

CHAPTER 8

## **Interpersonal Connection, Compassion, and Well-Being**

### **The Science and Art of Healing Relationships**

*Daniel J. Siegel*

In this chapter I'd like to explore what the field of interpersonal neurobiology has to teach us as psychotherapists about the role of human relationships, especially compassionate relationships, in health and well-being. This field is one in which we approach human life from multiple disciplines—physics, biology, psychology, sociology, anthropology—and try to bring them all to bear on understanding things from the standpoint of consilience. Consilience refers to those ways in which all the disciplines that shed light on different aspects of our human experience, health, and well-being converge or overlap. Based on this broad foundation, we can begin to understand the importance of a key dimension of human health and well-being that is only now being fully appreciated; that is, the dimension of integration.

Integration refers to a way of being of any complex system in which the connections between parts or elements of the larger whole exist in an optimal balance with the distinctness of those parts or elements. Whether this balance involves the parts of an individual mind and body, of the individuals within a given relationship, family, or society, or of humanity as one species within the complex ecosystem of the earth, integration is a sign of health and promotes well-being. Given the vital importance of integration to health and well-being, we can better understand those human capacities that foster integration within individuals and relationships. In this context, I will focus on two in particular: mindful awareness as a capacity that fosters the integration of an individual mind, brain, and body; and compassion as a capacity that fosters the integration of individuals with any given relationship, family, or society.

#### **Mind and Empathy: The Missing Ingredients in Modern Healthcare**

I'd like to begin exploring integration and the capacities that foster it with a story. It's a sad story but I think it's important. When I was in medical school, back in the late 1970s, many of my professors shared an approach to patients I found concerning. After they would get their lab data, they would walk with us, the medical students, into the patient's room. They would say to the patient, "I've

received the results of your testing. You have a fatal disease and you probably have three or four months to live. I'm sorry. Goodbye." When they would leave the room, I would tug on their white coat and ask, "Don't you want to talk to the patient about how she feels?" In retrospect, I don't really know what they were attending to. One after another, my professors would say, "Why would I do that? I've tested what's going on in their bodies. I've given them the information they need. There's nothing more I can do."

If you were a young medical student, how would you take that in? We were being taught by example how to be representatives of this stance on healing, to simply say, "I'm reporting on the physical state of your body." Of course, these were very smart professors; I was at Harvard University. These doctors were giving their patients data about the physical nature of the world. Ultimately, I ended up dropping out of medical school, and thought about entering all sorts of other professions. Instead I chose to go back, and to begin to think deeply about how to understand and describe the nature of that subjective experience we call "mind." As a physician, psychiatrist, psychotherapist, scientist, and educator, throughout my career I have been saddened and dismayed to find a firm grounding in the healthy mind absent even from our professional education and our work. After surveying over one hundred thousand mental health clinicians and nearly ten thousand teachers, the results are in: over 95 percent of these professionals focusing on helping others develop their minds have never been offered a working definition of what the mind is!

So I have worked over the years with many colleagues to develop the field of interpersonal neurobiology, where we combine over a dozen branches of science to address the question of what a working definition of the mind might be and, based on that, try to understand what a healthy mind is. While we have a bunch of chemicals that make up the structure of the body with all their interesting molecular combinations, there is also something more, something equivalent to the whole being greater than the sum of its parts. That something more is the mind, which at a minimum has subjective experience, what you feel. When someone tells you you'll be dying in three to four months, you have an inner subjective core that is not the same as the molecular structure of your body. That is mind. The ability to see it involves something more than mere eyesight. In 1980, I decided to call that ability "mindsight." I understand mindsight as the ability of mind to see itself. It's insight into your own inner subjective world. And it's also empathy for the inner world of someone else. The fact is, we human beings, and perhaps all living beings, have an internal subjective experience that is the fundamental nature of what we mean when we say, "mind." In addition to mindful awareness and empathy or compassion, the third component of mindsight is something that is a consilient finding across all different disciplines; that is, that well-being, including the full capacity for seeing into one's own mind and other minds, is dependent on a singular process: the process of integration.

In this context, I'm using the word integration in a very specific way, to mean the linkage, the connection of differentiated parts of a system, the linkage of things that are unique, specialized. For example, in the system of medicine, a patient has

a differentiated role in relation to a clinician, whether a psychologist, nurse, occupational therapist, or physician. Then other third parties are involved in the whole system. Or within any one individual, integration refers to the connectivity or linkage between differentiated aspects of mind, brain, and body. It turns out that what I call *mindsight* is the capacity to see and promote such integration, whether it's expressed as insight into oneself, honoring the complexity of our own inner life, or empathy for others, honoring their complexity and differentiation (Siegel, 2009). Sadly, when I go to medical schools around the world, even to departments of psychology or psychiatry, most never teach their students or clinicians how to understand and heal their own inner life. Without that basic capacity, it becomes very hard for us as clinicians to understand and heal the inner lives—the mind, brain, and body—of the others we call patients or clients. That is why I felt I had to use my professors as anti-role models, as examples of how not to practice medicine. Fortunately, twenty-five years later, we have a growing body of evidence in neuroscience and medicine that is leading to a gradual shift in perspective, and the beginnings of a shift in practice.

### **The Impact of Mindsight on Health and Healing**

When I was invited in 2005 to return to Harvard Medical School and speak about the neuroscience of emotion and narrative and its role in medicine, I was able to point to a number of new studies showing the power of mindful awareness and empathy in healing. For instance, I pointed to one double-blind study of students being seen with a common cold in a college infirmary during exam period. In the control group, the students were simply informed by their providers that they in fact had a cold and should recover soon (Rakel et al., 2009). In the experimental group, the provider spent thirty seconds inquiring about the student's level of stress, and making an empathic comment such as "It must be really hard to be sick during exam period." The study found that the immune response in the experimental group was more robust, and that that group recovered faster.

What we can say now is that empathy is not a luxury for physicians. Empathy is a fundamental part of the system we're working in as clinicians. That system is one of human relationships. Relationships can be defined as the sharing and flow of energy and information. When we talk to each other, with the movement of air molecules, we can hear one another. We can see each other because of photons. A clinician who puts her hand on a patient's hand when they're upset is using physical contact. That's energy. Our work in psychotherapy is all about how we derive information, which is energy with meaning and symbolism, from the energy patterns of our interaction with clients. In many ways that's what our mental lives are all about. By *mind* I mean the subjective experience, the consciousness of meaning and symbolism, a distinctively human, psychological form of information processing. Of course it involves the brain, and we'll come to that in a moment. But my point is that since our work concerns relationships, it involves the sharing of energy and information flow. So this kind of care requires that we differentiate,

that we have our own inner subjective experience, and then link that with the inner subjective experience of another.

## **PART: Applied Mindsight for Clinicians**

When I teach physicians or psychotherapists, this is where I start, by understanding healing relationship (Siegel, 2010a). Relationships that promote health are integrated relationships, honoring differences, promoting linkages. As a clinician, you don't become the patient, but you attune to their internal world. I like to unpack this process using an acronym. When people ask me, "What is the part in the healing relationship a psychotherapist needs to take?" I frame my answer using the word "PART" which stands for these four elements. P stands for presence. We can now study the idea of a clinician or any human being, being present for another person. This requires a receptive state of mind that allows you to receive things without judgment. Some people like to overlap this capacity with the practice of mindful awareness. In the research center I co-founded at UCLA, we recognize mindful awareness is a way of developing presence.

Presence allows for the second aspect of PART, the A, which stands for attunement. Attunement is the focusing of our attention on the inner nature of a person. It's usually used to mean interpersonal attunement. I believe that mindful awareness is actually a form of internal attunement. Attunement emerges from presence, so you attune to your own internal nature as well as that of another person. The clinician who offered the thirty-second empathic comment in the study I mention had to be present to realize that the patient was a student in final exams. Then that clinician was able to attune to the student's internal world, and that attunement allowed her to engage in the third aspect of PART, the R, which stands for resonance, resonating.

To resonate means that, as a clinician, I don't become my patient with a cold who's facing final exams, but I do feel connected and resonant enough to sense their feelings. They change me because of the resonance I'm experiencing in my attunement, and the resonance and attunement can only happen because I'm present. Resonance is like a guitar string. You don't become the lower-pitched strings if you're a high-pitched string, but you do resonate with them. This is where the phrase "The whole is greater than the sum of its parts" begins to make sense. Instead of two individuals in a clinical encounter, it becomes a "We." This understanding is everything. A "we" created from presence, attunement, and resonance creates the fourth aspect of PART.

When you're present, attuned, and resonate literally through the connected nervous systems of the two individuals involved, what is created is trust. Steven Porges has elegantly referred to this process in terms of something he calls the social engagement system, which is turned on when we can be present, attuned, and resonant (Porges, 2011). All sorts of physiological benefits emerge from this engagement, benefits that contemplative neuroscientist Richie Davidson and many others have demonstrated and described (Davidson, 2014). So presence, attunement, resonance, and trust is the fundamental part we play when our relationship is integrated and healing.

## **The Interpersonal Neurobiology of Mind and Integration**

Since I promised to say something about the neuroscience of integration, you might ask, “What does the body and brain have to do with this?” The nervous system of the body begins as ectoderm in the conceptus. Once the sperm and egg fuse together, the work of neural development is not far behind. One cell becomes two, two become four, then eight and sixteen, then thirty-two, sixty-four, one hundred and twenty-eight, until finally some tissue differentiation has to occur, the embryo’s mass of cells is so big, some are now on the outside and some are on the inside. That’s the first differentiation of embryonic tissues. At this point, the cells from the outer skin layer, the ectoderm, invaginate inwardly to become the neural tube. The nervous system begins with skin cells. The ectoderm is the interface of the outer world with the inner world. The nervous system, though it’s embedded deep inside the body, stays aligned with this original commitment. It remains central to the interface between the inner and the outer world. In this sense, the brain is not so much up in the head, but linking our whole inside with the outside world. I often refer to the central nervous system that gradually develops in the womb as an embodied brain. The term reminds us that the central nervous system is so much more than what’s in the head. Thinking of it as just in the head is almost meaningless, since its biology is all about interfacing the entirety of the body with the entirety of the natural and social surround. We humans are amazingly social creatures, and the next big phase of neurobiological development is embedded in a social world.

Simply put, integration happens interpersonally. Although it took us twenty years to flesh out, when you think about it, this is incredibly obvious. Interpersonal integration—relationships in which connection links two unique and distinct human beings—stimulates the activity and growth of fibers in the brain that are integrated. I draw your attention to three key examples: the prefrontal cortex, the corpus callosum, and the hippocampus. When I present this to new audiences, I ask them to use their hand as a very simple model of the brain. If you put your thumb in the middle of your palm, and wind your remaining four fingers over the top of your thumb, you have a very rough brain “handout.” Your spinal cord is represented by your wrist. Your brainstem, roughly 300 million years old, is represented by your palm. Your thumb curled over the palm of your hand represents your limbic area. And the other four fingers curled over the thumb represent your neocortex. This simple model overall represents a super complex system. With 100 billion neurons up in the head, and an average of 10,000 connections to each other, that nets out to trillions of connections. The number of on-off firing patterns in this brain has been calculated to be 10 to the millionth power, a number larger than the number of atoms in the known universe. What you have, even just up in your head, has more potential firing power than anything we know about.

The way this complex system coordinates and balances itself is very simple: differentiate and link. We can see this simple principle at work in the three areas I mentioned as examples. The corpus callosum, like the underbelly of your four top fingers, is a bridge of fibers linking the left cortex to the right. The hippocampus

buried deep within the limbic area, like the underbelly of your thumb, links widely separated implicit and explicit memory systems together. The prefrontal cortex, roughly analogous to your pinky with its fingertip and fingernail, connects with and links all three systems together, while also linking all three outwards to the social world.

To return to early development, the formula I offered was, “interpersonal integration cultivates neural integration” (Siegel, 2007). Recent decades of neuroscience have found masses of evidence supporting that formula, and not a single piece of research to disprove it. Of course, you can never say in science, “We’ve proven it,” but that’s the conclusion that now stands. Interpersonal integration catalyzes or cultivates neural integration. What that means is that these integrative regions develop fully and well when children are raised in secure bonds, where they enjoy presence, attunement, resonance, and trust with caregivers. And as these regions develop they support the higher personal and social faculties of mindsight, such as mindful awareness and empathy. Conversely, when children experience an insecure attachment with caregivers or disorganized environments in which they are subjected to trauma or abuse, their integrative regions fail to develop fully and well, and so do their higher personal and social capacities.

Why is this link between interpersonal integration and neural integration so important? Because we know that every form of regulation we’ve been able to look at, regulating attention, regulating emotion or affect, regulating mood, regulating thought, regulating physiology, regulating relationships, and behavior—in other words every aspect of self-regulation we explore depends on integration in the brain. This fact brings us back to the question, why did a thirty-second empathic comment improve the immune system and help subjects recover a day sooner? The answer lies in understanding the power of integration.

## **Interpersonal Integration and the Nature of the Mind**

We don’t live in isolation. We live in connection with each other. Of course, we live in separate bodies. That’s a differentiated experience we all have as an “I.” I live in this body. This is me, right here. Dan is here in this body. He’s got a name. He’s going to live, hopefully, about a hundred years. But what we’re learning about development is that our bodies develop in intimate linkage with the bodies of others, through development. Consider the Adverse Childhood Experience Scale Study done at Kaiser Permanente in California (Felitti et al., 1998). Sadly, relationship experiences that are stressful early in life lead to serious medical problems later on. Why? Because energy and information flow that happens relationally in the social world directly affects the molecular structure of the body. We’ve defined relationships as the sharing of energy and information flow. We defined the body as this collection of molecules in a system full of differentiated parts. The nervous system is very important, because when it’s integrated, the whole body does well. What is that nervous system really all about? It’s the embodied mechanism of energy and information flow. Relationships are the sharing of energy and information. The body is the mechanism of that flow within the network called yourself.

It's the node of the network. Now we're ready to ask the next, almost never asked question: "What is the mind?"

First of all, in thinking about this vital and subtle question, I ask you please to think with care. Most, in fact, nearly all of what is said in current science about the mind comes down to one, deceptively simple article of faith: "Mind is what the brain *does*." According to the conventional wisdom, "mind" is nothing but brain activity. Of course, that's part of the story. But if you limit your understanding of mind to that commonplace, you won't have a clue as to how the mind relates to medicine and psychotherapy. In 1992, I was asked to convene a think tank of forty scientists to discuss the connection between the mind and the brain. They couldn't come to any consensus, because there was no definition short of brain activity, which didn't make the anthropologist in the room happy. She would say, "That's not true. It's not just brain activity. Mind is central to what I study, to human culture." At our Center for Culture, Brain, and Development at UCLA, we study how culture shapes synaptic formation in the brain. We don't believe the mind is just brain activity. Brain activity is an important part of it, but not all.

If relationships are the sharing of energy and information flow, and the brain is the embodied mechanism of that flow, then of course its electrochemical energy transformations sometimes contain symbolic meaning: information. If energy and information are embodied in the nervous system, and outwardly in a social system of shared relationships, what would the mind be? Since it's clearly embedded within a vast web of complexity, in order to understand the mind, we must apply the mathematical science of complex systems. What that science tells us is that the mind as a living system is open to the flow of information from all around it; that it is capable of operating chaotically, embracing and transforming chaos, not just order and organization; and that it's nonlinear, in that it constantly adapts and changes in unpredictable and creative ways. These properties of mind mean that it meets the mathematical criteria of a complex system. All complex systems have what are called emergent properties. Emergent properties are those that arise from the interaction of the elements of the system, although they are not found within the separate elements considered in isolation. They are properties that come out of the complex system's interaction.

### **Mind as an Embodied Self-Organizing Flow**

One emergent property scientists of complexity have described is the property of self-organization. My proposal to the think tank I called in 1992 was that the mind is an emergent, self-organizing property of human life. In other words, it is an embodied, relational process that regulates the flow of energy and information (Siegel, 2012). If mind is a self-organizing process, where is it located? It is located within you and between you and other people, and also between you and the whole planet. One small sample of the evidence supporting the view of mind as a self-organizing embodied process comes from the groundbreaking study done by Nobel Prize winner Elizabeth Blackburn, psychologist Elissa Epel, and two of my interns (Entringer et al., 2013). That study showed that presence—the experience

of embodied, mindful awareness in the present moment—leads to improvement in telomerase levels that repair and maintain the ends of your chromosomes. When you apply your mind to presence, the initial P of our PART acronym, it actually raises the enzyme level to repair and maintain the ends of your chromosomes to keep yourselves healthy.

Another set of studies supporting this view relates to something called *eudaimonia*, the Greek term for well-being (Ryff, 2014). One aspect of *eudaimonia* is said to be the aspect of compassion; a second aspect involves connection with other people; a third aspect is having a sense of meaning or purpose; and a fourth aspect is equanimity, achieving some degree of emotional balance. Equanimity, meaning, connection, and compassion are all said to contribute to lasting well-being, called *eudaimonia*. Studies of *eudaimonia*, cultivated through practices like mindfulness, show that it may be associated with epigenetic changes in the non-DNA molecules that help our cells produce chemical messengers called cytokines that prevent inflammatory diseases, including some kinds of cancer and some kinds of diabetes (Fredrickson et al., 2013). What you do with your mind actually changes the methyl groups and histones, the non-DNA molecules, that sit on top of the DNA altering its physical shape in ways that shift gene transcription and expression towards well-being. One common denominator we notice about the aspects of mind that promote well-being is that they all seem to involve a sense of connection to something larger than the bodily self.

Compassion involves *feeling with* another person, wanting to help them. Connection involves an awareness of being linked with and belonging to social relationships and a larger community. Equanimity involves being able to regulate your own internal state so that you can maintain compassion and a sense of connection. A sense of higher meaning or purpose also involves an awareness of how we can contribute to others and the larger whole. All these positive, healing capacities of mind therefore relate to integration.

In modern culture we have made a serious mistake that is embedded in the way parents raise children, the ways teachers teach kids in school, the way the media is portraying everything. That mistake is congruent with the mistake we make by reducing the mind to nothing but brain; we have equated “self” with the body. The point is that the self is not isolated within the brain and body, nor simply a node within the self-organizing process of mind, brain, body, and society. The self is a node in that process along with all the interconnections within the person and between persons. We do have a differentiated experience of self. Yes, there is a Me, but there is also a We. We don’t want to give up on taking care of the body. We all need to be attuned to our bodies. But we also have a larger socially interconnected identity as a We.

When you see integration take hold in the mind, when you see mind emerging as a self-organizing process, you see how self-organization involves differentiated linking, linking internally to our parts, externally to others and our world. Otherwise the system tends towards extreme modes of self-destruction or self-protection; that is, towards chaos or towards rigidity. This perspective on the healthy mind as a process of integration also sheds light on mental illness. When

we integrate, when we can differentiate and link, we get individual and social harmony. We get flexibility. We're adaptive. We're coherent. We're energized. So the integrated mind can be stable even in the face of the hardest realities of life, including aging and facing death. Integration is the fundamental basis of health. Integration made visible is kindness and compassion.

### **Integration, Empathy and Compassion: Receptive vs. Reactive States**

How does interpersonal neurobiology help us understand and develop compassion? We're all familiar with the term kindness, but "compassion" requires some definition. In my view, compassion is more than just helping people who are suffering, but also entails actually helping people flourish. Viewed in this way, compassion merges into what we know as kindness, as well as related terms like care, love, altruism, and empathy. What do these terms have in common? Interpersonal neurobiology helps explore these related capacities, by reminding us that our brains and bodies have two binary basic states. One is the state of being reactive, the state we slip into when we hear "no." That state of reactivity is very different from the receptive state we slip into when we hear "yes." So I begin by suggesting that every one of the capacities I mentioned—care, love, altruism, empathy, kindness, compassion, connection—all have to do with the receptive state of our minds, brains, and bodies.

We all know that the reactive state of stress has a historical, survival value. When we feel threatened, our minds, brains, and bodies fall into this reactive state, which is expressed in one or more of the forms described by four Fs. We fight back, we flee, we tighten up our muscles and freeze waiting to see how to respond to threat, or we faint, which is also called feigning death. Such reactive states are interesting in many ways because the whole field of positive psychology has shed new light on a contrast that is controversial for professionals and the lay public—the contrast between positive emotions and negative emotions. What this means basically is that if you have negative emotions like anger, fear, sadness, anxiety, despair, all these states come about as a response to threat. The "no" reactive state actually is the gateway to what some call destructive emotions. If they persist for long periods of time they undermine health.

Of course, as psychotherapy teaches us, all emotions are fair and natural; we all feel them and when we do they should be expressed and explored. But these negative states are based on threat and so they affect our whole system adversely. Overexposure to them eventually becomes unhealthy. These negative states, these reactive "no" states, are in fact pathways to non-thriving, non-flourishing. In contrast, receptive states have the dramatically distinct quality of opening us up and out, are pathways to positive emotions like love, joy, elation, awe, and gratitude. What positive psychology has taught us in recent decades is that all these positive emotional states, when you can attain and maintain them, actually foster well-being. In what follows, we'll take compassion as a prime example of all these positive states.

To begin with, what does the term “compassion” mean? This term comes from Latin, and is a compound of two words. Literally “com” means with, and “passion” feeling. So we can think of it simply as “feeling with” another person. A common interpretation of this is expressed in the phrase, “I feel your pain, and I’m able to hold that pain inside of me enough to think about how I’m going to skillfully take an action to reduce your suffering.” But we can also widen the definition of compassion beyond this standard sense, to include what people usually associate with love or kindness. In that broader sense, compassion is not just about sharing and reducing suffering, but also about promoting flourishing. Of course, these different senses are all aspects of one positive social emotional process. This process involves being open to another person’s feelings, which is usually called empathy; then based on that it involves responding or taking action in some way to reduce suffering, which is usually called compassion; and it may expand to include the wish to share happiness by responding or taking action in some way to help foster flourishing, which is usually called love or kindness. We could even include another emotion here that is usually called empathic joy, a state of openness that shares and rejoices in the well-being of others.

What do these all shades of compassion have in common? What do reactive states and receptive states tell us about creating a compassionate inner life for inner transformation, interpersonal thriving, even a compassionate care for our planet Earth? In terms of the interpersonal neurobiology of mind, compassionate action, kind action, and empathic action are all integrative acts. Since integration is enhanced in a state of receptivity, and reduced in states of reactivity, all positive emotional states are also integrative states. What this means in terms of the brain is that they tend to enhance the activity of integrative regions like the prefrontal cortex, corpus callosum, cingulate cortex, and hippocampus. This activation is essential for us to access and maintain our full capacities for mindful presence, empathic attunement, emotional resonance, and basic trust or confidence. In contrast, when we are in distressed emotional states, reactive regions in our brain like the amygdala and hypothalamus tend to be more activated, leading to the shutdown or “hijacking” of our brain’s social engagement system. This kind of reactivity is naturally increased by trauma, whether in childhood abuse, insecure attachment, or trauma in later life. So negative emotions not only impair internal healing and social adaptation, but also basic well-being.

### **Mirror Neurons, Positive Affect, and Vagal Tone**

Three current research areas in neuroscience lend support this broad picture. Recent work on the mirror neuron social empathy system by my colleague Louis Cozolino and others has helped us understand the way our social brains try to understand others’ emotional states: by reading their facial expressions and body language, and then mapping the information we gather onto our own archive of embodied emotional memories (Cozolino, 2007). This groundbreaking work has been further clarified by current compassion research by Tania Singer and others, which distinguishes two modes of the empathy system (Singer & Klimecki, 2014).

One is a reactive mode in which the negative emotions we detect in others trigger negative emotional memories and states in ourselves. The other is a receptive mode in which we connect with the suffering of others while preserving a sense of differentiation that allows us to feel safe and respond with positive states like compassion that enhance well-being.

The second research area that sheds light on the integrative role of positive emotions is the field of affective neuroscience led by pioneers like Barbara Fredrickson (Fredrickson et al., 2013) and Richard Davidson (Davidson, 2013). In study after study over the last several years, we have found that positive emotions like compassion have an expansive, social self-organizing function that brings the mind, brain, and body into healthy receptivity and prosocial engagement with others and the world. Negative emotions like fear and anger not surprisingly increase reactive, self-enclosing states of mind, brain, and body that promote anxiety, traumatic reactivity, depression, and isolation.

A final field of study that has given powerful support to this model of compassion as an integrative process is the research on the autonomic nervous system done by Steve Porges (Porges, 2011). Steve's work shows how negative emotions trigger the primitive sympathetic fight-flight and parasympathetic freeze-faint systems that disable the brain's social engagement systems at all levels—cortical, limbic, and brainstem—while positive emotions like love and care help promote and stabilize the mammalian neurobiology of those systems, based on the smart vagal nerve and the peptides oxytocin and vasopressin. So compassion and related emotional states are vital to promote the integration and self-organization of mind, brain, and body on which healing relationships like parenting, teaching, and psychotherapy depend.

### **Mindful Awareness, Compassion, and Contemplative Practices**

We are all in great need of a new way of being—in ourselves, in our schools, and in our society. Our modern culture has evolved in recent times to create a troubled world with individuals suffering from alienation, schools failing to inspire and to connect with students. We live in a contemporary society overly focused on self and material things, often devoid of a moral compass to help clarify how we can move forward in our global community to create a more meaningful, sustainable, and compassionate way of living. Part of our journey towards rediscovering such a compass has involved linking the universal principles across scientific disciplines to clarify the true nature of mind and well-being. Another part has led us to explore the mechanisms of strengthening our mental skills through methods of attentional training, especially those developed and preserved with ancient traditions of meditative practice. One of these traditions belongs to what is sometimes considered a “religion” but at other times is seen as a form of practical “mind science,” the contemplative tradition of Buddhism. One facet of Buddhist meditation is the cultivation of a quality of attention that enhances the ability to be aware of present-moment experience and free oneself from the burden of often self-created anxiety, despair, and isolation.

In many ways, learning to train the mind to become more mindful has been demonstrated in a range of scientific studies to enhance immune function, improve cardiovascular health, increase telomerase, balance emotions, decrease fear and anxiety, increase empathy, and even strengthen self-compassion. Being mindfully aware, attending to the richness of here-and-now experiences, creates scientifically recognized enhancements in our physiology, our mental functions, and in our interpersonal relationships. Being fully present in our awareness opens our lives to new possibilities of well-being. In addition, what is called “interpersonal attunement,” focusing attention on the internal world of another, harnesses neural circuitry that enables two people to “feel felt” by one another, promoting longevity and resilience. Mindfulness may in fact be a form of “internal attunement” in which an observing self-function approaches a more directly experiencing self with curiosity, openness, acceptance, and love. This internal attunement may lead the brain to grow in ways that promote balanced self-regulation via the process of neural integration, which enables flexibility and self-understanding, empathy and compassion.

Almost all cultures have practices that help people develop awareness of the moment and what we can see enables attunement toward self and others. Each of the major religions of the world utilizes some method to enable individuals to focus their attention and feel connected to their inner and outer worlds, from meditation to prayer, yoga to *taichi*. Among these cultures, the Buddhist traditions of Asia have received growing attention from researchers and clinicians in recent years, in part because they approach our human needs for reflection and attunement as a science and healing art of individual and communal well-being. “The Buddha” was a man who sought a new way of living free from the self-created suffering that drove him to explore his inner world. The realization of a way to view suffering as inherent in the human condition and to outline the path to alleviate that suffering is the “awakening” that came with his journey. “Buddha” means the awakened one, and this awakening, this shedding light on a universal human condition, is the essence of Buddhist philosophy and practice.

The key to these practices is that the way we learn to focus our attention can prime new neural patterns of activation and ultimately stimulate the growth of new synaptic connections in the brain itself. This is how we use the focus of attention with awareness—a function of the mind—to change the structure of the brain. Such tools of training attention may be especially helpful in bringing mindfulness and attunement to high performance social roles and intimate relationships. In many ways, these are “mindsight skills” that enable us to see our own and others’ minds with more clarity and depth, and then to transform this energy and information flow in our bodies and in our relationships toward a process called integration—the linkage of differentiated parts of a system. Modern science can be interpreted to suggest that physiological, interpersonal, and psychological health emerge from such integration, experienced as harmony and flexibility. Ancient contemplative practices may reveal a rigorous form of mental training that ultimately can be seen to promote such integrative states in body, mind, and relationships.

In fact, within this ancient tradition, as in our own current science, the conscious mastery of differentiated elements brought about by rigorous methods of mind training is viewed as catalyzing a deep form of integration across many layers of mental life. This synergy helps make explicit the potential of applying this new science together with traditional practices to psychotherapy. The result of this kind of exploration is a productive confluence of both traditional and a contemporary science of mind that offers glimpses into the promise of an ongoing dialogue between these two very distinct disciplines of discovery.

Given the challenges we face throughout our global community in cultivating well-being in this troubled and alienated world, it is vital to our future well-being, and even our very existence, that we preserve and explore all human strategies to strengthen self-regulation and promote the internal and interpersonal integration needed to help us build our natural capacities for mindful awareness and interpersonal attunement. Integration can ultimately shift the pathway of cultural evolution in a positive direction—and a strengthened capacity for mindful awareness may be the essential starting place to cultivate such an intentional shift, helping our increasingly interconnected and rapidly changing world to survive and even thrive as we move into this new digital era. Science brings knowledge and technology but not necessarily wisdom. If we take our human family's accomplishments in exploring the nature of our mental lives, it is natural to then seek a weaving of the important contributions of all the sciences with the deep understanding of our subjective mental lives in the wisdom traditions of contemplation. Such moral living does not arise from a vacuum, but can be cultivated with integrative practices. Integration is the source of well-being and health that provides a secular ethic around which we can focus our efforts to bring the world to a scientifically grounded place of positive growth. Integration made visible is kindness and compassion. Whether we come to such integrative practices as individuals seeking lasting happiness through caring relationships in the world, or as professionals seeking to heal, teach, or lead, these insights and methods can inspire us all, and offer vitally relevant strategies to all walks of humanity, and to the future of the world, this fragile and precious Earth, the home we all share.