

Mindfulness and wellness: Central components of a science of learning

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Abstract

In this paper we address mindfulness and wellness from the perspective of lived experiences in our personal and professional lives. In a context of a long term study undertaken in a science teacher education program at Brooklyn College, what has emerged about teaching and learning and emotions, mindfulness, and wellness has informed the design and conduct of our research, while catalyzing changes to enacted curricula, curricula in other institutions in the greater New York area, and to the lives of the researchers, student participants in the research, and those with whom they interacted. As such, each author includes autobiographical narratives to capture salient features of our emotional lives and ways in which meditation, mindfulness, and health projects intertwined. What we learned about emotions and ways in which they are expressed physiologically further instigated research on interventions and studies of a “recovered” knowledge field, Jin Shin Jyutsu. In this paper we identify touches and holds used without apparent awareness, in teaching and learning vignettes. We address possibilities of using touches, holds, and flows, that are part of Jin Shin Jyutsu, in all contexts in which teaching and learning occur and more generally to address health projects, as they arise, as complements to or replacements for Western medicine.

Keywords

Meditation, mindfulness, wellness, emotions, learning sciences, health and education

Atención consciente y bienestar: componentes fundamentales de una ciencia del aprendizaje

Resumen

En este trabajo abordamos los temas de la atención consciente y el bienestar, desde la perspectiva de las experiencias de nuestra vida profesional y personal. Lo que surgió en torno de la docencia, el aprendizaje y las emociones, así como de la atención consciente y el bienestar durante un estudio llevado a cabo en un programa de educación para instructores de ciencia en el Brooklyn College, fue lo que orientó el diseño y la ruta a seguir de nuestra investigación. También provocó cambios en los planes de estudio que se desarrollaron en el programa mencionado y en los de otras instituciones del área metropolitana de Nueva York, igualmente en la vida de los investigadores, los alumnos que participaron y las personas con quienes interactuaron.

Palabras clave

Meditación, atención consciente, bienestar, emociones, aprendizaje de ciencias, salud y educación

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Por tanto, cada autor incluye narrativas autobiográficas con el fin de captar las características destacadas de nuestras vidas emocionales y las maneras en que se entrelazaron la meditación, la atención consciente y los proyectos de salud. Lo que aprendimos sobre las emociones y los modos en que se expresan fisiológicamente nos incitó a investigar más las intervenciones y estudios acerca de un conocimiento “recuperado” denominado Jin Shin Jyutsu. En este artículo exponemos imágenes de videos de sesiones de aprendizaje en las que se observan algunos puntos de contacto con el cuerpo utilizados por los participantes sin conciencia aparente de ello. Proponemos las posibilidades de utilizar toques, presiones y flujos energéticos, que forman parte del Jin Shin Jyutsu, en todos los contextos en los que la enseñanza y el aprendizaje se llevan a cabo y, de manera más general, para tratar problemas de salud en el momento en que surgen, como complementos o sustitutos de la medicina occidental.

To a major extent science education has been distracted by a riptide consisting of entities like science assessment and achievement, science identity, and a science pipeline in which students are considered to enter and subsequently to exit as science literate. Of these entities, the pursuit of higher science scores student and holding teachers accountable for student achievement, have steadily grown in size and importance to the point where in many Western countries these are now perceived as the primary goals. Fueled by billion dollar publishing interests and anti-union stances, politics, governmental policies and structures have emerged to promote a vision of education that is monolithic and expressed in writing as standards. The preferred approach by policy makers is for standards to be national in scope and to afford accountability of schools and teachers and testing programs to assess achievement. In the process, issues such as transcendence of science knowledge (i.e., beyond words, icons, and symbols) and dealing with grand challenges facing humanity and our planet today (e.g., health and wellness) are being further neglected or altogether abandoned.

In contrast to the mainstream view, that is bolstered by crypto-positivism (Kincheloe & Tobin, 2009), we have embraced science knowledge as cultural enactment, valuing not only what can be spoken, written, drawn, and expressed symbolically – but also all that is done, including tastes, values, and feelings. We adopt an expansive view and seek to better understand the value of science enactment as a way of being and interacting with our world as scientifically literate citizens. We see value in fostering mindfulness as an affordance in all educational settings (i.e., beyond the dichotomy of formal and informal and to include even those institutions that educate even though their primary role is not education – such as age care organizations, prisons, the media, etc.) to help us focus

and become aware but also for our health and wellness, and to become more kind and compassionate to ourselves and to the world around us. In our work we adopt a broad view of the possibilities of mindfulness, and in a contingent and emergent way, we build deeper understandings about the embodied ways in which science is learned and enacted, thereby transforming science and the individuals and communities that do science. Our stance is that doing science is transformative and reproductive of social environments – which consist of social entities (e.g., living and nonliving, human and nonhuman) and the maze of networks that connect them.

Although the initial grounding for our research was science education, we are interested in teaching and learning all subject matter in institutions that are formally associated with education (e.g., schools, universities, museums) and those with very different primary functions (e.g., print and electronic media, recreation centers, child minding facilities, retirement villages, and hospitals). Our focus on learning spans the birth through death age spectrum and our focus on wellness, well-being, environmental harmony, and literate citizenry emphasize multilogicality, hermeneutic-phenomenology, and authentic inquiry. Not only do we do research to learn from it, but we also expect all participants to learn from the research and benefit as individuals and communities.

Social economic disparity in education is also reflected in the disparity in health care and medical access (Basch, 2011). Asthma, diet, obesity, inattention and hyperactivity become gatekeepers that especially disadvantage those with the least, further compounding teaching and learning challenges of these students. This disparity further contributes to the cyclic loop of health issues negatively affecting educational attainment and in turn the level of education affecting health, contributing more and more to social economic and health disparities. Because of these societal disparities we are interested in expanding options and solutions to wellness and sustainability through healthy and mindful practices. Environmental harmony and ways in which mindful conduct interrelates with wellness and well-being are central concerns in our ongoing research. In this paper we use the term wellness in relation to the health projects of participants. Well-being has a broader focus that involves environmental harmony (i.e., living and non-living, human and non-human).

Mindfulness in education

We (the co-authors) commenced our collaborative work around mindfulness with what came to be known as the Brooklyn College (BC) study. At the time, our focus was on investigating emotions in educational settings such as, in this case, a graduate level course (taught by Konstantinos) in a science teacher education program.

Grounded in theories of Jonathan Turner (2002), Paul Ekman (2003), and Randall Collins (2004) that argue the primacy of emotions in social life, this work was a continuation of earlier research undertaken by Ken Tobin and Rey Llena (2010) in urban high schools. Knowing that educational environments were sites where teachers and students often experience high emotional states, we considered it important to develop interventions that would assist in alleviating strong emotions (particularly negative ones) towards creating more optimal, high-quality, learning-promoting emotional climates similar to those discussed by Alberto Bellocchi and his colleagues (2014). At the same time, we developed an interest in the emerging scientific evidence indicating that mindfulness practices have a potential to offer a wide range of health benefits including affect regulation (see, for example, a 2007 literature review of mindfulness salutary effects by Kirk Brown and his colleagues). In particular, our attention was drawn to the work on emotional styles of a contemplative neuroscientist, Richard Davidson. In his seminal book (Davidson & Begley, 2012), Davidson asserts that emotions are arguably the most embodied form of mental activity and, as such, they mediate our physical health in the most profound way (e.g., weakening or strengthening our immune system). More importantly, using the now well-documented concept of neuroplasticity (our brain's ability to change its structure and function), Davidson demonstrates that by engaging in contemplative practices such as mindfulness, we can shape the six dimensions of our emotional styles (e.g., we may become more resilient and more attentive, and/or develop deeper self-awareness and a more positive outlook). We theorized that such changes would potentially be beneficial to those participating in the teaching | learning¹ process, and hence we resolved to ground our interventions in mindfulness.

We frame mindfulness as a sociocultural, secular, and multidimensional construct involving a special quality of attention that, in Jon Kabat-Zinn's (1994, p. 4) words, is "purposeful, in the present moment, and non-judgmental." From an epistemological standpoint mindfulness represents a unification of centuries-old contemplative Eastern traditions (including Buddhism) and, as noted earlier, recent developments of what Tobin (2015a) refers to as Western modern science (WMS). In light of the aforementioned findings from social neuroscience, it is interesting that, as remarked by Craig Janes,

Buddhist medicine posits that the self (the "ego") [the mind] is ultimately causal of all suffering, including that of ill health. Al-

¹ The use of | indicates a dialectical relationship involving the terms either side of | (i.e., in this case teaching and learning). That is, the constructs are constituents of a whole, each presupposes the existence of the other, and they are recursively interrelated.

though body and mind are seen to be fundamentally integrated in this system, it is the mind that is problematized and seen as primary in facilitating both health and ill health. (1995, p. 10)

As we demonstrate below, what we experienced in the BC study did indeed warrant development and enactment of mindfulness-based protocols towards not only bringing participants' attention to (raising their awareness of) the connection between affective states and physiology (which we ultimately extended to the overall well-being) but also towards their ability to mediate strong emotions when those arose so as to not only improve learning and teaching, but also the health of those involved.

In order to gain phenomenological insights into the affective states arising in the classroom we investigated physiological expressions of emotion. To that end, we outfitted the study participants with oximeters that captured their heart rate (HRD) and blood oxygenation level (SpO2) during their involvement in co-teaching. We (researchers, instructor and student-participants) were struck by the degree to which some of the readings displayed and transmitted by the oximeters deviated from what is considered a healthy range. For example, while one female student's HRD reached 174 beats per minute, another's SpO2 fell to a low 74 percent. Clearly these pre-service and in-service teachers needed instantaneous and relatively non-intrusive self-help tools to alleviate these unhealthy states that, by their own admission, were often present in their stress-laden professional (and personal) lives. To be sure, as researchers we subscribe to the principles behind conducting authentic inquiry (Guba & Lincoln, 1989). Accordingly, we consider research to be of high quality if study participants directly benefit from their engagement in it. While models such as Kabat-Zinn's Mindfulness-Based Stress Reduction Program exist, incorporating them into classroom contexts that are already saturated with a number of competing priorities (including execution of the official curriculum) may pose challenges. Therefore, we elected to rely on our collective knowledge about mindfulness (including that of student-participants) towards co-developing and field-testing our own unique interventions. Below we briefly discuss how in the course of the BC study, fruits of this labor germinated to eventually blossom and become permanent fixtures of our practice.

Meditation and mindfulness

Researching mindfulness

Ken: The first paper I presented on emotion and mindfulness was at the annual meeting of the Australian Science Education

Research Association, in Adelaide (July, 2011). The paper was a collaborative effort involving Stephen Ritchie and Senka Henderson, from the Queensland University of Technology. In essence, we addressed ways in which excess emotions stuck to teacher and student conduct to adversely shape learning environments. Excess emotions, positive (e.g., happiness) and negative (e.g., anger, fear), were evident in an elementary science classroom and we laid out a rationale for ongoing research on mindfulness in teaching and learning of science.

“Take a few deep breaths” is a well-intentioned piece of advice intuitively given to those who find themselves in a distressful circumstance. Peacefulness and tranquility appear to emanate from images of individuals engaged in meditation practice. Indeed, Pierre Philippot and his colleagues (2002) found evidence that deep slow breathing is associated with production of happiness/joy. Hence, in the BC study, our collective 3-minute deep breathing exercise was meant to quiet the hurried minds of students, instructor, and researchers and bring focus to the upcoming class activities. Since engaging in breathing was meant to mediate negative emotions, informed by Philippot *et al.*'s research, we emphasized diaphragmatic (abdominal) breathing rather than thoracic (chest) breathing. We asked the participants to place their hands on the abdomen in order to feel its movement as they inhaled and exhaled. As the study progressed, students who engaged in the practice commented on experiencing heightened awareness of the connection between in-the-moment emotions and physiology as well as an increased ability to rein in strong emotions (also reflected by oximeter readings).

During the study, as the benefits of breathing meditation began to emerge, several of the participating in-service teachers, including ourselves, began introducing the practice into their classrooms. Indeed, since then, engagement in collective breathing meditation at the start of each class or research squad meeting has become a welcome routine. Doctoral students who we invite to lead the practice introduce us to creative meditation techniques. Furthermore, breathing meditation necessarily seeped into multiple fields of our (and other study participants') social lives. Given the porous and overlapping nature of boundaries among fields, we do not find it particularly useful to restrict our mindfulness promoting work to education as exclusively occurring within the confines of a formal classroom. Instead, we broadly frame education as perpetually happening across events and settings throughout individual | collective lives (i.e., birth through death). As educators and researchers, we believe that we have a moral responsibility to identify and promote wellness-sustaining practices that stretch beyond the familiar. To that end, as we discuss later in this manuscript, we continue to expand our explorations to include knowledge fields (“lost knowledges”)

that might be complementary to WMS. We learn that, in one such system (that is now retrieved), Jin Shin Juytsu (JSJ), breath (in tandem with our hands) is regarded the simplest instrument needed to bring about harmonious well-being. As Alice Burmeister remarks, “With every exhalation, we release piled up stresses, physical tension, and FEAR” (Burmeister & Monte, 1997, p. 20).

Figure 1. Enacting breathing meditation in the BC study.



Apart from breathing meditation, our work in the BC study included co-exploration of heuristics as an intervention. A heuristic is a series of statements (characteristics), each describing a feature of a social construct such as mindfulness. Every characteristic is accompanied with a rating scale and a space for free-flowing reflections (see figure 2). The respondents are encouraged to circle the numeral that best reflects their state of mindfulness and to provide contextual information that applies to their rating. The theory that supports heuristics is Pierre Bourdieu’s reflexivity or becoming aware of what one may not be aware of (Bourdieu & Wacquant, 1992). Thus, study participants who are not familiar with mindfulness are able to uncover meanings associated with it through engagement with a heuristic. In that sense, completing a heuristic may represent a hermeneutic activity and, as such, we expect (and indeed value) that different interpretations of what mindfulness is will emerge. In other words, consistent with a theory of difference, each person will make mindfulness his/her own. To be sure, engagement with a heuristic is meant to create an affordance for adopting salient characteristics into one’s enactments. For example, when considering a characteristic, such as “I recover quickly when things go wrong for me,” a person who circles *rarely* may, upon reflection, decide to work towards becoming more resilient (i.e., to decrease length of time and intensity of negative emotion associated with a setback). An important feature of heuristics is their adaptability (a shape-shifting quality). Hence, unlike surveys, heuristics may be altered to fit a context they are intended for. The changes may relate not only

Figure 2. Characteristics for the mindfulness heuristic.

| Mindfulness Heuristic | |
|---|---|
| <i>For each characteristic circle the numeral that best reflects your current state of mindfulness. As necessary, provide contextual information that applies to your rating.</i> | |
| 1. I am curious about my emotions. | <i>5=Very often or always, 4=Often, 3=Sometimes, 2=Rarely, 1=Never or very rarely</i> |
| | <i>Comments:</i> |
| 2. I find words to describe my emotions. | <i>5=Very often or always, 4=Often, 3=Sometimes, 2=Rarely, 1=Never or very rarely</i> |
| | <i>Comments:</i> |
| 3. I observe my thoughts without being caught up in them. | <i>5=Very often or always, 4=Often, 3=Sometimes, 2=Rarely, 1=Never or very rarely</i> |
| | <i>Comments:</i> |
| 4. I notice my emotions without reacting to them. | <i>5=Very often or always, 4=Often, 3=Sometimes, 2=Rarely, 1=Never or very rarely</i> |
| | <i>Comments:</i> |
| 5. I am kind to myself when things go wrong for me. | <i>5=Very often or always, 4=Often, 3=Sometimes, 2=Rarely, 1=Never or very rarely</i> |
| | <i>Comments:</i> |
| 6. I recover quickly when things go wrong for me. | <i>5=Very often or always, 4=Often, 3=Sometimes, 2=Rarely, 1=Never or very rarely</i> |
| | <i>Comments:</i> |
| 7. Even when I am focused I use my senses to remain aware. | <i>5=Very often or always, 4=Often, 3=Sometimes, 2=Rarely, 1=Never or very rarely</i> |
| | <i>Comments:</i> |
| 8. When I am emotional, I notice my breathing. | <i>5=Very often or always, 4=Often, 3=Sometimes, 2=Rarely, 1=Never or very rarely</i> |
| | <i>Comments:</i> |
| 9. When I am emotional, I notice my heart beat. | <i>5=Very often or always, 4=Often, 3=Sometimes, 2=Rarely, 1=Never or very rarely</i> |
| | <i>Comments:</i> |
| 10. I maintain a positive outlook on life. | <i>5=Very often or always, 4=Often, 3=Sometimes, 2=Rarely, 1=Never or very rarely</i> |
| | <i>Comments:</i> |
| 11. I can tell when something is bothering another person. | <i>5=Very often or always, 4=Often, 3=Sometimes, 2=Rarely, 1=Never or very rarely</i> |
| | <i>Comments:</i> |
| 12. The way in which I express my emotions depends on what is happening. | <i>5=Very often or always, 4=Often, 3=Sometimes, 2=Rarely, 1=Never or very rarely</i> |
| | <i>Comments:</i> |
| 13. The way in which I express my emotions depends on who is present. | <i>5=Very often or always, 4=Often, 3=Sometimes, 2=Rarely, 1=Never or very rarely</i> |
| | <i>Comments:</i> |
| 14. If I decide to focus my attention on a particular task, I can keep it there. | <i>5=Very often or always, 4=Often, 3=Sometimes, 2=Rarely, 1=Never or very rarely</i> |
| | <i>Comments:</i> |
| 15. I am kind to others when they are unsuccessful. | <i>5=Very often or always, 4=Often, 3=Sometimes, 2=Rarely, 1=Never or very rarely</i> |
| | <i>Comments:</i> |
| 16. When I produce strong emotions, I can let them go. | <i>5=Very often or always, 4=Often, 3=Sometimes, 2=Rarely, 1=Never or very rarely</i> |
| | <i>Comments:</i> |

to which characteristics are included, but also to the medium chosen to express them. Similar to breathing meditation, developing and enacting heuristics has become a signature methodology we routinely employ within our studies as well as in our teaching | learning practices.

We find that when adopted in education, engagement in mindfulness-based interventions may mediate positive socio-emotional and cognitive changes stretching beyond the immediate school environments and their narrowly defined outcomes. Considered in terms of epistemology, ontology and axiology, the interventions we discussed here are meant to afford shifts towards enactments saturated with focus, open awareness, and the ability to detach from thoughts and emotions. When viewed through an epistemological and axiological lens, wellness-mediating mindful enactments constitute learning and knowledge that are profoundly desirable and distinct from a Western canonical tradition that continues to be privileged in education.

Meditation to promote wellness

Ken: Meditation has become an integral part of my lifestyle and after embracing a practice of at least one hour of meditation a day; I have gradually adapted the nature of meditation to include wellness. Largely based on my ongoing research on emotion and the teaching and learning of science, I was acutely aware of the relationship between excess emotion and health. In fact, a teacher researcher on my research squad, here described by the pseudonym of Philip, provided evidence of a plausible link between excess anger and heart disease. Philip taught high school science in a low-performing urban school in New York City in which teachers and students frequently exhibited excess anger and fear in a continual struggle for control of learning environments, low levels of attendance at school, and high levels of teacher turnover. Eventually Philip's health and associated stress were problematic to such a degree that a doctor advised him to leave teaching or deal with life-threatening health projects due to his deteriorating heart and other "big label" health projects – including type 2 diabetes and recurring shingles.

In my efforts to learn more about meditation and ways to ameliorate emotion I made conscious efforts not to separate my professional and personal lives. In so doing I integrated ways I seek to be in the world across fields of my lifeworld. In particular, I resolved to learn from knowledge systems that in some special senses have been marginalized by educational researchers, especially science educators. For example, in an effort to expand my knowledge of meditation and associated practices about meditation I read widely the Buddhist literature (e.g., Brahm, 2006), and

in my travels to Taiwan, Singapore, and Australia, in addition to visits to temples and museums, I endeavored to learn from Buddhist colleagues and friends, spiritual leaders and complementary medicine practitioners. Accordingly, I opened doors to diverse resources to expand my learning about meditation, mindfulness, emotion, and wellness. Furthermore, I discussed what I learned with colleagues at the Graduate Center where I teach and they also became resources for ongoing learning. For example, at an early stage of my learning, a doctoral student introduced me to Pema Chödrön's work on getting unstuck (Chödrön, 2006).

Konstantinos: My experience in meditation started with the BC study. Before then I did not think of it as worthwhile. While I was into exercise and good health, I thought that meditation and mindfulness were too closely tied with religion. Meditation sounded more like a pretentious white middle class pursuit by people who, other than themselves, did not care the least about the world around them. With the BC study though, I began to see health benefits for my students and me. Since we began, my students have been reporting being helped by breathing meditation and by becoming more aware of their own emotions through mindful practices. As pre-service and in-service science teachers they experienced high levels of stress that often left them emotionally exhausted. It was then that I began to realize just how strong of an impact emotions had on many of these students and their life decisions (enough to encourage them to consider other careers) and how common stress was. They welcomed the learning of mindfulness practices and interventions because now they could do something about it and better manage their emotional and physical responses. As I learn more about mindfulness I continue to teach my students different forms of meditation and mindfulness practices. They often report that they too apply these practices with their own students to help them calm down, focus, become more aware of and better manage their own emotions.

Wearing an oximeter, in my classes, at professional meetings, and in my every day life, thereby becoming aware of my low blood oxygen level, persuaded me to change my breathing patterns. After three years of effort, now I am constantly breathing through my belly rather than my chest. Learning to let things go has been tremendously helpful. Sometimes things happen to us that make us very angry or very upset, like the way others in the street act towards us, or if we do something foolish. We may get so upset that it keeps us from moving forward with our lives. For me letting go has been tough. This is even more so in situations where there may be no good option or choice – kind of like getting mugged by someone with a knife. We know that it may be best to give up 10 dollars rather than fight back and possibly end up in the hospital, but giving up the 10 dollars is not easy.

With the teachers I teach as well, when their self-respect and identity are repeatedly assaulted and violated, convincing them to let things go is very hard. Their supervisors may get on their case for petty things that are irrelevant to teaching, when they are doing their best and giving up every moment of their free time for their students, these teachers feel unappreciated, demeaned and hurt. Letting go though can make a difference between staying healthy and becoming very sick. Letting go does not mean accepting, but merely not getting stuck and hurting yourself with negative emotions, while exploring possible solutions and ways out. Getting sick and being stuck makes it that much harder to resolve unwanted situations. For example, consider this narrative concerning one of my students, a first year science teacher. No matter how much effort she puts into her work she is continuously called to her supervisor's office to explain herself. At the same time she is given little or no support, mentoring or guidance to help resolve the issues she has to contend with. She is continuously on the verge of quitting the teaching profession. Her health has deteriorated and she is often sick. My advice to her has been to let it go and not to get stuck on what her supervisor says so that she may persevere and survive the rest of the school year and look for a better school to move to next year. In every class I have at least one such teacher, if not more. In recent years as teachers have become more and more the scapegoats for the ills in our society, the stressors on them have been dramatically increasing.

If we care about what is going on around us, what is happening to our students, what is happening to those not so well off, to our planet, it is very hard not to get very emotional. I think part of being responsible members of society is to be kind, compassionate, caring and humane to others and to our planet. Being an educator can be very emotional. For one, the political climate at the moment is very anti-teacher. I see my students facing a lot of issues brought about by political agendas that do not value teacher knowledge or caring and are more interested in making a profit through exploitation and destruction of public education. It is not unusual for new teachers to want to quit teaching because of the high levels of stress they encounter and health issues these stressors may cause or exacerbate.

Another place where strong emotions are encountered is in my classrooms. In our courses we often discuss difficult subjects such as race and gender. These topics can be heavily emotionally laden. As such I have to teach my students to be more aware of their own expression of emotions and how to manage them. By discussing such emotional topics in a mindful, respectful, and supportive atmosphere it helps create the safe spaces for different voices and values to be heard for learning from the "other" to take place.

Like the classroom, family life too is laden with both positive and negative emotional encounters and feelings. By taking the time to breathe and learning to let go, I use mindfulness meditation to reduce the unhealthy negativity that comes with simmering negative emotions. We may not always want to choose to let things go or even be kind to someone, but gaining that ability and using it often for me at least has kept me healthier, happier and less stressed.

Being emotional is not the issue as I see it. For example, the attacks on education and its effects on teachers and students (including my own children) that exasperate and increase the social economic disparities can and often do lead me to tears and staying up at night. Becoming very emotional or crying about this or some other injustice like another killing of another black man, I think keeps me human. Therefore, I do not necessarily try to change that. What I try to change is being stuck in it so much that I am unable to go on with my life. I need to be able to get unstuck from disabling and debilitating cycles of negative emotions that ultimately reduce my ability to function and possibly change what is causing these negative emotions.

She who smiles last, smiles the longest

Malgorzata: In the following story I recount an instructive chapter from my life – an episode that highlights how theory illuminates experience (even long after the episode has ended). Recollecting what, in this instance, occurred in the past in a context of what I know today brings a genuinely Duchenne smile to my face. The story is grounded in now well-documented salience of emotions in our lifeworlds and, in the words of the leading contemplative neuroscientist, Richard Davidson, the equal status (or dialectic relationship) between the emotional brain and the rational, thinking brain.

Years before I entered the doctoral program, I developed a close relationship with a co-worker (let me call him Rob) who was proud of his strong scientific background and who argued that his life was guided strictly and exclusively by rationality. I, on the other hand, considered myself and appeared to be perceived by others, as a highly emotional person. To Rob, for whom reason ruled supreme, my disposition was faulty and as such it needed fixing. Thus, any chance he got, Rob engaged in criticizing my being driven by my heart (emotions) rather than by my head (reason). Furthermore, he worked hard towards convincing me that I needed to become more like the rational him. At the time, I didn't quite realize that knowing *what* I needed to change was not sufficient for the transformation to occur. Despite my desire to alter my conduct (I trusted Rob's good intentions), knowing *how* to ac-

comply it was absent. Thus, time after time, my efforts to mimic Rob's way of being necessarily ended in miserable failures causing frustration in Rob and feelings of inadequacy in me. Unable to find common ground, we inevitably drifted apart.

Consistent with principles of authentic inquiry (Tobin, 2014), my current engagement in the collaborative research on expressed emotions and mindfulness has provided me with analytical frameworks that, as a researcher | participant, I am able to apply to different fields of my social life. To a large degree Rob's concern about the need to tone down my emotions was legitimate. Our workplace was (and, sadly, continues to be) a fairly toxic environment that routinely catalyzed emergence of negative emotional states including (in my case) anxiety, anger, worry, and frustration. Looking back, I remember experiencing nearly ever-present stress that often felt like a ton of bricks was weighing down on my chest. I also remember spending sleepless nights unable to quiet my emotion-aroused mind, busy with obsessively analyzing (frequently in a judgmental manner) what happened the day before or with planning what I believed I urgently needed to attend to the following day. What I was not aware of then was that leading life saturated with such high emotional intensity could have potentially devastating consequences to my overall well-being.

The mind-brain-body connection is one of the foci of contemplative research. Davidson, for example, asserts, "of all the forms of human behavior and psychological states, the most powerful influence on our physical health is our emotional life" (Davidson & Begley, 2012, p. 114). Indeed, as noted earlier, in the course of our research we witnessed high emotional states being expressed physiologically through elevated heart rates and/or decreased levels of oxygenation in blood. Importantly, this bio-feedback was instantly available to our study participants thus making them aware of their body's response to stressful situations associated with teaching | learning environments. While acquiring such self-awareness is central to developing mindful disposition, knowing *how* to intervene, (i.e., engaging in breathing meditation to alleviate intense emotions) is an essential step towards maintaining one's well-being (a step with which Rob or I were not familiar). In a sense, I wish someone had placed an oximeter on *my* finger during the years I allowed myself to endure the work-related emotional imbalance. I wish someone had taught me the art of getting unstuck to prevent experiencing sleepless nights. I wish I had known that, as we are informed by recent findings in the field of neuroscience, it was in my power to alter my emotional style and move towards a more balanced self.

Thankfully, the context in which I was introduced to mindfulness was an affordance for not only enthusiastically promoting it to those in my immediate circles (study participants, family,

friends, and co-workers) but also for adopting its principles to my own life. Of relevance was the mounting scientific evidence of benefits one is able to reap from mindfulness as well as the socio-cultural nature of our interpretive studies where difference occupies a privileged position. Hermeneutically speaking, I expected that each person (including me) would develop his or her own understanding of what being mindful means and how it may be incorporated into one's lifeworld. It also made sense to anticipate that the interpretation of the mindfulness construct would evolve over time. Indeed, initially, I equated mindfulness with engaging in breathing meditation. However, as my relevant knowledge base expanded (through scholarly literature, involvement in research, and personal experiences), it was becoming clear that adopting mindful ontology is a full-time commitment involving much more than watching one's breath during formal practice. Gradually I started to make sense of the meanings behind Jon Kabat-Zinn's (1994) framing of mindful ways of being in the world. Hence, being in the moment (and truly appreciating each moment) meant paying attention purposefully (i.e., making a conscious decision) to what was happening within and around me while focusing on a singular activity I was engaged in. It turns out that many daily activities that we (I) may consider mundane or perfunctory (such as making tea, taking a shower, or folding laundry) may indeed become mindful enactments if we (I) focus our (my) full attention on them, take time to do them, assign value to them, and decide to enjoy executing them. For each of these activities is part of the all-important here-and-now (possibly the closest to the temporal tangibility). The trick is to turn off the automatic pilot and gain some control over our wandering mind. As I noted earlier, I often found myself consumed by worries about the future or regrets about the past (which to me represents the intersection of the thinking brain and the emotional brain). Accordingly, salient to me was learning how to change my relation towards thoughts and emotions. Recognizing that we are not our thoughts or emotions and that we can distance ourselves from what goes on in our minds requires suspending judgment as it relates to ourselves and others. My favorite way of referring to this quality of mindfulness is compassion. Acting in a compassionate manner towards others has always ranked high on my axiological ladder. What I needed to learn was how to be more compassionate to myself. Through our research I found that I am not alone; many of the participants in our studies appear to suffer from an affliction of being too hard on themselves and hence could potentially greatly benefit from adopting mindfulness.

While on the conceptual level mindfulness may make a lot of sense, adopting mindful practices is far from being easy. It requires commitment and effort. For example, I am still working towards attaining more consistency in my meditation practice.

I also find it challenging to engage in loving-kindness towards people who seem to be driven by hurtful motives. In addition, I keep on being reminded of the contradictions always looming within the coherence of social life (Sewell, 2005). Quite recently, a physical health imbalance catalyzed emergence of an intense emotional dive that I was unable to ameliorate. In moments like that, when we seem to be failing in practicing mindfulness, it is the very construct that we should reach for with self-compassion leading the charge.

As for Rob's insistence on the primacy of reason over emotions, I now recognize that the two are in a dialectical rather than dichotomous relationship and it's quite unwise to separate them. As Davidson comments:

[T]he circuitry of the emotional brain often overlaps with that of the rational, thinking brain – and there is a strong message in that: Emotion works with cognition in an integrated and seamless way to enable us to navigate the world of relationships, work, and spiritual growth. (Davidson & Begley, 2012, p. 89)

Connecting research on emotions to include wellness

Complementary knowledge systems

Ken: For approximately two years I used complementary methods to address chronic injuries to muscles and tendons in both legs. I used the latest that could be provided by Western medicine when I received treatment from a sports specialist, who used platelet injection therapy in an effort to heal my damaged Achilles tendons. Although he declared the treatment a success and declined to treat me further (“I refuse to further treat a healed tendon!”), I could scarcely walk without intense pain. Accordingly, I continued a multi-year program of acupuncture that involved weekly treatment of both Achilles tendons, and muscles and tendons that extended from my shoulders to toes on both sides of the body. The weekly, one-hour treatment was distinctive in its hands-on characteristics. Jenny, my acupuncturist, felt my body for blockages in the flow of *Qi*, inserted needles at the appropriate acupuncture points, and rotated needles to stimulate *Qi* flow along the meridians theorized to encompass the body. In the time I was a patient (and learner) with Jenny she successfully treated projects that included the chronic conditions in my legs, severe pain in the coccyx and lumbar region of my body, high blood pressure, and food/seasonal allergies. As I received treatment I read widely about acupuncture, acupressure, and hybrid health systems such as *acu-yoga* (Reed Gach & Marco, 2009). As

I engaged in the treatment, experiencing success and occasional failure, I learned and expanded my scholarly activities to incorporate what I was learning from treatments for my health projects. I regarded my ongoing learning and research on emotion and mindfulness as inextricably interconnected.

On a professional visit to Singapore I made an effort to study reflexology – to augment what I regarded as the best aspects of acupuncture and acupressure. A science educator in Singapore, Poh Hiang Tan, assisted me to meet expert practitioners, and as she transported me from place to place to receive treatments from those she identified, she informed me about her experiences with JSJ and provided supporting resources (e.g., Burmeister with Monte, 1997). The Jin Shin Jyutsu (JSJ) knowledge system appealed as highly promising to me because it did not involve needles, pressure, or removal of clothing. Furthermore, the case study style of reporting used by Burmeister and Monte was compelling, illustrating how JSJ resolved myriad big and small health projects. Immediately I got my mother started on the use of JSJ practices, initiated my own practice, and resolved to learn as much as I could about this knowledge field.

Retrieval and expansion of Jin Shin Jyutsu knowledge field

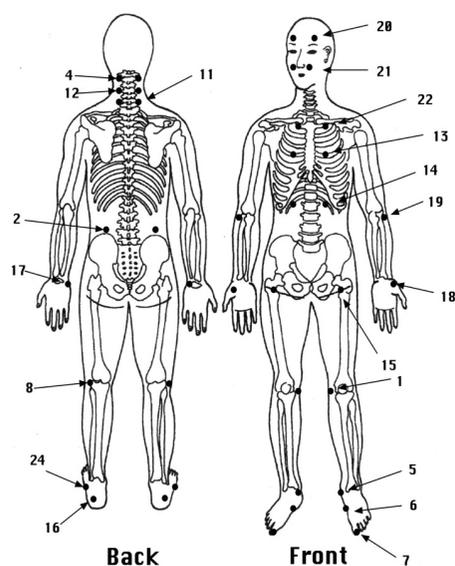
In the early 20th century, Jiro Murai, was stricken with a terminal illness. He retreated to a mountain cabin in Japan to restore his good health in a period of just a week. While he was in isolation in the mountains, Murai meditated and used mudras he had learned about from his studies of statues at temples. Through these practices he was able to heal himself. With his health restored, he dedicated his life to the recovery of a knowledge system that was thousands of years old – emanating in India before the birth of Buddha. This rediscovered knowledge system is today known as JSJ. In the process Murai accessed records preserved in Japan's Imperial Palace and undertook a lifelong program of research to expand and record JSJ – described as “the art of getting to know myself.” Mary Burmeister, who became a student of Murai's, continued to expand and refine JSJ and, after bringing the art to the United States, she effectively disseminated it globally.

JSJ is concerned with the flow of universal energy (e.g., *Qi*) in the body. Murai and his students identified 26 pairs of Safety Energy Locks (SELS), distributed on the body, through which *Qi* flows. The SELS are situated in two flows referred to as supervisor flows (i.e., vertical flows on the left and right sides of the body), (Burmeister & Monte, 1997). *Qi* flows up through the SELS on the back and down through those positioned on the front of the body. The foundational work of Murai and Burmeister docu-

mented ways in which *Qi* flows through the body, grows and repairs cells, and maintains good health. Health projects arise when the flow of *Qi* is disrupted or diverted from its normal pathways in the body – resulting in blockages, accumulations, and deficiencies (i.e., disharmonies). When disharmonies occur in the flows of *Qi*, JSJ can be used to restore harmony using the principles embodied in carefully documented organ energy flows and flows designed to open up the 26 pairs of SELs by gently using the hands as “jumper cables” to unblock or redirect the energy.

Some of the more significant SELs for this paper are represented in figure 3.

Figure 3. Selected SELs that have salience to this research.



Occurrence of JSJ-like touches and holds in a science education class

An eight-minute video vignette involved a science teacher education class in which three students, two of which were African-American, co-taught an interactive discussion on race. Students in this racially diverse class discussed race and racism, relating personal experiences and the need for school curriculum to address relevant history pertaining to immigration, race, slavery, and racism. The three co-teachers facilitated contributions from several students in the class. There were signs in the way students shook their heads, facial expressions, and utterances that there were numerous examples of agreement, disagreement, and emotional tensions. Konstantinos participated as well and

encouraged students to remain on the topic, even though there were emotional difficulties in so doing. A female with a Chinese background shared that when she was called a “chink” in high school she did not know the meaning of the word until her mother informed her it was a derogatory term. From there, the classroom discussion evolved to the use of the n-word and its origin in slavery and whether it was possible to “separate yourself from skin color.”

In the video of this event, as in all teaching and learning contexts, students moved their hands over their bodies, touching and holding different parts. Uses of JSJ-like touches and holds were pervasive. In most cases the touches and holds were not undertaken consciously. In conversations with participants, such as Elsie, they were unaware that they do this, or what is accomplished by so doing. To illustrate the contexts in which the most commonly used SELs were accessed, we focus on Elsie, who was seated near the front and relatively close to the camera. The same vignette also was photographed from the back of the class and we used both angles to illustrate the pervasive use of JSJ-like SELs. The photos we use to illustrate these holds (figures 5-7) are from a follow-up discussion Konstantinos and Elsie had on these holds.

According to the JSJ field, significant health advantages can derive from harmonizing the fingers. Each finger is associated with an emotion, several SELs, and one or more organ energy flows. Figure 4 shows the five fingers of the right hand with a label showing the emotion that can be mitigated by holding each specific finger. As was apparent in the vignette, Elsie continuously massaged her fingers, often interlacing the fingers on the right and left hands. Touching a palm with the fingers or bringing the palms together, as happened when Elsie interlaced her fingers, creates a sense of wholeness and well-being.

Figure 4. Emotions associated with each of the fingers.



During the vignette Elsie mainly held her left hand on her right wrist at SEL 17. Occasionally the left hand moved to SEL 19, but returned relatively quickly to SEL 17. SEL 17, which is situated on the little finger side of the wrist – in the valley between the two bony bumps, is likely to be useful in becoming mindful since it stills the mind, and mitigates emotions. Harmonizing SEL 17 allows the body to relax by calming nerves and reducing stress, resolving too much effort/pretense, and fostering intuition.

Figure 5. Elsie holds SEL 17 while Konstantinos holds his ring finger.



Figure 6. Elsie holds SEL high 1 while Konstantinos appears to be holding SEL 17.



Figure 7. Elsie interlaces her fingers and touches her palms together while Konstantinos holds right high 1 with his left hand and rests his SEL 19 on SEL 15.



Frequently the left hand shifted toward SEL high 1, which is situated one hand width above the knee and on the upper inside of the thigh. Harmonizing SEL 1 and high 1 pulls down the *Qi* energy that is stuck above, helping when a person is stuck mentally and/or physically. Other symptoms that may be addressed by harmonizing SEL 1 are: building strength, self-confidence and trust; calming nerves; relieving stress; supporting exhaling; and clearing the head.

SEL 19 is commonly used during the vignette and more generally during formal classes in which teaching and learning occur. SEL 19 is situated on the outside of the elbow on the palm side of the arm. It is quite common to see SEL 19 accessed continuously throughout a lesson. Usually it involves much more than just touching. If frustration is building up it is common for participants to hold the elbow area and pull it toward the center of the body. This practice seems to overcome a feeling of lacking authority and control and perhaps lacking self-confidence. Numerous physical ailments occur when disharmonies arise in SEL 19, including digestive problems, allergies, itchiness, throat irritation, hand discomfort, and tennis elbow. It is interesting to note that when individuals fold their arms, their hands rest in the area of SEL 19 on each arm. This tends to engage the fingers, the palm, SEL 17, and SEL 18. Also, because the folded arms rest in the area of the diaphragm, the left and right SEL 14 are usually involved. Therefore, folding the arms and holding the pose for some time can catalyze a reduction in the intensity of emotions, assisting in the removal of those that are stuck. As we mentioned, SEL 14 usually is implicated when the arms are folded. In a mental sense harmonizing SEL 14 can create internal and external equilibrium – by removing gaseous and liquid bloat, for example. The emotions usually

associated with SEL 14 include aggravation, worry, stress, jealousy, and greed. A number of physical ailments also can result when disharmonies arise in SEL 14. These can include equilibrium disorders such as vertigo, stomach pain, digestive problems, flatulence, heartburn, hiccups, and snoring.

Touches and holds also occurred on the head and shoulder regions, engaging SEL 21, SEL 22 (on the front of the body) and SEL 11 (on the back of the body), at the nape of the neck.

SEL 21 is at the bottom edge of the cheekbones, about 1/2 inch from the nostril. Harmonizing SEL 21 can reduce worry, rumination, mental tension, and depressive moods like boosting energy and understanding. When SEL 21 is harmonized we are assisted in overcoming prejudices and ossified patterns of thought. Harmonizing SEL 21 can provide individuals an energy boost so that they can think better – helping to digest thoughts and impressions. Physical ailments associated with disharmonies to SEL 21 include stuffed nose, sniffing, and problems associated with sinus, weight, and digestion.

The location of SEL 22 is in the little hollow underneath the collarbone. SEL 22 is associated with the emotions of fear, panic, sorrow, and guilt. In a physical sense harmonizing SEL 22 can help an individual adapt to unpleasant ambient conditions such as environmental pollution and air contamination that elicits allergies (e.g., smoke or pollen in the air). SEL 22 relieves tightness in the chest and throat and helps a person to adapt to the social and physical environments. Among the physical ailments that can be addressed by harmonizing SEL 22 are high blood pressure, thyroid dysfunction, osteoporosis, and the regulation of calcium levels in the blood. In terms of wellness SEL 22 may have a role since, when it is open, we can let go without attaching. That is, SEL 22 has a role in getting unstuck or perhaps not getting stuck in the first place.

SEL 11 is situated at the nape of the neck – above the shoulders at the base of the neck. SEL 11 promotes the ability not to cling to things and to broaden perspectives. Relaxing the shoulders brings tranquility to conduct. SEL 11 harmonizes respiration, unloading excess baggage, including the burdens of the past. Often SEL 11 is seen as a way of attaining balance in life. Harmonizing SEL 11 overcomes negative thinking, doubts, worries, and fear. In so doing it brings a greater sense of balance and adaptation. The physical symptoms associated with this harmony of SEL 11 include neck pain, whiplash, tennis elbow, sore wrists including carpal tunnel, numbness in the fingers, headaches, thyroid problems, high blood pressure, and hernia. Look ahead to figure 8 to see the left hand on right SEL 11 and the right hand on right SEL 15.

Elsie and several others in the class interlaced their fingers in a variety of ways. This practice can assist in energizing the body in an effort to overcome fatigue and exhaustion. On an emotional level the practice of insulating the fingers and touching the palms together can overcome despair, not feeling centered, depressive moods, stress, and burnout. This is not to argue that the students and/or teachers in the class were experiencing high levels of these symptoms. It is worth pointing out that the holds observed in the vignette are probably timely and sufficient to resolve disharmonies

as they arise and while only low-level emotions are present. Accordingly, interlacing the fingers and bringing the palms together can be thought of as a restorative hold that is done if and as necessary, but might be done preemptively to avoid serious health problems projects associated with fatigue and burnout.

Use of JSJ to ameliorate emotions

Konstantinos: It was personally difficult for me to accept non-Western understandings and practices about the body and wellness (i.e., like JSJ). What greatly influenced my thinking and subsequent transformation was Darwin's book on the expression of emotions (Darwin, 1889/2009) and how we have adopted using emotional expressions across different phenomena. Noticing how our own body positioning often mirrors JSJ holds, convinced me that our bodies naturally try to alleviate unwanted disharmonies through different holds. For me, JSJ represents a formalization and extension of what we do subconsciously. Now I apply JSJ on a daily basis. At the start of my day, especially if I feel physically discombobulated I try to do the JSJ main central flow to help bring me back together (<http://www.jsjnyc.com/self.html>). During encounters with others, whether with my family, students, or colleagues, I try to use my out breath to manage strong negative emotions. I pay attention to my facial and bodily expressions and to my tone of voice so that I am more aware of how I feel and change emotions, if and as necessary. I teach my students, as new teachers themselves, to be mindful of the same as well. Oftentimes I stop the lesson and point out how my voice or others' voices have changed.

JSJ and wellness

Malgorzata: As I remark in our recent co-authored article (Powietrzynska, Tobin, & Alexakos, 2015), I was fortunate to grow up immersed in what I consider an indigenous knowledge system, which was particularly salient to maintaining and restoring wellness. It might be precisely this deeply rooted experience in reliance on self-help towards prevention and/or curing common ailments that underlies my current interest in participating in the "recovery research" of "lost knowledge systems" (Tobin, 2015a, p. 300). In my adult life I actively sought and enjoyed benefits of healing methods that may be regarded as complementary to the conventional Western medicine. Among them were different forms of massage therapy, reflexology, acupuncture, Chinese herbs, as well as a lesser known Ceragem thermal massager treatment that incorporates the principles of the Chinese

Chuna method (Ceragem, n.d.). As was the case with mindfulness, my introduction to JSJ occurred in the academic context. Since, unlike my co-authors (Ken and Konstantinos), I have not engaged in any formal training into this art of healing, as of this writing, I speak from the position of a novice learner. Despite my cursory knowledge, however, I have been able to engage in simple preventive and healing JSJ practices. One of my early JSJ experiences involved applying a hold (pictured here) that almost instantly cleared my then very sore throat. I also have adopted the harmonizing and calming practice of engaging in the before-you-get-out-of-bed or before-you-go-to-sleep *Main Central Flow*. Alice Burmeister accurately notes, “The art is so disarmingly simple and gentle that many wonder as to its potency” (Burmeister & Monte, 1997, p. 3).

Figure 8. JSJ addresses a sore throat.



JSJ brings into focus the mind-body connection and the role emotions (attitudes) play in the overall well-being. Cindy and Earl Mason note:

Psychophysiofilosophy is a sub branch of haptic medicine that is concerned not only with physical touch but with the idea that attitudes of the mind and heart manifest in the body. . . . Negative feelings or attitudes, especially chronic ones, if left untended, will result in disharmony (disease) of the body. (Mason & Mason, 2009, p. 375)

Why, then, do we not educate others (and ourselves) about simple techniques that can potentially catalyze improvements in

wellness while costing nothing? We know that, “socio-economically advantaged patients regularly rely on haptic medicine for its ability to relieve a variety of difficulties without additional side effects or interference with other medications” (Mason & Mason, 2009, p. 370). As researchers, we have a moral obligation towards equalizing the playing field for those less fortunate. I recently offered a mindfulness workshop to a group of eleven adult learners who came from disadvantaged backgrounds. While everyone in the group was able to readily identify with experiencing stress, anxiety, worry, and feeling overwhelmed, I was shocked to discover that not a single person appeared to have a concept of mindfulness or an idea of how to cope with daily stressors. In addition, when preparing for the workshop, I found it challenging to locate suitable materials (including images and video clips) that my non-white, non-affluent, and largely un-credentialed audience could identify with. Hence, I am committed to continue my co-engagement in the current mindfulness- and JSJ-focused wellness-promoting work towards expansion of its accessibility by underserved communities.

A brief conclusion: Meditation, mindfulness, and wellness

Mary Burmeister noted that emotions were at the base of all wellness projects. Accordingly, there are good reasons for humans keeping emotions in check and it should not come as a surprise to find that there are SELs distributed over the body, affording convenient mediation of excess emotions. In this paper we have described the prevalence of touches and holds of a number of SELs as students and their teachers participated in conversations about race and racism. What we described here is consistent with our experiences as teachers and students across diverse grade levels and in many parts of the world. In addition, similar patterns of touches and holds are evident across fields of the life world.

The unconscious touches and holds appear to be associated with the amelioration of excess emotions. As the body senses disharmonies, touches and holds might reduce the impact of excess emotions and ensure that the SELs remain open and able to facilitate appropriate patterns of energy flow and distribution. As part of reflexive inquiry we see authentic inquiry as a way of heightening awareness to the existence of 26 sets of SELs and the possibilities of using touches, holds, and flows to eliminate undesirable health ailments such as headaches and allergic reactions to toxic air. Increasing awareness expands agency by providing new lenses for thinking about living bodies and their potential. As more is known about our own bodies it is possible to think more broadly about applications of JSJ to other life forms that are

critical to the sustainability of the planet and of course can serve as a hedge against the mass extinctions (Kolbert, 2014) that characterize the short time that humans have sought to dominate life on earth (Ruddiman, Ellis, Kaplan, & Fuller, 2015).

This research is a precursor to the development and use of wellness kits to be taught in an endeavor to promote awareness of JSJ and its affordances. Within the context of our work that emphasizes authentic inquiry, and therefore highlights beneficence to participants, we approach our research on wellness and associated interventions in terms of the issues that arise in the research – emergence and contingency are priority issues as far as our collaborative endeavors are concerned. Furthermore, what we learn and develop will intentionally spill over into other fields of our life world, benefiting us and those with whom we interact.

The more we experience JSJ the clearer it is that self-help is central to establishing and maintaining wellness. Accordingly, we are already working with interested participants outside of class to educate others about JSJ. After teaching about some of the rudimentary principles of JSJ, including its history as a recovered knowledge field and the extensive empirical work of Jiro Murai and Mary Burmeister, we teach the location of the 26 SELs and provide suggestions on how to harmonize them and what might happen if disharmonies arise and persist.

In an effort to introduce flows we teach what is referred to as the Trinity – consisting of a main central flow, the supervisor flows, and the mediator flows. If the Trinity flows are practiced daily, each of the SELs will be harmonized and wellness is enhanced. Furthermore, because of the central importance of fingers and toes we teach how to hold each of the fingers for 36 breaths. This too will harmonize the body and allow the energy to flow along the correct pathways without blockages, diversions, buildups, and deficiencies. Just as the fingers can ameliorate emotions and address disharmonies, so too can the toes. Finally in our introductory approach we teach students the value of holding opposite fingers and toes. That is, hold the left little toe together with the right thumb. Doing a yoga-like pose in which all fingers and toes are correctly interconnected can accomplish this. Alternatively, another person can do the holds using his/her arms and hands as jumper cables to make connections.

In teaching these basic flows we have incorporated them into new meditation protocols. Instead of only focusing on the out breath, as we did in the BC study, we focus on harmonizing of pulses, which occurs as one or more of the flows we just mentioned are enacted. Hence, JSJ is built into meditation interventions and the pulses together with the breath are viewed as objects for meditation and mindfulness. If harmony becomes an integral part of being mindful and knowing one's body, then

different aspects of the JSJ knowledge system can be learned and practiced in a context of promoting well-being through mindful practices.

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