

# The Wise Brain Bulletin

News and Tools for Happiness, Love, Effectiveness, and Wisdom  
Volume 1, 9 (6/14/07)

*Featured Article:*

## *Coping with Loss: Implications of Neuroscience and Contemplative Wisdom Part Two*

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### **Preface**

In the previous issue of the Bulletin (Vol. 1, #8), Part One of this article reviewed basic information about your own brain, and then explored the latest science about what goes on inside it when you experience a loss, or merely anticipate one. Now, in Part Two, we'll weave together methods from psychology and contemplative practice – both informed by neuroscience – that you can use to bear and cope with and heal and grow from your difficult experiences, and those of others you care about.

Because it is central to this article as a whole, I'm going to repeat most of the Introduction just below, which also appeared in Part One; you can skip it if you've got a great memory!

### **Introduction**

We all must face losses of one kind or another. For example, my mother died two years ago, plus I've had to anticipate the loss of my 88-year-old father – who

happily is still going strong. Besides the dramatic losses of loved ones, there are other, sometimes as wrenching, losses having to do with animal companions, place (e.g., refugees), or limbs or faculties. Subtle, even abstract losses – such as reputation, standing, trust, or innocence – can also tear at your heart.

Then, of course, there are the many losses woven into the fabric of everyday life. Once in Yosemite, when our son was maybe six or seven, he was watching a rugged-looking rock climber (who, we found out later, had just received his MBA) play chess with himself in a café. Wally – the climber – invited Forrest to play a game with him, which our son enjoyed immensely. When he was finally checkmated (after a valiant struggle, I'm proud to say!), Forrest tried nearly as valiantly to persuade Wally to play another game. Wally smiled, and then said, "You know, all good things have to come to an end."

Whether it's a warm snooze in bed, a hot fudge sundae,

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## Greetings

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

The Bulletin is offered freely, and you are welcome to share it with others. Past issues are archived at [www.WiseBrain.org](http://www.WiseBrain.org).

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

The Bulletin is normally published twice a month, but because Rick H is off to Australia and New Zealand for two weeks for his brother's wedding, the next issue will come out in early July.

a vacation, a great conversation, or old friendships when we move on to new situations . . . all good things must indeed come to an end: an irrevocable loss forever of that particular moment of experience.

This fact of loss, ranging from trivial to shattering, is so central to the human experience that all the world's major philosophies and religions have grappled with how to find meaning in it, and ways to cope. Consider Existentialism, developed mainly in refined European intellectual circles in the 20th century, whose central theme is the confrontation with personal

mortality. Or these words, written down somewhere in a small village or dusty caravan over two thousand years ago:

*To every thing there is a season, and a time to every purpose under heaven:*

*A time to be born, and a time to die;  
A time to plant, and a time to pluck up that which is planted;  
A time to kill, and a time to heal;  
A time to break down, and a time to build up;  
A time to weep, and a time to laugh;  
A time to mourn, and a time to dance;  
A time to cast away stones, and a time to gather stones together;  
A time to embrace, and a time to refrain from embracing;  
A time to get, and a time to lose;  
A time to keep, and a time to cast away;  
A time to rend, and a time to sew;  
A time to keep silence, and a time to speak;  
A time to love, and a time to hate;  
A time of war, and a time of peace.*

*Ecclesiastes 3:1-8*

Every time must come to an end – whether it is pleasant or unpleasant, ugly or beautiful, wholesome or evil – because of the inherent nature of the universe: if things did not naturally end, then there would be no change; the universe would be static, eternally the same, and life could not exist. Who knows, perhaps there may be universes of that sort, but the one in which life can occur – this one, which contains the life that is reading these words – must endlessly change. It is precisely that which enables new things – loves, children, sunrises, teachings, pleasures – which also brings their endings. And our losses.

In Buddhism, this impermanence is regarded as one of the three fundamental “marks” of existence (the others are

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## Train Your Brain

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

The class meets on the 2nd Tuesday of every month, 7 – 9:15 pm, at the Unitarian Universalist church in Terra Linda (San Rafael), at 240 Channing Way. The atmosphere is warm, informal, and focused. The fee for each month of the program is \$40 (please contact Rick Hanson if you would like a scholarship). To register, contact Guisela Luster at [drh@comcast.net](mailto:drh@comcast.net) or simply arrive fifteen minutes early.

Upcoming dates and topics:

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



- Balances the “sympathetic” wing of the nervous system (the SNS): “fight or flight”

- Is primary; unlike the SNS, the PNS is necessary for life

General methods for activating and strengthening the PNS include:

- Breathing, especially exhaling

- Relaxation

- Improving heart rate variability; check out the HeartMath Institute

- Yawning

- Positive emotion

- Fiddling the lips (really!)

Contemplative methods for the PNS:

- Lovingkindness for oneself and others is a relaxing, heartfelt, and positive emotion that lights up the PNS like a Christmas tree. You can do lovingkindness informally, simply by wishing someone well. In a more formal, Buddhist practice called “metta” meditation, you repeat phrases sincerely in your mind that take the form of “May you \_\_\_\_\_.” The classic phrases are:

May you be safe.

May you be healthy.

May you be happy.

May you live with ease.

You can change these phrases however you like, and the people they can be applied to include yourself, a benefactor, a friend, a neutral person, and a difficult person.

- Intense types of positive emotion can be experienced and even cultivated through contemplative practice, including joy, contentment, tranquility, bliss, and rapture.

### **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.

In fact, two of the five primary factors that lead to the non-ordinary states of consciousness in Buddhist meditation known as “jhanas” are rapture and happiness.

If you like, try to call up memories or thoughts or images that make you feel happy. Experiment with this and find the “cues” that work for you. Notice the nature of the experience in your body. Try to intensify it, then let it calm, then intensify it again. As with any positive state of mind, see if you can develop a strong “sense memory” of the experience so you can re-activate it deliberately if you want.

- Resting in core consciousness, “fair witness” – This is the place of simple observation that registers experiences without judgment. For more on core consciousness, see Antonio D’Amasio’s book, *The Feeling of What Happens*.

- Abiding as “true nature,” Bodhicitta, (the Divine?) – At the deepest levels of consciousness, great teachers have said there abides a fundamental core of beingness that is the essence of who we are. And some have gone a step further, and have said that this nature is identical with the nature of a posited Transcendental . . . Something. To whatever extent any of this is meaningful to you, you could explore taking refuge there. A simple step is to try on the possibility that your true nature – always with you, simply covered over by reactive mind – is aware and peaceful, happy and kind; presume for some moments that that is indeed the case, and live as that and from that, and see how that feels.

### **Frontal Lobes**

Literally the front portion of the cortex, these regions – which encompass a good deal of brain volume – handle many functions, including these that are involved with grieving:

- Finding meaning

- Planning responses to loss

- Bringing verbal influences to intense emotional and somatic processes

- Controlling problematic expressions of feelings and desires

General methods for the frontal lobes include:

- Have conscious reasons for self-care; be for yourself.

This was the subject of the third Train Your Brain class, whose article can be downloaded here: <http://www.wisebrain.org/YourPreciousLife.pdf>.

- Deliberately exercise the will.
- Make intentions conscious, multi-modal, and vivid; call to mind a strong sense of the desired state.
- Give instructions to yourself.
- Re-intend at short intervals.

Contemplative methods include:

- Hold helpful perspectives on loss. For example, reflect on how everything is impermanent, and that it is the inevitability of death that enables life.

Or consider the compounded and interdependent nature of everything; the departed loved one is part of everything and goes on as everything. (An interesting variation on this theme is found in what's called process theology, in which some have suggested that God partakes of the lived experience of every being, and so that experience lives on forever in the eternal Divine.)

From a Buddhist perspective, this fact of existence means, ultimately, that there is no "I" or "me;" much suffering comes from taking things personally or trying to glorify

the "I." This view finds support in modern neurology, which has found that the functions of the psychological self are distributed widely throughout the brain; there is no homunculus localized somewhere and looking out through your eyes.

Or find what is personally helpful in the beliefs of different religions, such as the Christian and Muslim belief in heaven, or the Buddhist and Hindu doctrine of reincarnation.

- "Channel" a teacher or mentor. This means deliberately bringing to mind such a person, intentionally focusing on his or her qualities, and then imagining you are that person in some regard, such as how you are approaching a difficult matter.

A commonplace example of this happened once when I was rock-climbing. For a while, I watched a really great climber moving with beautiful fluidity and precision and grace. I tried to get a sense within my own body of what he could be experiencing, and key aspects of his approach to the rock. Then, when it was my turn, I just imagined I was him and tried to climb in the same way, "playing back" the "recording" of him I had made in my mind. I felt really different, and sure climbed more effectively.

A profound example of this modeling is contained in the simple question, "What would Jesus (or Buddha or?) do?" (If you'll forgive a political reference, the power of that



simple question echoes in the bumper sticker you may have seen: “What would Jesus bomb?”)

- Give yourself over to wholesome practices and precepts. There are many ways to do this, including writing out some affirmations at the start of each day, or adopting precepts such as never taking that which is not freely offered.

This guidance for your mind can be visual as well. For instance, I make collages sometimes, perhaps at the start of the new year, or related to a theme such as my hopes for my family. You might like to try this yourself if you haven't already.

## **Cingulate Gyrus**

You may recall that it was the cingulate gyrus which lit up during deep meditation or prayer (the pale “caterpillar” in the picture at the start of this article. It helps us cope with loss in many ways:

- Retrieving autobiographical memories (i.e., with the person)
- Integrating emotion and memory, and thinking and feeling
- Controlling attention
- Interest in other people

You can activate and strengthen the cingulate gyrus by:

- Activities which call for monitoring performance (e.g., meditation, careful crafts, precision sports).
- Deliberately linking emotion and memory (e.g.,

scrapbooks).

- Linking thinking and feeling (e.g., speaking one's experience or reflecting about it in present time, therapy).

The premier contemplative methods for strengthening cingulate gyrus functions are meditation and prayer. As mentioned, regular, longstanding practice leads to measurable thickening in the anterior cingulate region – especially relative to comparable individuals who are more elderly; meditation may actually slow the cognitive declines of aging.

Researchers have also found other benefits for meditation, including better control of attention, more ability to be aware of bodily states, greater empathy, better integration of thinking and feeling, improved mood, and a stronger immune system. Not bad at all for a method that can be done anywhere at any time, costs nothing, and takes just a tiny fraction of your day.

There are certainly many kinds of meditation and prayer, and there is preliminary evidence that some of the variations in meditative practice and experience correlate with observable differences in the brain. For example, mindfulness practice – relaxed presence with whatever passes through consciousness – activates different regions than concentration practice, which seeks absorption in a single focus of attention.

Concentration practices probably have a particular benefit for the cingulate gyrus, since they require close attention to . . . attention, which is a prime function on the cingulate. Similarly, reflections or visualizations that integrate emotion with thinking or with imagery also stimulate this region of the brain; examples include chanting, repeating the Lord's Prayer, Tibetan tonglen practice, and lovingkindness meditations.

Whatever you choose for yourself, consistent practice will make the most difference for you. If you do not have a regular meditation practice, try to commit to meditating at least one minute every day, and then build from there.

## **Insular Cortex**

This part of the brain (sometimes called the insula) is very involved in sensing the internal states of the body, and therefore may play a central role in what's called “core

### **Grateful Wonder**

In past issues, we've usually linked to incredible cosmic photos. This time, we've got goodies that are much closer to home. The first is an extraordinary, haunting video, which you may have seen on YouTube, that moves through a thousand years of women in Western art in three minutes. The second is simply a ridiculously fun web page sent to us by a contributor in which you can make your own garden.

Enjoy!

- #1 [http://www.youtube.com/watch?v=nUDIoN-\\_Hxs](http://www.youtube.com/watch?v=nUDIoN-_Hxs)
- #2 [http://www.procreo.jp/labo/flower\\_garden.swf](http://www.procreo.jp/labo/flower_garden.swf)

consciousness” (see the references to this in the section on the parasympathetic nervous system above). When you’re grappling with a loss, there’s often an increased sense of your own bodily (especially visceral) states. Further, grieving often feels heavy or weighty, and the insula is probably involved in that experience, as well.

Here are some general methods for stimulating the insula and gaining more conscious control over its functions:

- Internal sensing activities (e.g., sensory awareness, Feldenkrais, yoga)
- Abiding in physical pleasure

The main contemplative practice that stimulates the insula is whole body awareness. Most of the time we sense just one part of our body at any given moment. Just observe your own body for a minute or two, and you’ll see different and localized sensations claiming your attention as the seconds tick by. Then, by contrast, try to sense your body as a whole. You’ll probably get a global, “gestalt” sense for a few seconds at a time, and then it will crumble to be replaced by a more particularized sensing; when this naturally happens, just keep regenerating the whole body sensing.

By the way, this method also probably stimulates the right hemisphere of your brain, which has a calming influence and thus increases the benefits of whole-body awareness. Other ways to stimulate the right hemisphere include visualization, singing, and meditations on spaciousness (e.g., blue sky).

## **Amygdala**

You have two amygdalas (amygdalae?) actually, one on each side of your brain. They are about the size and shape of an almond (whence their name), and they have an incredibly central role in everyone’s emotional life. For example, when you are coping with a loss, these little nodes:

- Interpret stimuli (internal and external) as unpleasant or pleasant; when they’re unpleasant, the amygdala sends instructions to resist or avoid them (fight or flight), and if they’re pleasant, to move toward them.
- Get overly active in nightmares

- Play a major role in any traumatic components to grieving

There is a growing, applied science for how to incline the amygdala in a more positive direction. For a summary, take a look at the slide show for the Neurology of Awakening workshop ([http://www.wisebrain.org/Neuro\\_Dharma.pdf](http://www.wisebrain.org/Neuro_Dharma.pdf)) and its Summary of Methods (<http://www.wisebrain.org/WiseBrainMethods.pdf>).

Here, I’ll emphasize just one of these general-purpose methods, which makes use of the fact that the brain continually reconstructs your memories (unlike a computer, which simply grabs the complete record out on the hard drive). If you infuse the reconstruction with positive qualities, then when the memory is stored anew, it will carry with it some of the positive associations you imbued it with. Over time, that will increasingly shade the



atmosphere, the context, the meaning, the frame of the memory in a positive direction. You will never forget the facts of what happened, but your experience of those facts can become more peaceful and resolved.

There are many ways to do this, by recalling what occurred:

- In a context of spaciousness
- With compassion and encouragement for yourself
- While remembering that you coped and got through
- And acknowledging factually the good qualities in yourself that helped you with the experience or which remained present at least some of the time even though things were hard
- And to the extent you can, bringing a sense of letting go of the painful feelings . . . even to the point (if it feels right to you) of forgiving others – and even yourself.

In contemplative practice, cultivating equanimity – or its close cousins, calm and tranquility – is a very direct training of the amygdala. For example, in Buddhism, the chain of events that leads to suffering includes this crucial sequence:

- Contact with stimuli (both internal and external) . . . leads to:
- A “feeling tone” of pleasant, unpleasant, or neutral (produced mainly by the amygdala) . . . leading to:
- Craving, the experience of grasping after the pleasant or wanting the unpleasant and the neutral to become pleasant . . . leading to:
- Clinging, a more stable state of mind that clutches at the objects of its desires . . . leading to:

- Suffering

Equanimity practices involve not reacting to our reactions (see <http://www.wisebrain.org/Equanimity.pdf>), and thus cut the chain of suffering, at least for a time. They include:

- Become more aware of the feeling tone of your experience.
- In particular, be mindful of the neutral tone – which is easy to miss since it is . . . neutral, beige, the taste of water. Besides helping you become more mindful, and drawing you into the peacefulness of the neutral, this practice will be sensitizing your amygdala to neutral stimuli so that it will react increasingly to them, and not just flag pleasant or unpleasant stimuli.
- Notice how pleasant, unpleasant, and neutral come and go endlessly on their own. This growing insight helps you relax more with whatever tone your experience contains at any time.
- Develop a growing impartiality toward the ten thousand things. “Good,” “bad,” “beautiful,” “ugly,” etc. are all just labels, and “empty” of any inherent nature or truth. To be sure, that does not mean becoming immoral or callous; consider how the spiritually developed people in human history were characterized by both great equanimity and great kindness. But we can relax judgmental labeling – unpleasant is not “bad” – and bring compassion and lovingkindness to our experience and to the people in our lives, no matter what.

This impartiality is at the heart of the development, in Buddhism, of disenchantment, and then dispassion, signs of mature practice.

As the Third Zen Patriarch said:

“The Great Way is easy. For one with no preferences.”

## Conclusion

We’ve covered a lot of ground at a brisk clip, and it all might seem a little overwhelming. The key point is that there are many effective things you can do to help your brain – and therefore your mind and whole being – cope with difficult experiences, including the loss of loved ones.

May you and all beings be safe, healthy, happy, and at ease.

### **San Rafael Meditation Group**

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



## *Estrogen and the Menopausal Brain*

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janhealth@comcast.net

### **Introduction**

In the previous issue of the Bulletin (Vol. 1, #8), in a list of possible interventions for improving memory, I wrote: “For women entering menopause, consider taking estrogen.”

Not surprisingly, I got a few thoughtful comments about that line, and I appreciated them. Hormone replacement therapy (HRT) is controversial, so I’d like to unpack the complexities of that subject. In this issue, I will summarize data regarding post-menopausal estrogen replacement and the brain. In the next issue or two, I will review the concerns associated with the risks of using estrogen replacement (and related methodological problems), and how to minimize them.

### **Some Neurological Benefits of Estrogen**

In general, animal studies on laboratory rats and primates have shown that estrogen promotes brain cell survival, growth, and regeneration. Studies with human subjects have compared the brains of post-menopausal women who did or did not take estrogen. Without estrogen, the women’s brains were characterized by “age-related shrinkage.” But with HRT, these brain regions remained normally sized:

- Prefrontal cortex (planning, judgment, decision-making)

- Parietal cortex (sensory processing)
- Temporal lobes (language, emotion)

Different research – the Baltimore Longitudinal Study of Aging – found that women on HRT had greater blood flow to the hippocampus and other regions important for verbal memory. They also performed better on vertical and visual memory tests than women who had never been treated with hormones. Overall, these scans again showed that estrogen seems to reduce the usual shrinkage of the brain with age. Other researchers – this time at UCLA – found that women who had used estrogen therapy were less depressed and angry than those not on HRT, and they performed better on tests of verbal fluency.

Last, in my clinical experience, many women love the effects of estrogen replacement for mood and cognitive clarity. (And to be clear, my license does not allow me to



prescribe hormones, so I have no incentive to hold this view.)

### **Concerns**

On the other hand, in 2002, the Women's Health Initiative (WHI) study found that women who took Prempro, a combination of estrogen from mare (horse) urine and a synthetic progestin, had a small increased risk of breast cancer, stroke, and dementia. Since that finding hit the headlines, hormone therapy has been up in the air.

The WHI has been roundly criticized in many academic and clinical quarters, largely on methodological grounds, and I will review those analyses in the next issue of the Bulletin. To summarize and potentially over-simplify a very complex subject, the bottom line of the evidence so far is that not supplementing estrogen and HRT both

carry risks that must be evaluated on an individual basis; many women will probably conclude that the net balance of risks and benefits appears to favor HRT— if properly done — but some women will decide that the balance in their own case tilts against HRT.

### **Conclusion**

In this light, the key questions are:

- How can a woman assess her health risks from not supplementing estrogen, and her health risks from HRT?
- How can a woman reduce her health risks from HRT, while preserving its benefits?

In our next Wise Brain Bulletin, we'll try to answer these. See you then!

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# *Offerings*

**Rick Hanson, PhD, and Rick Mendius, MD**

1. We will be teaching two daylong workshops at Spirit Rock in 2007, and you can go to [www.SpiritRock.org](http://www.SpiritRock.org) for information and to register:

- August 11 – The Neurodharma of Love: Using Brain Science and Buddhist Wisdom to Illuminate the Heart of Important Relationships – Through integrating contemplative teachings about healthy relationships with current neurological research, we'll offer practical tools for activating the brain states underlying wholesome mind states of empathy, compassion, and lovingkindness. Additionally, we'll explore ways to preserve your equanimity in rough-and-tumble relationships, and to ride (gracefully) the roller-coaster of romance, sexual desire, and the long-term shift to a calmer love.

- November 10 – On One Wing and Two Prayers: Practicing with a Wounded Brain – This will be taught with James Baraz, a founding teacher of Spirit Rock and the source of the fantastic Awakening Joy course. It is for people interested in well-being and contemplative depth

who are also grappling with depression, significant anxiety (or trauma), ADD/ADHD, head injury, or dementia – and for caregivers who work with them.

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

3. On Friday evening, September 21, we will give a lecture and discussion at the monthly meeting of the Marin County chapter of the California Association of Marriage and Family Therapists. The topic will be the neuropsy-

chology of positive emotion, and how to help clients (and ourselves!) activate it. If you're an MFT, it will be great to see you there, and we think any therapist is welcome; just contact the local chapter at 459-3484 for the details.

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

5. On Friday, October 26, we will be presenting a daylong workshop on "The NonDual Brain" at the Conference on Nondual Wisdom and Psychotherapy, which is co-sponsored by The Center for Timeless Wisdom, the California Institute of Integral Studies (CIIS), and other organizations. Continuing ed units will be offered, and you can register by contacting CIIS. While there will be a focus on using nondual brain tools in caregiving settings, this workshop is appropriate for anyone.

6. On Saturday, December 1, we will lead a daylong at the Sati Center in Redwood City on The Neurology of Awakening. This will be an updated version of the daylong by that title we presented at Spirit Rock in November, 2006, with more experiential emphasis on neuroscience-informed exercises for steadying the mind. If you live in San Francisco, the East Bay, or the Peninsula, this would be a great way to deepen your understanding and practice – plus learn more about the Sati Center itself, founded by a wonderful teacher of ours, Gil Fronsdal.

7. On Sunday, May 11, 2008, we will co-lead a daylong at Spirit Rock with Christina Feldman, a senior Vipassana teacher and co-founder of Gaia House, in England. Christina is a profound practitioner and teacher (and a seminal influence for Rick H), as well as a mother and a householder. The subject will be equanimity – which may not

sound very sexy, but is at the heart of both managing difficult emotions (and traumatic experiences) and cutting the chain of suffering (in a Buddhist framework) by not reacting with craving and clinging to the pleasant and unpleasant experiences of life.

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

### Words of Wisdom

These quotes are from the article, Are You Ready for Death, by The Dzogchen Ponlop Rinpoche, in *Buddhadharma*, Summer, 2007, which was adapted from his wonderful book, *Mind Beyond Death*:

Leaving this life is similar in many ways to going on a long trip. In this case, the trip we are making is a journey of mind. We are leaving behind this body, our loved ones, our possessions, and all our experiences of this life, and moving on to the next . . . Although we may cling to this life and fear its end, beyond death there is mind, and where there is mind there is uninterrupted display: spacious, radiant, and continually manifesting.

. . . Each time you practice meditation, it is important to sit with confidence and to arouse the intention to achieve enlightenment in that very session. If you become accustomed to generating such confidence now, then at the time of death you can manifest the same level of confidence and trust in your practice. You have one last chance [when you die] – for this lifetime, at any rate. It is not your last chance ultimately; there is no sense of being doomed forever. However, the time of death is our last opportunity to achieve enlightenment now.

. . . We should stop what we are doing to remember impermanence and to prepare ourselves for death. When will our death come? It could be tomorrow. It could be today. The time that death will arrive is uncertain. Therefore, we have to be prepared for it. We have to be ready twenty-four hours a day.

. . . Ultimately, mind transcends death. Who we are and where we are is mind. Mind endures because it is unborn and unceasing . . . It is mind that journeys as a guest in this physical body until we take full possession of the boundless wisdom and compassion that are innate to us, and realize the freedom and purity of our abiding nature.

# *Synergies of Science and Contemplative Wisdom*

Science and religion have been dancing with each other – often awkwardly, stepping on each other’s toes, sometimes brutally – since long before Galileo was forced by the Inquisition to deny his observations of Jupiter’s moons (which cast doubt on the notion that the Earth was the center of the universe, and thus at the center of God’s plans).

For a contemporary example, one need look no further than the intense efforts on various school boards to undermine evolutionary accounts of human development – as if refuting the literal account in Genesis would somehow be evidence against the existence of God. Or as if the only possible form a possible transcendent Divine might take is the omnipotent Agent in Christian, Jewish, and Muslim theology.

On the other side of the divide, some atheists make the case against the Transcendental with a tone that verges on contempt for believers, and sometimes crosses the line. In their vehemence, they make themselves the classic logical error pointed out in all intro classes to scientific research methods: the absence of evidence (even as they define the evidence) is not evidence of absence.

Happily, this dance frequently unfolds more harmoniously, with an appreciation for the sincerity and the contributions of both science and religion – or more specifically, science and contemplative practice. Here is a sampling of beautiful examples.

“...the scientific picture that’s coming out of cognitive science is now connecting to the picture from the contemplative wisdom side of human thought. Historically in the West those two streams of thought were connected, say, back in the time of Socrates and Plato. They were separated when modern science said, “Okay, we’re going

to take over nature, and we’ll leave the self and the mind to religion or ethics.”

Now, science is actually turning back to look at the mind, to look at the self. And in so doing, science is finding itself needing to renegotiate its relationship with the spiritual traditions—and they, of course, have to renegotiate their relationship to science.

So, we live in interesting times. “

John Juca, Evan Thompson

“That empirical attitude is embedded within Buddhism just as it is within science. A famous word that the Buddha used of the dharma was *ehipassiko*, sometimes translated as “come and see for yourself”—inviting one’s own inspection. This is really the message of science, also. “

Guy Armstrong

“The most beautiful experience we can have is the mysterious. It is the fundamental emotion which stands at the cradle of true art and true science. Whoever does not know it and can no longer wonder, no longer marvel, is as good as dead, and his eyes are dimmed. It was the experience of mystery—even if mixed with fear—that engendered religion. A knowledge of the existence of something we cannot penetrate, our perceptions of the profoundest reason and the most radiant beauty, which only in their most primitive forms are accessible to our minds—it is this knowledge and this emotion that constitute true religiosity; in this sense, and in this alone, I am a deeply religious man. I cannot conceive of a God who rewards and punishes his creatures, or has a will of the kind that we experience in ourselves. Neither can I nor would I want to conceive of an individual that survives his physical death; let feeble souls, from fear or absurd

egoism, cherish such thoughts. I am satisfied with the mystery of the eternity of life and with the awareness and a glimpse of the marvelous structure of the existing world, together with the devoted striving to comprehend a portion, be it ever so tiny, of the Reason that manifests itself in nature.”

Albert Einstein, *The World As I See It*, pp. 22-23.

“Don’t believe everything you think!”

Anonymous

The history of science is rich in the example of the fruitfulness of bringing two sets of techniques, two sets of ideas, developed in separate contexts for the pursuit of new truth, into touch with one another.

J. Robert Oppenheimer, *Science and the Common Understanding*

“Come, Kalamas. Do not go by oral tradition, by lineage of teaching, by hearsay, by a collection of texts, by logic, by inferential reasoning, by reasoned cognition, by the acceptance of a view after pondering it, by the seeming competence of a speaker, or because you think, “This ascetic is our teacher.” But when you know for yourselves, “These things are wholesome, these things are blameless; these things are praised by the wise; these things, if undertaken and practice, lead to welfare and happiness,” then you should engage in them.”

The Buddha, *Angutara Nikaya*, III.65 (translated by Bhikkhu Bodhi)



*Fare Well*

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