Guest Contributor: Eugene Beresin, MD

Supporting the Mindful Physician: The Patient/Doctor Program at Harvard Medical School

Eugene Beresin, MD

Bonnie Badenoch, PhD

Mindful practitioners attend in a nonjudgmental way to their own physical and mental processes during ordinary, everyday tasks. This critical self-reflection enables physicians to listen attentively to patients' distress, recognize their own errors, refine their technical skills, make evidence-based decisions, and clarify their values so that they can act with compassion, technical competence, presence and insight.

Ronald Epstein, MD

This is the first day of Patient/Doctor III at Harvard Medical School. Eight students and two physician-tutors are meeting to explore the mindful practice of medicine, right at the juncture where they are forming their identities as physicians rather than students. Soon they will be immersed in the world of attendings, acutely ill patients, distraught families, the challenge of a medical system that despite its best efforts is at times dysfunctional, as well as medical, ethical, and relational decisions for which no amount of schooling can prepare them. During this year-long course, the tutors will strive to make the setting safe, so that their students have space to develop the habit of mindful reflection as they encounter the unimaginable technical and human responsibilities of being a physician. These experienced doctors – all dedicated to the human aspect of the medical profession - will model reflective practice, secure attachment, and a broad perspective that includes relationships not only with patients, but with members of the healthcare team, the hospital administration, society at large – and themselves.

The program's current director, Eugene Beresin, MD, is deeply rooted in the interpersonal neurobiology perspective (Cozolino, 2002, 2006; Siegel, 1999, 2006, 2007) that we humans are inherently social, continually shaping one another's brains. This interpersonal process also influences our physical health, so the relational dimension of medicine lies at the core rather than at the periphery. Respect for our social roots also grounds P/D III by deeply honoring the students' experience in the midst of this difficult and formative passage.

Ronald A. Arky, MD, a professor of medicine at Harvard and Master of the Francis Weld Peabody Society, developed the three-phase Patient/Doctor series 15 years ago. From their inception, the three courses were designed to foster students' awareness of the human dimension – one core issue that crosses all specialties. In 1927, Francis W. Peabody wrote an article entitled "Care of the Patient." He stated, "The most common criticism made at present by older practitioners is that young graduates have been taught a great deal about the mechanism of disease, but very little about the practice of medicine – or, to put it more bluntly, they are too 'scientific' and do not know how to take care of patients" (p. 877). The article goes on to talk about how important it is to know, understand, and empathize with patients within their social setting – Who supports and doesn't support them? What scares them or comforts

them? What socioeconomic circumstances are impacting them? Long before Stephen Porges' (2007) research showed us why a feeling of safety is essential to connection, and many researchers (Kiecolt-Glaser, McGuire, Robles, & Glaser, 2002; Pressman, Cohen, Miller, Barkin, Rabin, & Treanor, 2005; Segerstrom & Miller, 2004) established the relationship between interpersonal attunement and a healthy immune system, Peabody intuitively understood that kindness and connection are intimately interwoven with recovery from illness. Since budding doctors are often a more continuing presence in the lives of patients than the specialists, Peabody advocated for training in human relationships as central to medical education.

I had the privilege of interviewing GAINS Advisory Board member Gene Beresin to talk with him about the Patient/Doctor III program and the changes he has made in it since he became director in 2004. What follows are excerpts from that interview – with some commentary.

Eugene Beresin, MD

Bonnie: Can you tell me something about the genesis of your involvement with the Patient/Doctor program, what its goals and aims are?

Gene: The notion of looking at the relationship was really at the core of it. I don't know how far back it goes, but writing reflection papers was always part of the tradition. In fact, a book had been published of many of the Harvard medical students' seminal reflection papers. I don't think when they were first written they were done in the context of mindful practice. They were done more in a context of journaling one's experience, paying attention to one's experience, and being able to talk about the experience that you go through becoming a physician – the joys, the horrors, the sorrows, the awesome responsibility. People don't have a clue what they're getting into when they first become physicians. Then they take a couple of years of basic science and they learn a little bit about biology and biochemistry and physiology, and they see a patient here and patient there, mostly presented to them, but they don't really have any idea about what the experience and responsibility is like until they actually start working in their clerkships in their third year.

So I think one of the things that initiated the course was paying attention to the fact that it is very important for us to be able to talk about our experiences, process them, and understand them. That was the motivation for the notion of reflection papers, and, I think that was a great tradition. Now, I must say, part of Patient/Doctor III before I took it over, one of the reasons I was given this incredible honor was that it wasn't getting very high ratings. And it wasn't getting high ratings because the students disliked the small group tutorials where they did actually process their experience. It was getting bad ratings because they were given too many lectures, and they wanted out of the lecture hall because they'd had enough lectures already – which made sense to me. What they really wanted was for seasoned physicians to grasp what they were experiencing and this required space to talk about their experiences.

So when I took it over, I was basically given the mission of looking over all of the topic areas, revamping them, coming up with new topic areas, and trying to unify the course. And this is where mindful practice comes in. It seemed to me that the kernel was there, but using the literature and movement about mindfulness was not. So I worked with Ron and was lucky enough to be able to get a wonderful group of people together. The first thing I did was draw from my work or understanding and readings from mindfulness –

Ron Epstein's work and Danny Siegel's work and Jon Kabat-Zinn and other people who've written about mindfulness. And other people like Parker Palmer whose work I'd studied. He wasn't talking so much about mindfulness, but about the notion of reflectiveness and bringing the whole person into the relationship, and understanding oneself as a core part of the process as well. So when Ron or Danny or others would be writing about mindfulness – it's not just being reflective. It's being reflective in a way that combines an understanding of one's own feelings, values, beliefs, biases, reactions to various situations – a real combination of awareness of self and other, as well as an ability to reflect, to be aware of oneself in the process of doing what you're doing.

Bonnie: So this adds a whole other layer of processing to the experience.

Gene: Exactly. And what Ron and I had independently used – because he's a musician as well – is the notion of playing music with other people. You have to be not only aware of what you're producing, but aware of what others are producing musically, and making them sound right together. So you're doing it, you're watching yourself while you're doing it, but you're not an isolated observer. You're performing and observing at the same time – and that's what we try to help the students do. So the core conceptual framework of the course is mindful practice. Then when we applied that to the notion of relationships, not just relationships between doctor and patient, but relationships between the physician and the profession, the physician and the healthcare team, the physician and society, then the notion of reflectiveness became broadened tremendously in this course. That's why we have modules on teams, on systems, on medicine as humanism, whether it's at odds with medicine as a business, and lots of stuff about the individual patient/doctor relationship. Thus, it broadened the notion of reflective practice or mindful practice – and the core has become small group tutorials with two tutors with anywhere from 5 to 10 students and only four times a year do we meet for lectures – called intersessions – which are really plenaries and are followed by tutorials. It's really evolved and been an amazing experience.

There are a couple of key elements of this. One of them has to do with identity formation. I think what's also incredibly valuable here is that medical students in particular who are beginning to work with patients at a very close level, and with other physicians, and with teams are in a critical place in terms of forming their own sense of identity as doctors. And I cannot think of a better place to get them, to reach them and help them learn this than at the very beginning of their clinical work. Now, you've got to admit, empathy and self-reflection, which are critical, are context-dependent. While we may be getting them at an early phase of their professional development, once they go into residencies and get into this horrifying medical healthcare system, which, in my view right now, is fairly dehumanizing for both doctor and patient, what they've learned at the very beginning is often lost and needs to be regained or refound. But at least we're having the

chance to start with a framework that helps them form a sense of identity. And the other key thing that I wanted to mention is that we're helping them form attachments to each other and to the members of the healthcare team and to their patients that I hope will prove to be fundamentally enlightening to them.

Bonnie: When I read through the course guide, I get such a sense of honoring the medical students and their process, that they are going to have a deep process as they transform into physicians, and it isn't just "suck it up and move on." Such an honoring of the depth of change they are going to go through in their lives, and of the depth not only of responsibility but of being holders of the whole human drama.

Gene: And hopefully what we try to do with them is help them unite mind and body – not only the minds and bodies of their patients, but their own minds and bodies. That's why we have a module on physician well-being. They have to learn how to pay attention to their own minds and bodies and integrate them, as well as to help care for their patients both mentally and physically.

And hopefully what we try to do with them is help them unite mind and body – no only the minds and bodies of their patients, but their own minds and bodies.

Gene went on to talk about other changes that have made the course more helpful. Prior to this, medical students used to rotate through various hospitals for their clerkships, but now they do all their hospital work at one location, truly becoming part of a community. P/D III used to be six months, meeting every week, and is now a year, meeting every other week, but alternating with a unique kind of case conference attended by the same group of students. A large multi-disciplinary team (representatives from all the specialties, radiology pathology, and the tutors), with the faculty outnumbering the students, meets to discuss a case, presented by the students, and reviewed with the help of a hospitalist leader and invited specialists. After the case presentation, the discussion is student-driven. As issues come up that relate to other specialties, or social, economic, or political concerns along with P/D III topics, the faculty can help the students gain a more integrated perspective rather than being "isolated silos" in regard to the various specialties or other perspectives on the patient.

Gene: Let me give you a great example. We had a case conference. This is not the P/D III curriculum, but we're part of this curriculum. One student presented a case of a *placenta previa*, where the placenta is in a bad place, actually in the way of the cervix. It turns out that the patient had *in vitro* fertilization and that she was an older patient and there were twins. We began with a discussion of the diagnosis and differential diagnosis and management of *placenta previa,* in a woman of a certain age, with a certain kind of background, who had a hard time with fertility. And then we gradually moved to a discussion of IVF and the emotional tolls of IVF. And beyond that to having twins vs. having singles, and the emotional, psychological, physical, and economic burdens of having twins. It moved from the obstetrics discussion to really more of the family, interpersonal, and psychological discussion of having multiple babies - what it might mean for a single mom to have twins, what it means for families without means to have twins, what it means in terms of risk factors. It is quite amazing to me that what would have begun and stayed as a discussion of obstetrics became such an open forum for multiple issues –and this was brought about by the leader who was an obstetrician. I think having a context in which there are multiple disciplines talking about patient care together, bringing different perspectives, makes the entire experience reflective – and we don't know where it's going to go. Then when we went back to the tutorial the following week, we had a long discussion about the ethics of assisted reproductive technology and about the

role of physicians in this whole realm, and about our responsibility for the psychology as well as the physical well being of people who go through these procedures. It was very cool.

This multidisciplinary approach certainly resonates with Dan Siegel's consilient approach in discovering the principles of interpersonal neurobiology. Interestingly, Dan was Gene's first medical student when Gene was newly a resident at Massachusetts General Hospital. Listening to Gene talk, I can easily hear how the two men have formed an interpersonal network of mutual support and discovery over the years.

Gene: What Dan is onto in a very eloquent way is that the human brain is really a social brain and that everything interpersonal is embedded in the brain in the inherent physiology and biology as well as in the manifestation of that which is mind – and it's all integrated and connected. The problem we face in life - and not just professional life, but personal life - is fragmentation and lack of integration. I think that using the concepts of mindfulness and interpersonal integration and narratives is incredibly important. One of the reasons we continue to write these reflection papers is because another line that has come into Patient/Doctor III is the incredible importance of narrative, and that narrative is only possible coming from a place of secure attachment and integration. What we're trying to do is to help patients feel securely attached to their physician so they can tell their stories. That's so critical not only for getting their diagnosis - if they have a diagnosis, 80% of correct diagnoses are made from good histories - but also establishing a relationship of empathy and trust and caring, so that they can learn to confide in their physicians and rely on them. So that's another place that we try to get to with the students in terms of helping them get comfortable with narrative medicine.

The tutors who facilitate this process are a diverse group with a common vision and mission that involves them being able to offer their own process as physicians and human beings to their students. They bring their vulnerabilities, their professionalism, their experiences of success or failure, their mistakes (together with assuming responsibility and apologizing), their reflective practice and mindfulness, their ethical struggles, their internal struggles with value conflicts, perhaps their own experience with illness. At the same time, each of the tutors, regardless of specialty, has learned about group process – how to listen and allow the group to take its own direction, how to show respect for the unique needs of the individuals and the group culture as it evolves from week to week, how to deal with interpersonal problems that emerge in the group.

Gene: There's another place I tried to make the course go in a way that's a little different, besides mindfulness, and that is getting away from the doctor as purveyor of cure to this position of healer. The reason I brought that in is because it's something that's been lost over the years. The more we've been forced into simply making a diagnosis and providing a "treatment" is really not reality. The reality is, yes, we make diagnoses. Our diagnoses are imperfect. And our treatments are hardly ever cures. One gross generalization, which may get me into hot water, is that the only real cures are surgery and antibiotics. But even if you cure the illness, you still have a relationship, and your comforting support, your relationship with the family. Your relationship is healing and goes beyond the course of the illness even if you provide a cure.

> Most of the time we don't provide cures. Most of the time, we provide reassurance and comfort and education and things that are not in the vocabulary of diagnosis and treatment. As tutors, we keep coming back to that over and over again, that this is really a misnomer to think of our work as purely curing rather than viewing ourselves as doctors used to be viewed and viewed themselves, as involved in the art of healing.

We went on to talk about what Gene sees as the differences in the program with his input. He said, "For one thing, our ratings have gone up." The students report that the tutorials and a process called an Observed Structured Clinical Examination (OSCE) have the most meaning. Gene says that he inherited this basic exercise from his predecessors, and has added an additional dimension of mindfulness. The OSCE experience centers around giving bad news. Even though the exercise is structured with what is called "a standardized patient," the students report that once they are immersed in the exercise, it feels like the real thing. The patient is either a woman with a history of breast cancer or a man with a history of prostate cancer. The students are also told that there has been a divorce, a history of depression, and that the patient saw a social worker during the previous cancer episode. The student is told s/he is a new resident, taking over the case from the previous resident who treated the patient for three years, including following the patient after the treatment for cancer. The student (playing the role of new resident) is seeing the patient for a follow-up visit. The patient is coming in now because of low back pain, and after prescribing increased ibuprofen, the student/resident orders a bone scan which reveals metastatic cancer. The patient comes in for her/his second visit to get the test results. The OSCE is based on this, the second visit with the resident.

Most of the time, we provide reassurance and comfort and education and things that are not in the vocabulary of diagnosis and treatment.

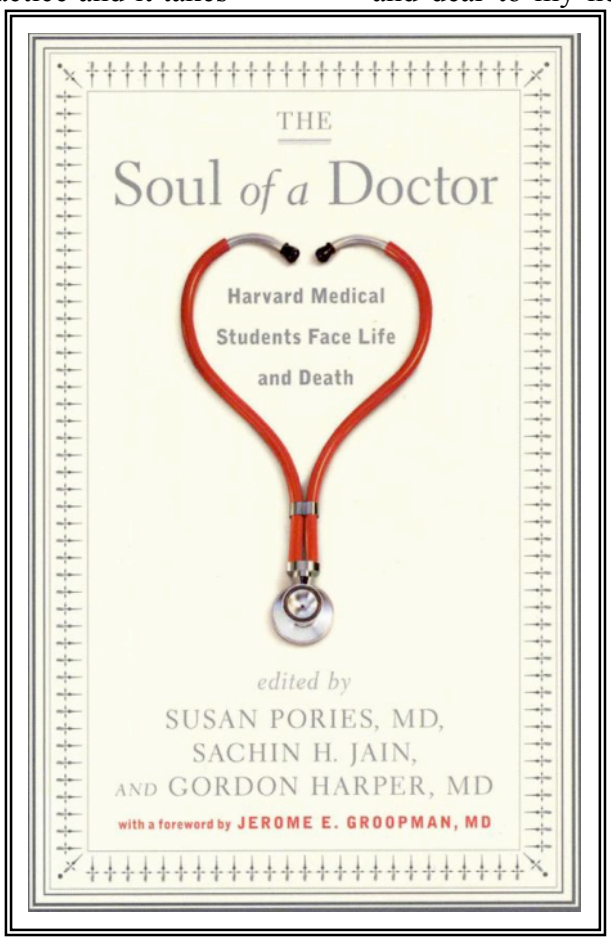
Before the student goes in to meet with the patient, the tutor asks him or her not about the cancer specifics, but instead offers a series of questions to stimulate a reflective state of mind – What do you think is going to be the most difficult thing for you? What will be most difficult for the patient? After the experience, the patients are taught to not ask anything except reflective questions – What was it like for you? Why did you interrupt me? Why did you talk so much? When I was angry, why couldn't you sit with my anger? Then the students write down their reflections and share them with each other and their tutors. These are the aspects of P/D III that get the highest ratings – being in the moment with each other, their tutors, and patients.

Bonnie: It's very warming and encouraging to hear you talk about the program.

Gene: Nothing's perfect. We still have a long way to go. I can tell you the down side of it is that, while it gets high ratings and is part of the core curriculum, there are still a lot of physicians, not just at Harvard but all over the country, who don't believe that empathy and communication skills and reflectiveness are teachable – they just happen. One of the reasons we include core readings is because there's a lot of data, as you know, that the doctor/patient relationship, or the patient/doctor relationship - always put the patient first - the patient/doctor relationship is one of the most important factors in terms of outcomes – positive health outcomes and positive psychosocial outcomes. Collaborative decision-making, patient-centered care, and the relationship have all been shown in the literature to be hard science.

You probably saw about two months there was a big spread in the *New York Times* and *The Globe* about teaching emotional intelligence in schools in addition to reading, writing, and arithmetic – that it's not just an art, it's a science. There's a lot of data that shows emotional intelligence is critical to learning,

and that it needs to be taught. It's an uphill battle, I think, to get the medical community as a whole to believe that there is a hardcore scientific basis for emotional intelligence, for interpersonal and communication skills, and that these are critical for positive health outcomes. And it's not just something that you learn by osmosis. It takes practice and it takes attention and it takes devotion and it takes skill – lots of skill. It's not one of those things "see one/do one/teach one." So part of our mission is really to help the community, both doctors and patients, understand that this is part of our work, and it's also work on the part of patients, too. It's not as if patients are passive recipients of this kind of stuff. They need to be reflective as much as we do, and have permission to call us on it when we're not being reflective.



Bonnie: It's easy to sense how your being and dedication to the interpersonal infuses this program from underneath.

Gene: I have a group of tutors who are really devoted to this program and really get it. I wish we could spend more time together [in the physical sense].

Bonnie: In spite of that, it seems like the program doesn't get fragmented because the tutors have similar viewpoints about the core principles.

Gene: That part is true.

Bonnie: It seems like you have succeeded in creating a holding environment that helps reshape your students' attachments a bit even when they struggle with attachment. Because of what you all have that infuses the program and the way these groups are together more, there's a good chance of receiving the kindness and empathy they need.

Gene: Just to reinforce what you are saying about the holding environment – which is near and dear to my heart, being a Winnicott fan - we do try to create that within each of the tutorials. They are very much like a combination of group therapy and processing information and a seminar and a tutorial – it's all kind of mixed up. The one thing is that they have to be safe. Medical students are fraught with the danger of grading, so saying something like "That attending on service who was so mean to that patient…" is scary. They see horrifying things. Most physicians do a pretty good job, but the students will occasionally see something horrifying, unprofessional, unethical. It happens every day. They have to feel safe enough to talk about it and say, "I can't believe what I just saw. I can't believe that this is tolerated." They have to have a safe enough holding environment to verbalize it.

Last year, we started a new program where we have an ethicist come in and the students present an ethical dilemma, which the ethicist helps them discuss. This year, I wanted to humanize feedback and evaluation, which is often seen as apart from the normal process of everyday life. Most people prepare for their examinations at the very end and hardly get any feedback – and everyone has to get an honors. What we're doing this year is that the tutors are going to be evaluated and be given feedback during one of the tutorials. We're

going to have a senior tutor sit in and watch and just listen and not participate – and they are sworn to confidentiality so the students will feel safe. And then we're going to share our feedback from our senior tutor/evaluator with the students during the following session so they can understand how we can improve ourselves, how we miss cues. The forms we are using have nothing to do with how sophisticated the tutor was in analyzing a scientific paper. It's more like "Did you listen? Did you show respect? Did you facilitate discussion? Did you allow students to feel safe?" The way the instrument is crafted is basically in an interpersonal way that's tailored to running a small group. I hope that will also facilitate the holding environment and allow the students to feel that it's OK to give feedback. They are going to face various physicians in leadership positions who are not going to take any kind of negative feedback, and they know that, but at least let's give them some experience where they know they can give us feedback, and that we can get feedback from our own peers.

Bonnie: What a great opportunity to model reflection in the moment.

Gene: Exactly.

As we rounded out our interview, I was left with the balanced feeling of having been with a compassionate human being who can hold the hope of greater mindfulness and empathy for his students side by side with realism about the challenges of the medical profession right now. The human brain's capacity for maintaining integration under stress may depend most directly on at least two factors: the strength of the integrative circuits that have been fostered by the practice of mindfulness, and our ongoing interpersonal integration with a community. P/D III seeks to wire in those two experiences for a year, perhaps changing or strengthening the implicit expectation that this is what professional and personal life should and can be like. Then, even in the midst of the stress that is sure to be present in a physician's life, perhaps these underlying patterns will influence practice in large and small ways.

Eugene V. Beresin, M.D. is an internationally known psychiatry educator and clinician, and the Director of the Child and Adolescent Psychiatry Training Program at the combined Massachusetts General Hospital/McLean Hospital consolidated residency training program. He is also a Professor in the Department of Psychiatry at Harvard Medical School, and a past president of the American Association of Directors of Psychiatric Residency Training. Dr. Beresin has been a production and content consultant to HBO for several of its children's productions (including the Emmy-winning programs "Classical Baby," "Through a Child's Eyes: September 11, 2001" and "Goodnight Moon and Other Sleepytime Tales"), as well as to prime-time commercial television programs such as "E.R.," "Law & Order: Special Victims Unit" and "Family Law." He has also consulted with and been interviewed extensively by network and major market television news organizations on matters related to mental health. He is the editor of the media column in *Academic Psychiatry*, and Associate Editor for Ten Year Reviews of Research for the *Journal of the American Academy of Child and Adolescent Psychiatry*.

Bonnie Badenoch, PhD, LMFT is co-founder of Center for Brain-Wise Living, a nonprofit counseling and consultation group in Portland, Oregon. She enjoys providing consultation, supervision, and training with the brain in mind, and as a therapist, specializes in helping people heal torn attachments. Her doctorate in comparative religion and practice of meditation inform her work and support her confidence in life's positive possibilities. She is also a founding board member of GAINS and its current vice president, as well as the Editor-in-Chief of the GAINS Quarterly. Seeking to foster the integration of Interpersonal Neurobiology into the practice of therapy, she has written *Being a Brain-Wise Therapist: A Practical Guide to Interpersonal Neurobiology,* published in 2008 by Norton in their IPNB series. You can visit Bonnie's website at www.brainwisetherapist.com or email her at bonniebadenoch@mac.com.

If a mind is just a few pounds of blood, urea, and electricity, how does it manage to contemplate itself, worry about its soul, do time-and-motion studies, admire the shy hooves of a goat, know that it will die, enjoy all the grand and lesser mayhems of the heart?

--Diane Ackerman

Editorial Musings

Making a Business of Cohesive Narratives

Bonnie Badenoch, PhD

A 76-year-man, speaking on condition of anonymity on the radio news, tells of how his retirement savings vanished in the blink of Bernie Madoff's eye, while a young man, looking shell-shocked, stands by my freeway exit with a sign that reads, "Newly homeless with my mother. Will work. No drugs, no alcohol." He doesn't bear the signs of prolonged homelessness. I stopped to walk back and learn how this happened. He said, "My boss is trying to save his business, so he cut my hours. My mom is sick and can't work, so here we are. I don't understand how this happened."

In our current environment of economic challenge and misery, it would be easy to rail against the business giants who apparently put profit today ahead of possible human disasters down the road. From a less personal viewpoint, listening to reports that our financial system has become an interdependent tangle, where one institution's fall can bring down many, we might wonder how differentiation of these institutions followed by linkage – the conditions for increasing complexity – has produced so much incoherence.

Maybe it is similar to a process that sometimes happens in the brain. An old memory of some painful or frightening experience lies dissociated in the limbic region, part of our unseen implicit memory. It's a narrow and binding bit of information, filled with perceptual biases, and has generated it's own narrative, with or without words, about how things are. As a result, it controls some of our behavior below the level of awareness. Each of us has such mental models about the way the world works. If I implicitly fear the world is nothing but a place of struggle, I will then develop a response to that – anything from giving up, to developing a punishing work ethic, to trying to get my needs met by others through tricks and lies. Out of my pain comes a cohesive narrative that generates behaviors to protect me from what I fear. The world then responds to these behaviors and we're all in the soup together. This is the essence of a cohesive narrative – it uses the left hemisphere to make meaning of the dis-integrated information flowing from the right implicit limbic in a very limited form of bilateral integration, and then bases actions on the motivations arising from that narrative.

The relational results of responding to a cohesive narrative are diametrically opposed to those engendered by coherent narratives. Springing from and supporting a more integrated brain, these latter stories emerge as we resolve the wounds of our history by welcoming the experiential truth of our lives. Then a protective layer of behaviors is not needed, and the way is open for the coherence of true complexity to emerge.

Do large, complex systems like governments and networks of businesses do that as well – generate lived narratives and hurtful defensive actions based on a narrow, subterranean set of implicit assumptions about how life works? Does the circle of empathy then narrow to a pinpoint? We do know that when dissociated limbic circuits dominate, empathy, response flexibility, attunement, self-reflection, and morality are severely limited. Acting on these implicit stories repeatedly engrains neural nets with their own momentums. Gradually, states of mind may become traits of being – and its business as usual.

I don't know if I am right about any of this, but I do keep mulling it over because it troubles me that such pervasive lack of foresight and empathy could become so deeply rooted in our social and economic system. Railing against the apparent offenders doesn't do any good, but gradually understanding the deeper causes might engender different choices.

Author's References

Supporting the Mindful Physician:

The Patient/Doctor Program at Harvard Medical School

Cozolino, L. (2002). *The neuroscience of psychotherapy: Building and rebuilding the human brain*. New York: W. W. Norton.

Cozolino, L. (2006). *The neuroscience of human relationships: Attachment and the developing social brain*. New York: W. W. Norton.

Epstein, R. M. (1999). *Mindful practice*. *JAMA*, *282*, 833-839.

Kabat-Zinn, J. (1990). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness*. New York: Delta.

Kabat-Zinn, J. (2006). *Coming to our senses: Healing ourselves and the world through mindfulness.* New York: Hyperion.

Kiecolt-Glaser, J. K., McGuire, L., Robles, T., & Glaser, R. (2002). Psychoneuroimmunology: Psychological influences on immune function and health. *Journal of Consulting and Clinical Psychology*, *70*, 537-547.

Novack, D. H., Epstein, R. M., & Paulsen, R. H. (1999). Toward creating physician-healers: Fostering medical students' self-awareness, personal growth and well-being. *Acad Med*., *74,* 516-520.

Peabody, F. A. (1927). The care of the patient. *JAMA, 88*(12), 877-882.

Porges, S. W. (2007). The polyvagal perspective. *Biological Psychology, 74*, 116-143

Pressman, S. D., Cohen, S., Miller, G.E., Barkin, A., Rabin, B. S., Treanor, J. J. (2005). Loneliness, Social Network Size and Immune Response to Influenza Vaccination in College Freshmen, *Health Psychology*, 24, pages.

Segerstrom, S. C. and Miller, G. E. (2004). Psychological stress and the Human Immune System: A Meta-Analytic Study of 30 Years of Inquiry. *Psychological Bulletin*, *130*(4).

Siegel, D. J. (1999). *The developing mind: How relationship and the brain interact to shape who we are*. New York: Guilford.

Siegel, D. J. (2006). An interpersonal neurobiology approach to psychotherapy: Awareness, mirror neurons, and neural plasticity in the development of well-being. *Psychiatric Annals, 36*(4), 247-258.

Siegel, D. J. (2007). *The mindful brain: Reflection and attunement in the cultivation of well-being.* New York: W. W. Norton.

NeuroLeadership: Toward Integration

Pearce-McCall, D. (2007/Autumn). Our organizations, ourselves: Mindsight at work. *Connections & Reflections: The GAINS Quarterly,* 12–17.

Pearce-McCall, D. (2008/Autumn). Leaders mind their brains. *Connections & Reflections: The GAINS Quarterly,* 19-25.

Rock. D. (2008). SCARF: A brain-based model for collaborating with and influencing others. *Neuroleadership Journal, 1:* 44–52.

Rock, D., & Schwartz, J. (2006). The neuroscience of leadership. http://www.strategy-business.com/press/freearticle/06207?gko=498f4-12656449-15832258.

Siegel, D. J. (1999). *The developing mind: Toward a neurobiology of interpersonal experience*. New York: Guilford Press.

Siegel, D. J. (2006). An interpersonal neurobiology approach to psychotherapy: Awareness, mirror neurons, and neural plasticity in the development of well-being. *Psychiatric Annals, 36*(4), 248-256.