



# The Wise Brain Bulletin

News and Tools for Happiness, Love, and Wisdom

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## *The Mind, The Brain, and God*

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With all the research on mind/brain connections these days – *Your brain in lust or love! While gambling or feeling envious! While meditating, praying, or having an out-of-body experience!* – it’s natural to wonder about Big Questions about the relationships among the mind, the brain, and God.

For instance, some people have taken the findings that some spiritual experiences have neural correlates to mean that the hand of God is at work in the brain. Others have interpreted the same research to mean that spiritual experiences are “just” neural, and thus evidence against the existence of God or other supernatural forces. These debates are in part updated versions of longstanding philosophical and religious wrestlings with how God and nature might or might not intertwine.

What’s your own gut view: Do you think that God is involved in some way in your thoughts and feelings? In your most intimate sense of being?

In this essay, we’ll explore what mind, brain, and God could be, how they might interact, and

what studies on the neuropsychology of spiritual experiences can – and cannot – tell us. I’m not a scholar of religion or philosophy, and offer reflections here that have been useful to me, an amateur, in the hopes that they will serve in some way your own investigations and intuitions.

### **What the Words Mean**

Sometimes, the more profound the subject, the murkier the discussion. When considering the potential relationships among the mind, the brain, and God, it’s particularly important to be clear about key terms – like mind, brain, and God.

So – by *mind*, I mean the information represented by the nervous system (which has its headquarters in the *brain* – the three pounds of tofu-like tissue between the ears). This information includes incoming signals about the oxygen saturation in the blood and outgoing instructions to the lungs to take a bigger breath, motor sequences for brushing one’s teeth, tendencies toward anxiety, memories of childhood, knowing how to make pancakes, and the feeling of open spacious mindfulness. Most

of mind is outside the field of awareness either temporarily or permanently. Conscious experience – sensations, emotions, wants, images, inner language, etc. – is just the tip of the iceberg of mental activity. The nervous system holds information much like a computer hard drive holds the information in a document, song, or picture. Hardware represents software.

Immaterial information is categorically distinct from its material substrate. For example, often the same information (such as Beethoven's 9th Symphony) can be represented by a variety of suitable material substrates (e.g., sound waves, music score, CD,



iPod). Therefore, at one level of analysis, Cartesian dualism is correct: information and matter, mind and body, are two different things. Nonetheless – as we will see – at another, higher level of analysis, it is clear that the mind and the nervous system arise interdependently, shaping each other, as one integrated process. (And perhaps at a lower level of analysis – that of quantum phenomena – information and materiality are

inextricably woven together; but I'm not going there in this essay!)

Mind, as I define it here, occurs in any creature with a nervous system. Humans have a mind – and so do monkeys, squirrels, lizards, worms, and dust mites. More complex nervous systems can produce more complex minds. But just as there is a spectrum of complexity of the nervous system, from the simplest jellyfish 600 million years ago to a modern human, there is a similar spectrum of complexity in the mind.

Or to put it bluntly, there is

no categorical distinction between the mind of a millipede and a mathematician. The difference is one of degree, not kind. (And how many mathematicians – or anyone, for that matter – could move dozens of limbs together in undulating harmony?)

By *God*, I mean a transcendental Something (being, force, ground, mystery, question mark) that is outside the frame of materiality; *materiality* includes matter and energy since  $E=mc^2$ , plus dark matter/energy, plus other wild stuff that scientists will discover in the future. God is generally described in two major ways: as an omniscient and omnipotent being “who knows when a sparrow falls,” or as a kind of Ground from and as which everything arises – with many variations on these two views, plus syntheses and divergences.

By definition, while God may intersect or interact with the material universe, it is in some sense other than that universe – otherwise we don't need

### Greetings

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Rick Hanson, PhD edits the Bulletin, and it's designed and laid out by Michelle Keane.

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another word than “universe.” For example, if someone says that God is the same thing as nature, that begs the question of whether God exists, distinct from nature.

## ***The Interdependent Mind and Brain***

Let’s review three facts about the mind and the brain.

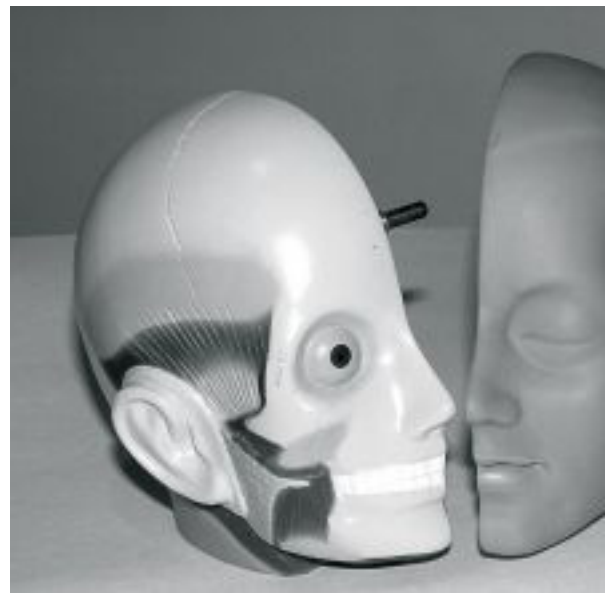
First, when your brain changes, your mind changes. Everyday examples include the effects of caffeine, antidepressants, lack of sleep, and having a cold. More extreme examples: concussion, stroke, brain damage, and dementia.

Without a brain, you can’t have a mind. The brain is a *necessary* condition for the mind. And apart from the hypothetical influence of God – which we’ll be discussing further on – the brain is a *sufficient* condition for the mind. Or more exactly, a *proximally* sufficient condition for the mind, since the brain intertwines with the nervous system and other bodily systems, which in turn intertwine with nature, both here and now, and over evolutionary time; and as you’ll see in the next paragraph, the brain also depends on the mind.

Second, when your mind changes, your brain changes. Temporary changes include the activation of different neural circuits or regions when you have different kinds of thoughts, feelings, moods, attention, or even sense of self. For example, the anterior (frontal) cingulate cortex gets relatively busy (thus consuming more oxygen) when people meditate; the caudate nucleus in the reward centers of the brain lights up when college students see a photo of their sweetheart; and stressful experiences trigger flows of cortisol into the

brain, sensitizing the amygdala (the brain’s alarm bell).

Mental activity also sculpts neural structure, so changes in your mind can lead to lasting changes in your brain. This is learning and memory (as well as lots of other alterations in neural structure below the waterline of conscious awareness): in other words, *neuroplasticity*, most of which is humdrum, like remembering what you had for breakfast, or getting more skillful at chopsticks with practice.



Examples of neuroplasticity include:

- Meditators have a thicker anterior cingulate cortex and insula (a part of the brain that tracks the internal state of the body); a thicker cortex means more synapses, capillaries (bringing blood), and support cells.
- Cab drivers have a thicker hippocampus (which is central to visual-spatial memory) at the end of their training, memorizing the spaghetti snarl of streets in London.
- Pianists have thicker motor cortices in the areas responsible for fine finger movements.

Within science, it has been long presumed that mental activity changed neural structure – how

else in the world could any animal, including humans, learn anything? – so the idea of neuroplasticity is not news (though it's sometimes described as a breakthrough). What *is* news is the emerging detail in our understanding of the mechanisms of neuroplasticity, which include increasing blood flow to busy neurons, altering gene expression (epigenetics), strengthening existing synapses (the connections between neurons), and building new ones.

This growing understanding creates opportunities for *self-directed neuroplasticity*, for using the mind in targeted ways to change the brain to change the mind for the better. Some of these ways are dramatic, such as stroke victims drawing on undamaged parts of the brain to regain function. But most of them are the stuff of everyday life, such as building up the neural substrate of well-controlled attention through meditative practice. Or deliberately savoring positive experiences several times a day to increase their storage in implicit memory, thus defeating the brain's innate negativity bias, which makes it like Velcro for negative experiences but Teflon for positive ones. (You can learn more about self-directed neuroplasticity in [Buddha's Brain](#).)



Third, the mind and brain co-arise interdependently. The brain makes the mind while the mind makes the brain while the brain makes the mind . . . They are thus properly understood as one unified system.

## **Proofs and Disproofs**

Lately, numerous authors have tried to rebut beliefs in God (e.g., *The God Delusion*), while others have tried to rebut the rebuttals (e.g.,

*Answering the New Atheism: Dismantling Dawkins' Case against God*). The intensity of these debates is often startling; people commonly talk past each other, arguing at different levels; and the “evidence” marshaled for one view or another can be hollow. (A delightful exception is the [dialogue between Andrew Sullivan and Sam Harris](#).)

For example, it's an error to conflate religion and God. Whether religions are wonderful or horrible or both is not evidence for or against the existence of God. Critiques of religion (e.g., the Crusades, fundamentalism) are not disproofs of God. It's also an error to think that biological evolution is evidence for the nonexistence of God. Just because a creation story developed thousands of years ago turns out to be inaccurate does not mean that God does not exist. Evolution does not need to be attacked in order to have faith in God.

Then there are so-called proofs of the existence of God within the material universe (e.g., burning bushes, miracles, visions, psychic phenomena). But that “evidence” must be experienced via the brain and mind. Therefore, in principle, that experience could simply be produced by the mind/brain alone, without divine intervention. (You could assert that God is known by some transcendental faculty outside of materiality, but then you'd still have to explain how the knowing achieved

### **The Wellspring Institute for Neuroscience and Contemplative Wisdom**

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by that transcendental faculty is communicated to the material brain, so you are back to the original problem, that the ordinary brain could be making up information purportedly derived from a transcendental source.) So you can't prove the existence of the transcendental through material evidence.

On the other hand, since any God by definition extends beyond the frame of materiality, nothing in the material universe can disprove its existence. You could endlessly rebutt apparent evidence for the existence of God, but those rebuttals can not in themselves demonstrate that God is a fiction. At most, they can only eliminate a piece of apparent evidence, but in terms of ultimate conclusions, so what? As scientists say, the absence of evidence is not evidence of absence. Further, a God outside the frame of materiality (particularly a playful one) could amuse herself by fostering rebuttals of seeming evidence for her existence in order to bug some people and test the faith of others: who knows? Most anything could be possible for a transcendental being, ground, something-or-other.

Bottom-line: You can't prove or disprove the existence of God. So the fundamentally scientific attitude is to acknowledge the possibility of God, and then move on to working within the frame of science, which is plenty fertile as is, without resorting to God.

Let's explore an illustration of how these issues can play out in the media.

### *Is the Mind "Just" the Brain?*

Recently a friend sent me an article on the National Public Radio (NPR) website, titled "[Study Narrows Gap between Mind and Brain](#)," about some new research. The investigators had found that suppressing neural activity in a part of the

brain (on the right side, near where the temporal and parietal lobes come together) changed the way that subjects made moral judgments: they became less able to take the intentions of others into account.

The study itself is interesting, and takes its place in a growing body of research on the neuropsychology of moral reasoning and behavior. But the article about it on the NPR site contains comments from a scholar from a leading university

that are worth examining. He is initially quoted as saying: "Moral judgment is just a brain process." Hmm. What does the "just" mean? He could have said something like, "Moral judgment involves processes in the brain," but instead he seemed to assert that the psychological subtleties of ethics, altruism, hypocrisy, and integrity, are *just* epiphenomena of the brain. Whether this is exactly what he meant or not, let's consider this idea in its own right: that our thoughts and feelings, longings and fears, and subtle moral or spiritual intimations are "just" the movements



of the meat, to put it bluntly, between the ears. This is a common notion these days, but there are numerous problems with it.

First, neural processes certainly do underlie mental processes. For example, as the study showed, normal right temporal-parietal function underlies reflections about the intentions of others in moral reasoning. But those *neural activities are in the service of mental ones*. That's their point. We evolved neural structures and processes in order to further psychological adaptations that conferred reproductive advantages, the engine of biological evolution. Mind is not an epiphenomenon of brain: mind is the function of the brain, its reason for existence.

Second, *mental processes pattern neural structure*. Morality-related information – in other words, mental activity – has shaped the brain of each person since early childhood. As Dan Siegel puts it, the mind uses the brain to make the mind. In a basic sense, it would be just as accurate to say that “the brain is just the mind writ in neural tissues.”

Third, the neural substrates of conscious mental activity are continually changing in their physical details (e.g., neurons involved in a substrate, connections among them, and neurochemical flows). This means that the thought “ $2 + 2 = 4$ ” on Monday maps to a different neural substrate than it does on Tuesday; in fact, that math fact would have a different substrate if you re-thought it only a few seconds later on Monday! Similarly, reflections on the Golden Rule on Monday will have a different neural substrate than on Tuesday. Consequently, *it is the meaning of the thought that is fundamental, not its neural substrate*. Taking this a step further, the ideas that two and two are four, or that we should treat others as we would like them to treat us, can be represented in many

sorts of physical substrates, including marks on a page, patterns of sound waves, and magnetic charges on a computer hard drive. Here, too, it is the information, the meaning, that is the key matter, and the physical substrate, whether brain or something else, recedes in significance.

Fourth, and most fundamentally, *the mind and the brain co-dependently arise*. It's kind of silly to try to make one causally senior to the other. Psychology shapes neurology shapes psychology shapes neurology, and so on. These two are distinct – immaterial information is not material neural tissues – but they are also interdependent and cannot be understood apart from each other. There is indeed a dualism between mind and matter, but they also form one coherent system. When people try to de-link mind and brain, and then argue that one rather than the other is primary – *The mind is really just the brain at work!* or *The brain is really just the mind at work!* – there is usually some sort of agenda going on: typically either an attempt to argue a strongly materialist, even atheist view, or to argue a fundamentalist spiritual view. But arguments about the primacy of either mind or brain are not very useful: they produce mainly smoke and heat, with little light.

### ***Do Neural Correlates Mean There's No Soul?***

But it was the last sentence in the article on the NPR site that really caught my eye: “If something as complex as morality has a mechanical explanation, [the scholar said], it will be hard to argue that people have, or need, a soul.”

First, to repeat the point made in the section just above, it's simplistic to claim that morality has a “mechanical explanation” – in other words, that morality boils down to “just” the operations of the

material (= mechanical) brain – simply because there are neural correlates to moral experience and action.

Second, to the heart of the matter, the closing sentence refers to the view, held by different religions and philosophies, that the fundamental source of morality – and by extension, human goodness, compassion, altruism, kindness, etc. – is transcendental, such as a proposed soul, divine spark, or Mind of God. In the culture wars of the last few decades, studies on the neural substrates of the loftier realms of experience and behavior (including the one discussed here, on moral judgment) have been taken as evidence by some that we don't need transcendental factors to account for those aspects of a human life – and by extension, that such transcendental factors do not exist: in other words, that “people do not have or need a soul.” Let's try to unpack this.

Human psychology alone – without reference to transcendental factors – can fully account for morality, or it cannot. (And as we've seen, that psychology is inextricably intertwined with our neurology.) Separately, either there are transcendental factors or there are not. If we do not make the assumption that morality is based on God, then *evidence that morality requires only a mind and brain is not evidence against the existence of God.*

You see a similar fallacy in the cultural conflicts over the implications of biological evolution. If one believes that “God created Man,” then evidence that modern humans gradually evolved from hominid and primate ancestors sounds like an argument against the existence or importance of God. Those who think that evolution would somehow eliminate God consider evidence for it to be a kind of blasphemy, so some school boards have tried to slip creationism into science textbooks.

Yes, the evolutionary account of life on this planet does undermine the story of God the Creator in the book of Genesis, but that's just one portrayal of the nature of God. Setting aside that particular portrayal leaves plenty of other ways that God could work in the world. Evidence that God did not create Man is not evidence that there is no God: in principle, God could exist and not have created Man. In other words, a reasonable person could believe both that evolution has unfolded without being guided by the hand of God *and* that God exists – and similarly believe that morality does not require God and that God exists. It is a category error, and an unscientific one, to think that evidence *for* the neuropsychological substrates of morality is evidence *against* a soul (or against other transcendental factors).

In this light, one does not need to resist evidence for evolution, or for the neuropsychology of morality or spiritual experiences. This point has significant social implications, because the resistance to scientific findings out of a fear that they somehow challenge faith has undermined lowered scientific literacy in America. For example, in the 2008, [biannual survey by the National Science Board](#) of scientific understanding, only 45% of respondents agreed that, “Human beings, as we know them today, developed from earlier species of animals.” This percentage is much lower than in Japan (78%), Europe (70%), China (69%), and South Korea (64%). Similarly, only 33% of those surveyed agreed that, “The universe began with a big explosion.”

## **Summing Up**

To be clear: I am not asserting that there is or is not God; nor am I asserting that, if God exists, he/she/it/none-of-the-above plays a role in mind, consciousness, or morality. I *am* asserting that

attempts to draw inferences from neuropsychology about God's existence or role in human affairs are usually a waste of time. At most such inferences can refute a particular theory about God's role in life – such as God is necessary for human morality, or for the existence of our species altogether. But that leaves all sorts of other theories about God that are not yet disproved – as well as the fundamental matter that God is by definition categorically outside the realm of proofs or disproofs within the material universe.

God may or may not exist. You have to find your own beliefs in that regard – and I don't think brain science will offer much help.



### **Words of Wisdom: Mind and Matter**

“The earth and myself are of one mind” -Chief Joseph.

“A human being is a part of the whole called by us universe, a part limited in time and space. He experiences himself, his thoughts and feeling as something separated from the rest, a kind of optical delusion of his consciousness.

This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest to us. Our task must be to free ourselves from this prison by widening our circle of compassion to embrace all living creatures and the whole of nature in its beauty.” -Albert Einstein

“Where you meditate has everything to do with how useful your meditation will be. But by where, I don't necessarily mean in which room of the house, or whether you live in a quiet spot or not. I simply mean that you should meditate inside the life you have. If you are an accountant, meditate inside an accountant's life. If you are a policeman, meditate inside of that. Wherever you want to illuminate your life, meditate precisely in that spot.” -Clark Strand



# *Using the Mind to Heal*

From *Verbal First Aid™: Help Your Kids Heal From Fear and Pain—And Come Out Strong*, by Judith Simon Prager, PhD and Judith Acosta, LCSW, Berkley Books 2010

Stimulating the brain by providing alternative scenarios and images to a person in crisis can engender *measurable changes* in our bodies as well as alter the way we perceive ourselves and our health. In so doing we are also enhancing our sense of mastery. This is a very important idea when working with trauma, because one of the primary complaints in trauma treatment is an overwhelming sense of powerlessness. Terror and hypervigilance are compounded and embedded by a feeling of impotence. When Verbal First Aid is used right away, people are more likely to experience a sense of personal control and thus mitigate the possibility of an acute stress disorder.

Studies help us understand “how the brain becomes sensitized to a traumatic event, and how there can be a cumulative effect,” said Dr. Bruce McEwen, director of the neuroendocrinology laboratory at Rockefeller University<sup>1</sup>. In a study at Mount Sinai School of Medicine and the Jewish Board of Family and Children’s Services in New York, parents of children between one and five years old who were nearby when the World Trade Center collapsed were surveyed about their children’s behavior. “Children who had been rattled by a previous experience were about 20 times as likely to show signs of depression, anxiety, or attention deficits as children who had not known a significant trauma before Sept. 11.”<sup>2</sup>)

How children react to an incident, whether

they are rattled or soothed, determines what is emotionally retained as a trauma that is echoed cumulatively. When Verbal First Aid is used well, as it was in the case of Oliver related earlier and by the fireman in the story at the end of this chapter, what is remembered is not the fear but the sense of ultimate safety. Teens who experienced the ugliness of the 1998–1999 war in Kosovo, who had lost friends, who had seen their homes destroyed, and who were surrounded by violence were part of a study by the Institute of Mind/Body Medicine, which included guided imagery and many other mind–body techniques. The conclusion: “The data indicate that mind–body skills groups were effective in reducing posttraumatic stress symptoms in war-traumatized high school students.”<sup>3</sup>

What about the more ordinary experiences and traumas of childhood, the ones you will most likely be dealing with? The following three stories serve as excellent illustrations of how easily and quickly Verbal First Aid can work. It’s not necessary to be a therapist or to engage in a very elaborate protocol to know what to say and how to say it when you really need it. Knowing Verbal First Aid can do your child a world of good in just a few moments.

## ***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.

## **The Windshield Wipers**

At a typical, noisy, busy playground, a five- or six-year-old girl ran up to a man, likely her father, crying plaintively because she had gotten sand in her eyes. Her father, meaning well, picked her up and began rubbing her eyes with the sleeve of his wool sweater.

Although it was none of her business, a bystander who knew Verbal First Aid couldn't bear the thought of the child's scraped cornea and walked over to the child. "Oh, there's sand in your eyes," the woman said. "I wonder if you could imagine that your eyelids were like the windshield wipers in Daddy's car, and your eyes were like the windows that had dust on them. And if you blink a lot maybe fifteen times, I'll bet you could wash those windows off."

So the child blinked some seven times or so, considered where things stood, said, "It's better now," jumped down from her dad's arms and rushed off to play. The woman told us that she believed that the image as well as the blinking helped the situation resolve faster.



"What do you think Spider-Man would do if he had a broken arm?"

"He'd probably wrap it up in spiderwebs until it was all better."

"Do you think he'd do that for you?"

"I don't know."

"I'll bet if you imagined that he was doing that every night before you went to sleep, your arm would heal faster than anything, and the doctor will be so surprised at how fast you're better." She saw him sometime later without the cast.

"Hey, you healed really fast," she said. He looked at her conspiratorially, because his cynical mother was nearby, and just gave her that secret, Spider-Man smile.

## **Spider-Man Takes a Dive**

Andrew, five-years old, had fallen out of a tree and broken his arm. A neighbor who knew Verbal First Aid saw him flourishing his cast with bravado. But under that gesture was clearly the sadness that he was confined to the front steps of his house when he'd rather be out and about making trouble again.

"Who's your favorite superhero?" she asked him.

"Spider-Man," he answered without a doubt.

## **Dragons, Giants, and Witches**

Recently we received a phone call from a firefighter who had read *The Worst Is Over*. He always knew, he said, that there were certain first responders whose very presence seemed to change the way things resolved. They had what he called a good bedside manner and made the events, even in the face of catastrophe, seem to go better.

The day after he read our book, this firefighter was called to the scene of a car crash in which a mother and a five-year-old girl were trapped in the crushed vehicle. The mother was easily removed,

but the daughter, although not seriously injured, was pinned into her seat and hysterical with fear.

Ordinarily, he said, he would have been calling out for his fellow firefighters to bring the jaws of life, shouting orders to mobilize the help that would be needed, but this time a thought, a single thought, crossed his mind and he remembered the child and what she must be thinking and feeling.

He stopped everything, just for a second, and reached into the car, touching her knee as best he could. He looked into her eyes and said to her, “I’m a daddy like your daddy, and I have a little girl just like you. And I’m going to take care of you as if you were my little girl.”

Everything changed, he said. In that moment, time stood still. The quiet was dazzling. The little girl stopped crying. The air around them became charged with something unseen but felt. And the rescue happened gracefully and in such a way that, when the child thought of it later, she would think not of the fear, but of the relief, of the connectedness, of how we can be all right, even in the face of something scary.

Maybe our lives are not about what happens to us so much as how we perceive what happens. The author E. M. Forester said that when we tell a story, there must be a mountain over which our protagonist must go in order for us to know the character of our hero or heroine. Is he brave or cowardly? Is she wise or foolish? It is only as he or she encounters the obstacle that we have the opportunity to see of what this person is made.

In the face of whatever we encounter, who are we?

### ***Changing How We Perceive What Comes Our Way***

What we perceive does not have to be what we actually receive. The research is indicating that what we think

about what happens may be as important as what actually happens.

The issue, in literary parlance, is not the mountain over which we must go. It is not even whether we must slay a dragon, chop off the head of a giant, or melt a witch. Whatever our challenge may be, although it may be cancer, the loss of a loved one, or a terrible injury—all of which are tragedies and deserve their proper respect—the issue is not the mountain but how we respond to it. How we respond to a situation, any situation, depends less on the situation than on what we bring of ourselves to it. And this is often a function of what we are telling ourselves at such a time, of the words and images that our fear or our courage supply.

When we know that it is our thought, our attitude, that shapes the world we live in, we discover that we have within us the very answer we often seek outside.

When the firefighter stopped the world to connect with the child—when he told her that no matter how it looked, she was safe in his care—her physical, emotional, and spiritual heart shifted. And she saw the event and the world differently, then and forever.

We all are in need of rescue sometimes, but we are also sometimes the rescuer, even our own. When we and our children know the thoughts and images that can turn a car crash, a broken heart, a hurtful or frightening event around, we have gained a mastery that can help make us courageous in the face of the many dragons, giants, and witches that exist. With Verbal First Aid we are preparing our children to be and feel safer out in the world.

#### Notes:

1. Bruce McEwen, Rockefeller University News-wire. Available at [http://newswire.rockefeller.edu/?searchTerm\\_bruce](http://newswire.rockefeller.edu/?searchTerm_bruce) accessed January 11, 2010
2. Benedict Carey, “Study Finds Prior Trauma Raised

Children's 9/11 Risk," February 5, 2008; <http://www.nytimes.com/2008/02/05/health/research/o5trau.html>

3. J. S. Gordon, J. K. Staples, A. Blyta, and M. Bytyqi, "Treatment of Posttraumatic Stress Disorder in Postwar Kosovo High School Students Using Mind-Body Skills Pilot Study," *Journal of Traumatic Stress* 17 (2004) 143-147.



**Judith Simon Prager, PhD,** is a hypnotherapist who has trained doctors, nurses, and first responders in Verbal First Aid at medical centers across the country, in England and in China after their devastating earthquake.

She has created a prenatal program and given keynote addresses at international prenatal conferences. She teaches with her husband, Harry Youtt, in the UCLA Extension Writers' Program, where they were named Outstanding Instructors, and is co-author of *Verbal First Aid* and *The Worst Is Over*. She has also written *Owie-Cadabra's Verbal First Aid* for kids, and *Journey To Altermity: Transformational Healing Through Stories and Metaphors*. You can find out more about her work at [judithprager.com](http://judithprager.com)



**Judith Acosta, LISW,** is a psychotherapist and classical homeopath. She is the co-author of *The Worst is Over* (Jodere, 2002) and *Verbal First Aid* (Penguin, 2010). She has written many articles on Verbal First Aid, culture and the media, religion and mental

health, trauma, and alternative medicine. Since 1994, she has trained organizations in Verbal First Aid and given seminars on animal-assisted

therapy, trauma and burnout, stress reduction, and workplace crisis management. In private practice, she specializes in the treatment of trauma, anxiety, grief, and performance. She is based in Placitas, New Mexico with her husband and rescue dogs. She brings nearly 25 years of experience to clients all over the country and can be reached at [www.wordsaremedicine.com](http://www.wordsaremedicine.com).

## Grateful Wonder

### *Jellyfish, Umbrellas, Horseheads, and Jewish Mothers*

It seemed like a fun idea to juxtapose these images of largescale cosmic structures with another force of nature – the mother of James Baraz, creator of the [Awakening Joy](#) course and book.

- [The Jellyfish Nebula](#) – dozens of lightyears across (a lightyear is about six trillion miles)
- [The Umbrella Galaxy](#) – run your cursor over the picture to see tidal streams of stars caused by a collision with another galaxy
- [The Horsehead Nebula](#) – the head of the horse is about five light-years high.
- [The Jewish Mother](#) – Or at least one (who could well be one of a kind!)

## *Farewell*

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