office building – 50 floors maybe – of self in the brain of a horse or an orangutan.

With these neurological developments, really interesting things start to happen, such as:

- Self in relation to a mate or others
- Self that has empathic sensing of the states of others that are distinct from one's own
- Representations of personal identity – in effect a kind of primitive self-concept, self known to itself – that is beginning to be teased out in studies of higher mammals, especially primates.

And last, with the advent of the human brain around 150,000 years ago – and perhaps really with the advent of linguistic and cultural capabilities in the brain that some scholars think appeared about 40,000 years ago – we have the full flowering of the architecture of the self, a veritable skyscraper of “me, myself, and mine.”

For example, the wonderful frontal and temporal lobes give us autobiographical consciousness, with which we can reflect upon ourselves in the past and imagine ourselves in the future. We can predict what we might experience in different situations, and plan accordingly. We can tell stories about ourselves, change our personal narratives some times, and even love our inner child.

In sum, we have inherited an architecture of self grounded in brain structures designed by evolution to promote survival in extremely harsh conditions.

This brain structure of self is what it is – but now we live in different times, with much more knowledge about our own brain. Therefore, we have vastly more opportunities for managing and even transcending the tendencies of our brains, and thus our minds.

Part Six:

Transcending the Self

Selflessness is not a case of something that existed in the past becoming nonexistent. Rather, this sort of “self” is something that never did exist. What is needed is to identify as nonexistent something that always was nonexistent.

- The Dalai Lama

Introduction

To soften the grip of the self, even to the point of complete release, it helps to replace the conditions which activate it with conditions that promote its absence.

So let's explore what some of those liberating conditions might be and how to encourage their presence in your mind

and your life.

Understanding of “Not-Self”

Having a basic understanding of “not-self” – anatta in Buddhism – and perhaps even some penetrating insight into it, is foundational. This includes a personal conviction, based on reason and experiential “seeing for oneself,” of the truth of this clarity about the nature of self and its problems.

Many, many traditions offer very clear and persuasive analyses of the groundlessness of the individual self, and of the benefits of opening up into the larger, even universal, ground – Ground? – of being. For example, in Buddhism, clinging to

self is one of the four main objects of attachment that lead to suffering.

The importance of understanding – conceptual, experiential, and embodied – should not be underestimated amidst legitimate concerns about getting too heady or lost in thought.

As an illustration of this point from Buddhism, Wise View is placed first in the discussion of the Noble Eightfold Path since it is foundational for what follows.

Activating the Parasympathetic Nervous System (PNS)

Since a sense of threat triggers the self strongly, it is very helpful to activate the “rest-and-digest,” parasympathetic wing of the autonomic nervous system, which dampens the

“fight-or-flight,” sympathetic wing. The PNS brings feelings of safety, calm, and contented well-being. If you flop down on the couch after a long day of work and breathe out and feel at peace, your PNS is lighting up all over your body. (For an extensive discussion of the stress response systems in your body, the problems of chronic stress, and ways to activate the PNS see the article, The Parasympathetic Nervous System, at www.WiseBrain.org).

There are many ways to activate the PNS; here’s a quick summary:

- Full breaths, especially exhalation
- Deep relaxation
- Balancing heart-rate variability; HeartMath
 - Mindfulness of the body
 - Yawning
 - Meditation

Fading of Desire

Since the other main source of self-activation is desire, turning down the thermostat on that furnace can relax selfing – among many other benefits. This is where equanimity really helps, plus basic functional fulfillment of the essential needs of the person, plus reasonable and realistic goals and wants, plus the absence of addictions.

Acceptance helps, too, as Peter Fenner writes:

*We stop making problems out of having problems!
We accept . . . our experience - our life circumstances, not in a defeatist way, but with dignity and grace. We welcome what is as a gateway to the unconditioned mind.*

Blurring the Boundaries of the Self

When you feel a strong sense of integration with the world, self is needed less and less to



protect you from the world or move against the world. You are identifying less and less with a particular body and point of view and personal history; recall that identification was one of the two fundamental functions of selfing.

This felt sense of body-and-mind-and-world-are-one is aided by a conceptual clarity about the actual oneness of all things – including self and world – and by practices that blur the edges of each. For example, meditations on lovingkindness bring a sense of emotional connection and joining with other people. Meditations on space or spaciousness open us out as well. Concentration practices that really quiet the parietal lobes can also quiet their construction of the localization of the body in space. And contemplations on emptiness – on how self is compounded and dependently originating – undermine any felt distinction between self and world.

Relaxing Agency

The other fundamental function of selfing is agency, which you can relax in daily life by emphasizing letting go. More formally, in meditation, focus on the sense of receiving the breath, of being a space it enters, rather than willfully going out via attention to “get” it. You may like to add a sense of devotion to the breath . . . the breath as a friend.

You could also give yourself over to healthy precepts or practices, and in a sense, put them in charge. For example, you could turn over agency to the Five Precepts in Buddhism (i.e., Do not kill, steal, lie, create harms through sexuality, or use intoxicants that cause heedlessness). Or, in more everyday senses, you could give yourself over to “the angels of your better nature,” or to wholesome purposes.

Devotional practices can support this further, such as prayer – for example, “Your will, my Lord, not mine.” The same with devotion to a guru.

(Obviously, any surrender of agency needs to be done carefully; first of all, do not harm yourself.)

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

Undermining the Sense of Self

Again, doing this carefully and not harming oneself, you could treat your own self as unimportant or existing for the benefit of others. Examples from formal spiritual practice include:

- Dedication of merit
- Karma yoga, in which you are unattached to the personal fruits of your efforts
- Tonglen practices in Tibetan Buddhism, in which you draw to and through yourself the suffering of others
- Vows of poverty when one becomes a monastic, or any other form of renunciation
- Insight meditations like Vipassana that deconstruct the elements which comprise the apparent self.
- Charnel ground meditations, in which you imagine in vivid detail the ultimate dissolution of the body
- Practices such as Stephen Levine’s “A Year to Live.”

In daily life, you can deliberately orient to experience flowing by as provisional, just the brain at this time – “not me” – without identifying with it or attaching to it like velcro as “me” or “mine.” If you want to raise the bar, you could embrace narcissistic injuries as opportunities for practice (!).

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.

Taking Refuge

Finding sanctuary in, taking shelter in, identifying with – these are all forms of taking refuge, an important part of most any spiritual tradition.

As to where you find refuge, consider God, or Bodhicitta, or Awareness, or True Self . . . or simply the beingness at the root of every person, probably a fundamental property of the human nervous system, which is always already aware, peaceful, benign, and content.

Letting those . . . or That . . . be the source, the stream of one's life . . . being lived by them, as them . . .

Doing this involves getting a sense of those refuges . . . registering them in memory . . . and then learning how to find yourself back to, or evoke, them again. Here's where the

skill of “taking in the good” can really help, creating a kind of well-worn path in the meadow of the mind back to the wellspring.

It also helps to have a developing conviction of the reality of those refuges. They may be obscured momentarily by greed, hatred, or delusion – or, in conventionally psychological language, by complexes and neuroses and defense formations and maladaptive cognitive-affective structure – but they still continue to exist.

Like the reassuring realization that Sam had in *The Lord of the Rings*, when he saw:

. . . peeping among the cloud-wrack . . . a white star twinkle for a while. The beauty of it smote his heart, as he looked up out of the forsaken land, and hope returned to him. For like a shaft, clear and cold, the thought pierced him that in the end the Shadow was only a small and passing thing: there was light and high beauty for ever



beyond its reach.

It's a remarkable fact that the people who have gone the very deepest into the human mind and heart – the sages and saints of every religious tradition – all say the same thing: the fundamental nature of every human being is pure, conscious, peaceful, radiant, kind, and wise . . . and is joined in mysterious ways with the ultimate underpinnings of reality, by whatever name we give That.

Joining with Others

Last, and as an appropriate way to begin our glide path down to the end of this essay, we must of course speak of joining with others.

Empathy and cooperation are deep in our evolutionarily-derived nature. For example, the need over the last hundred million years or so to develop greater and greater capacities to understand, connect with – and ultimately, to love – others of one's species . . . all the way to us humans . . . has probably been the most significant driver of the evolution of the brain.

We release the self contraction in relationship. Thus the central meditation of Rick Hanson's teacher for some years, Adi Da: "Avoiding relationship?"

Thus the importance of ordinary intimacy.

Thus the importance of presence – even Presence – as it is beautifully described and explored in the nondual teachings, including the essays in *The Sacred Mirror* and in *Listening from the Heart of Silence* (John Prendergast was the senior editor for these).

Any thus the importance of what is called sangha in Buddhism – the company of other practitioners, particularly the more senior ones – which the Buddha reminded Ananda, his primary attendant, was "not half, but the whole of the holy life." One way this works is that, by seeing the true nature of

others, we see the true nature of ourselves, as Adyashanti affirms: *What is intrinsic within me is by nature intrinsic within you.*

It is also in relationship with others that the importance of personal virtue – sila, in Buddhism – is particularly apparent. By "giving no other cause to fear you," you reduce the causes that lead others to act in ways that tend to trigger the activation of self. As the Buddha observed: *Outstanding behavior, blameless action, open hands to all, and selfless giving: This is a blessing supreme.*

And, of course, that virtue supports your own realization . . . to the extent that realization is ever one's own! Consider this statement from the Venerable Tenzin Palmo, an Englishwoman who spent twelve years on retreat in a cave in Tibet, and another twelve or so on retreat in other settings: *Wisdom is . . . all about understanding the underlying spacious and empty quality of the person and of all experienced phenomena. To attain this quality of deep insight, we must have a mind that is quiet and malleable. Achieving such a state of mind requires that we first develop the ability to regulate our body and speech so as to cause no conflict.*

Conclusion

And no better ending than this pithy advice from the Buddha to the wanderer, Bahiya, who was enlightened upon hearing it:

Then, Bahiya, you should train yourself thus: In the seen, let there be only the seen. In the heard, let there be only the heard. In the sensed, let there be only the sensed. In the cognized, let there be only the cognized.

When for you there is only the seen in reference to the seen, only the heard in reference to the heard, only the sensed in reference to the sensed, only the cognized in reference to the cognized, then, Bahiya, there is no you in terms of that. When there is no you in terms of that, there is no you there. When there is no you there, you are neither here nor there nor between the two. This, just this, is the end of suffering.

Offerings

Rick Hanson, PhD, and Rick Mendius, MD

1. On Saturday and Sunday, February 23 and 24, Rick Hanson will be leading an experiential and powerful personal growth workshop called Being Your Best Self. Deep within each one of us, grounded in the structures of the brain, is a core of being that is courageous, caring, and contented – and this workshop is about removing blocks to living from that core, and about energizing it in your relationships and in your work. We'll be sending out more detailed information about this workshop in early January.

2. At Spirit Rock, in 2008, these daylongs are scheduled:

- The Neurodharma of Love, led with Sylvia Boorstein, on Sunday, March 30. Sylvia, as you may know, is quite extraordinary – sort of a cross between a Jewish grandmother and the Dalai Lama – and this workshop will be memorable. The emphasis will be on relationships in general and love in the broadest sense, integrating deep teachings on compassion and lovingkindness with a clear-eyed understanding of how we evolved to be caring toward “us” and often wary and aggressive toward “them.”

- Equanimity, led with Christina Feldman, on Sunday, May 11. Christina is a senior Vipassana teacher from England who combines profound penetration with practical good humor. Equanimity is the key to freedom from emotional reactions, and to cutting the chain of craving and clinging that leads to suffering.

- The Neurology of Awakening, on Saturday, September 6. We'll cover how to nurture the brain states that foster the steadiness of mind leading to the deepest and most liberating insights. This is our foundational workshop, with solid neurology and practical tools for activating, step-by-step, the brain states of the Buddha's progressive process of contemplative illumination.

- The Hard Things That Open the Mind and Heart: Practic-

ing with Difficult Conditions, led with James Baraz, on Sunday, November 2. This is for people grappling with difficult conditions – both internal and external – and for caregivers and friends who support those individuals. These include challenges with the body, mind, and life circumstances. We'll cover Buddhist perspectives and practices for difficult conditions; lovingkindness for oneself and for any being who suffers; brain-savvy ways to strengthen your capacity to be with the hard stuff; and methods from the intersection of the dharma and neuroscience for lifting mood and cultivating joy

- Resting in Emptiness: The Evolution of Awareness and the Transcendence of the Self, on Sunday, November 30. This workshop will address the thorny and fundamental question of . . . “me, myself, and I.” The self – with its tendencies to grasp after possessions and take things personally – is perhaps the premier engine of suffering. We'll explore the evolution of the apparent self in the animal kingdom, and the ways in which the self is real and is also not real at all, coming to rest more and more in the underlying spacious awareness in which self appears and disappears.

3. At One Taste in San Francisco – an organization and living collective dedicated to conscious and embodied relationships – on Tuesday evening, April 15, we will be giving a public talk on the evolution – and transcendence – of jealousy. It should be a fun, playful, and informative event.

4. At the Sati Center in Redwood City, California, on Saturday, October 4, we will be presenting the Resting in Emptiness daylong.

5. At Claremont Graduate University, during October 19 – 21, we will be discussing at a conference on using neuropsychology to help illuminate the common ground – and differences – among the contemplative practices of different faith traditions.

Fare Well

May you and all beings be happy, loving, and wise.