

Weaving Complementary Knowledge Systems and Mindfulness to Educate a Literate Citizenry for Sustainable and Healthy Lives

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Kenneth Tobin (Eds.)

**Weaving Complementary Knowledge Systems and
Mindfulness to Educate a Literate Citizenry for
Sustainable and Healthy Lives**

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**Weaving Complementary Knowledge Systems and
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TABLE OF CONTENTS

1. Researching Mindfulness and Wellness <i>Kenneth Tobin</i>	1
Part I: Mindfulness in Education	
2. Recalibration of Mindfulness for Education <i>Heesoon Bai, Michelle Beatch, David Chang and Avraham Cohen</i>	21
3. The Gift of the Present: Mindfulness for the Future of México <i>Xicoténcatl Martínez Ruiz</i>	41
4. Awakening Mindfulness in Science Education <i>Olga Calderón</i>	57
5. Dynamics of Mindfulness for Purposeful Living <i>Jambay Lhamo, Karma Gayphel, Sonam Rinchen and Sonam Daker</i>	79
6. Mindfulness: A Tool for Administrator Teacher Self-Care <i>David Genovese</i>	89
7. Issues in Engaging Mindfulness in Science Education: Critical Perspectives <i>Carolina Castano Rodriguez and Deborah Tippins</i>	97
8. Mindfulness in Teacher Education: Trials and Tribulations <i>Linda Noble and Małgorzata Powietrzyńska</i>	109
9. In Search of Mindfulness: Polish Context of “Being Attentive” <i>Ewa Dębska</i>	131
10. Mindfulness and Neoliberal Education: Accommodation or Transformation? <i>David Forbes</i>	145
11. Mindfulness and Place-Based Education in Buddhist-Oriented Schools in Thailand <i>Rojjana Klechaya and George Glasson</i>	159
12. Drawing Attention: Notes from the Field <i>Cristina A. Trowbridge</i>	171
13. A Mindful Inquiry into Reductionism in Mathematics Education <i>Bal Chandra Luitel</i>	185

TABLE OF CONTENTS

Part II: Mindfulness and Wellness

14. Mindfulness and Sexual Wellness: A (Critical) Personal Narrative <i>Konstantinos Alexakos</i>	215
15. Of Two Minds: A Narrative Fiction of Active Addiction and Mindful Sobriety <i>Peter Waldman</i>	235
16. The Importance of Being Upside-Down: The Mindfulness of Perceiving “As Is” <i>Kiat Hui Khng</i>	253
17. Jin Shin Jyutsu and Our Hands: Instrumental for a New Way Forward <i>Maria Miniello</i>	265
18. Coming Face to Face with Fears: Journeying to Wellness <i>Pamela A. Proscia</i>	291
19. Complementary Approaches to Wellness <i>Jed Schwartz</i>	305
20. Taking Charge of Our Own Wellness through Complementary Approaches: An (Inter)Personal Narrative <i>Małgorzata Powietrzyńska</i>	317
21. Being and Becoming Mindful <i>Ferzileta Gjika</i>	331
22. Complementary Perspectives on the Enigma of Diabetes Mellitus <i>Kenneth Tobin and Nick Ansari</i>	345
23. Recovery from Eating Disorders and Child Sexual Abuse: Enhancing Personal Sustainability through Mindfulness-Based, Transpersonal Art Therapy <i>Elisabeth Taylor</i>	371
24. The Effects of Mindfulness Based Interventions on Physiological Regulation <i>Liat Zitron and Yu Gao</i>	387
Name Index	401
Subject Index	403

KENNETH TOBIN

1. RESEARCHING MINDFULNESS AND WELLNESS

ABSTRACT

In this chapter I address mindfulness and wellness as priorities for educators and citizens in a complex, rapidly changing world. The issues I address include the context of everyday life, emphasizing stress and emotions as salient to the quality of interactions and wellness. The importance of educating the citizenry from birth through death is identified as a priority. Meditation and mindfulness are presented as components of a toolkit that is pertinent to improving lifestyles by, when it is desirable to do so, enabling people to detach emotions from what they do. Also, meditation and mindfulness can be options for people to use to change the emotions they express in particular situations and also reduce the intensity of emotion, if and when it is considered desirable.

A second section of the paper provides an advance organizer for many chapters in this volume that concern complementary approaches to health and wellbeing. In this chapter I focus on Jin Shin Jyutsu as an approach that individuals can use, as self-help, to maintain wellness and address health projects that emerge. Jin Shin Jyutsu is presented as a complement to Western medicine, not a replacement for it. The examples I provide in this introductory chapter set the stage for what is to follow in the remainder of the book.

Keywords: mindfulness, wellness, complementary medicine, Jin Shin Jyutsu, emotions, research priorities, literate citizenry

MINDFULNESS

Awareness and Change

Television and electronic media are ubiquitous in the lives of citizens across an age spectrum of birth through death. It is common to see young children using iPads and iPhones to access digital media, games, and a variety of live and stored television programs. Similarly, TVs are used to occupy time, ostensibly entertaining and educating senior citizens in a variety of places, including their homes, retirement villages, nursing homes, and hospitals. At many restaurants and gyms, for example, TV sets broadcast news and entertainment “in the background,” and in many US households, perhaps most, family members returning to their home instinctively switch on the TV to catch up with the latest news. When they are on, these devices

K. TOBIN

are resources for learning, whether or not the learner pays attention. Learning is continuous, aware | unaware and intentional | unintentional (the vertical bar, represents a dialectical relationship; Tobin, 2015).

I regard it as increasingly important for researchers to explore what is being learned from these pervasive media. For example, what might we be learning about talking and listening? What models for verbal interaction are projected on television programs? Consider debate as an example. I learned to debate when I was in elementary school. We were taught to focus on a topic, present a carefully structured argument, and coordinate that argument with a team of speakers, taking care to listen attentively to members of an opposing team that made the case for the antithesis to what our team was presenting. The debate was scored by one or more moderators and we knew the rules. Arguments were to be based on fact and when good points were expressed by the other team, they needed to be identified, acknowledged, and refuted. We had to make a case for our thesis within the allotted time and refrain from interacting directly with participants from the opposing debate team (e.g., distracting/disrupting). It was absolutely forbidden to interrupt a speaker verbally or non-verbally. Compare this form of debate to what is happening at the present time on many media (e.g., TV, internet). Ever so gradually, the meaning of debate has morphed into argument, characterized by antagonists rapidly laying out a position, emphasizing key points early on because of an awareness that probably they will be interrupted by an opponent. Exaggeration and telling lies have become part of the standard repertoire featured on presidential, and other forms of political debate, White House news briefings, and other fields where panels are often selected to ensure balance in political ideologies. Participants constantly interact to disrupt – shaking heads, rolling eyes, using utterances to show disdain, talking over others, shouting, and speaking while others are speaking. Often, participants intentionally misrepresent one another's positions and use hyperbole in an endeavor to succeed in the moment. Rarely observed are signs of valuing and respecting others, especially those who are different – for example, listening attentively, acknowledging strengths in others' perspectives, learning from difference, and exercising courtesy, compassion, and ethical conduct.

In our work in the learning sciences we have advocated and researched mindfulness in education and mindfully listening and speaking (Powietrzynska & Tobin, 2016). To act critically, while consuming electronic media, intentionally or not, there is a strong case for mindful consumption. Being aware is an important starting point, and knowing what to be aware of also is central. What does it take to be a critical consumer in an ever-increasing crescendo of controversy that characterizes the present? Participants need a level of education that allows them to opt in and opt out and expand their foci beyond being entertained and occupied. In an era where there seem to be overt threats to civil conduct (e.g., bullying, lying, misleading, and exaggerating), a goal is to educate the public for literate activism. Propaganda and brainwashing are dangers, potentially eroding democracy; replacing it with oppressive autocracy focused on individualism, competition, division, and winning at all costs.

Unattaching Emotions

The historical constitution of all actions is an important part of the framework I use in my everyday life (Tobin, 2016a). In our ongoing research on teaching and learning, which has had an emergent focus for more than 20 years, emotions have been salient. Initially, the concern was that an attachment to emotions appeared to have deleterious effects on the quality of teaching and learning. At the same time, in social life the news is replete with examples of personal conduct being impacted by emotions. Road rage is a good example of anger building to a crescendo that, too frequently, manifests in dangerous actions, such as inappropriate use of physical violence, firearms, and even motor vehicles as weapons. These all too common examples have persuaded me that there is an educational priority to learn how to get unstuck from emotions, so that conduct is not swamped by high-intensity, and/or persistent emotions. My thinking is that tools to ameliorate a buildup of emotions in the body might be a worthwhile outcome of education. This thought extends beyond school-based programs, to include any, and all fields in which teaching and learning occur. From the sociocultural perspective we employ, teaching and learning occur in all fields of the lifeworld. That is, the learning environment for building tools to ameliorate excess emotions is vast, encompassing participation in everyday life.

Within a context of educating for literate citizenry, tools that include, but are not limited to, meditation and mindfulness have an important place in affording lifestyles that do not succumb to the challenges of everyday life. Tools, including meditation and mindfulness, expand agency and thereby the potential for success in challenging times. Obviously, such tools, and others included in the chapters of this book, are not panacea that can eliminate dangerous ideologies such as neoliberalism and capitalism. And yet, education that targets contemplative inquiry can catalyze widespread changes in practices that have liberatory potential.

Identity

There is a tendency to focus K-12 schooling on academic achievement in valued subject areas that include reading, writing, mathematics, and science. Also, as teenagers get close to high school graduation, there is widely accepted policy and practice to focus schooling on preparation/entry to higher education and/or vocational education and skills. The idea that education is to enhance the aesthetics of being in the world and improving the quality of lifestyles often takes a back seat to getting through the essentials – passing examinations and clearing benchmarks. It is in this context that scholars from fields such as science and mathematics education might focus on possibilities of transforming K-12 education to focus on such issues as sustainability and educating stewards to transform present and future. Among the priorities to be addressed are grand challenges such as consumption, pollution, species extinction (Powietrznynska, Tobin, & Alexakos, 2015), and desirability of

K. TOBIN

eliminating toxic lifestyles that diminish and disadvantage less fortunate others (i.e., extinguish inequalities).

For many years, research proposals seeking funding from agencies like the National Science Foundation were encouraged to populate a pipeline into science with would-be scientists. School programs were to be more than science-friendly; they were to shape learners' identities such that they were enthused about becoming scientists in their employed lives, homes, and even in recreational settings. I am opposed to universalizing goals like these, mainly because, in my view, the purposes of education are to be liberatory and potentially transformative. Tools associated with science education would afford critique, not only of science itself, but also of scientists, and those that support them. I do not embrace a jaundiced, anti-science stance, but I do want learners to recognize accomplishments of science and scientists alongside challenges and social pressures associated with the history of science and its social contexts – including issues such as economic exploitation, warfare, addiction to prescription drugs, and emergence of crises associated with grand challenges, such as global warming, climate change, species extinction, and recognizing the historical and current (negative) impacts of humans on ecosystems. Targeting the creation of science-related identities as a goal for all science learners may be construed as indoctrination, and scientism.

Contemplative inquiry has a potential role for educating citizens, beyond formal schooling, to understand and experience fluidity of identities and egos. Chapters, including the next one, authored by Heesoon Bai, Michelle Beatch, David Chang, and Avraham Cohen, provide theoretical insights and practical suggestions in frameworks that include philosophical and empirical support for cautions and changed practices. Readers are encouraged to use critical lenses while reading all chapters in this volume, weighing their contributions, and considering how to appropriate what is learned to connect with their own contexts.

Emotions and Wellbeing

A strong rationale for educating the public to control emotions, if and as necessary, concerns relationships between health and emotion. My resolve to identify toolkits to ameliorate emotions strengthened when a teacher-researcher from my research squad required heart surgery. He was counseled by his physician to retire from teaching, because stress levels appeared deleterious to his health. That is, teaching was making this teacher sick. Of course, teaching is not the only stressful job. Just today a neighbor advised me that he had quit his job because of the stress associated with his work and especially the practices of his supervisor. The more stressed he became, the higher his consumption of hard liquor and food. His health deteriorated rapidly and a change of job became a life raft. Alleviating stress was an important life skill he did not have, and already his new job is proving to be stressful. With a goal of ameliorating excess emotions and preserving good health, there is a strong case for designing educational toolkits that would afford people across the age

spectrum expanding agency throughout their lifeworlds, including fields associated with employment, home, recreation, and wellbeing.

Mindful conduct is a priority for citizen education. Mindfulness, as it applies to teaching and learning, has potential applications that extend far beyond pre-k through college classrooms, museums, and other institutions such as zoos, hospitals, and prisons that often have formally designated education-related functions and associated spaces and resources. Indeed, wherever learning occurs, and that includes every aspect of social life, individuals are continuously involved as teachers | learners and mindful activity is potentially central to what is happening. That is, since teaching | learning occurs continuously, throughout social life, mindfulness can be considered as a constituent of what happens. I am not arguing that mindfulness always occurs or that it should always occur – just that it is an activity that has potential applicability to the quality of social life. Context always is important, and so too is contingency.

A case for multilogical research. From a standpoint that values contingency and emergence as central components of viable research, I include in a multilogical approach, a tenet that either/or analyses and associated challenges are rarely fruitful. I view labels as reductive, though necessary for communication. Also, I accept a crisis of representation; that all efforts to use language to present/describe what is happening fall far short of representing what is happening. Representations of what is happening reflect frameworks used, explicitly and implicitly, and a values hierarchy that always is in play. That is, frameworks illuminate what is experienced in social life while obscuring much of what is happening. All efforts to describe are reductive and fallible representations of what is happening. Crises of representation demand nuance when claims are made based on research (inclusive of all claim-making, including empirical, philosophical, narratology, and etc.).

It is wise in our scholarly tradition to embrace nuance. Forceful, bluntly expressed claims are flawed, just as nuanced, carefully hedged claims also are flawed. How then to proceed? Consistent with post-Bourdieuian theorizing we embrace William Sewell Junior's view, that culture is experienced by participants as patterns of thin coherence, along with dialectically interrelated, ever-present contradictions (Sewell, 2005). Accordingly, all attempts to describe/represent what is happening are accompanied by descriptions of contradictions.

As a researcher who has used a multilogical approach for several decades, I have sought to design studies that search for, and seek to understand difference in its salient manifestations. Thus, it is not enough to search for, and learn from, assertions. Instead, we seek contradictions and endeavor to learn from their transformative potential. We named this approach event-oriented inquiry (Tobin & Ritchie, 2012).

In a context of mindfulness and wellness, we are not engaged as truth seekers with a mandate to learn and describe. Instead, we adopt authentic inquiry, in which we are transformed by doing research that is itself an agent of transformation

K. TOBIN

of all participants and associated collectives/institutions. We reject a fly on the wall approach to research in favor of an approach that incorporates subjectivity as strength and values all participants benefiting from research while eliminating harms that emerge as research is enacted. As a transformative activity, based on what we learn, we do our best to improve quality of the lives of all participants, including our own.

My Appropriation of Mindfulness

When I first began to study mindfulness, it was in a context of the use of breathing meditation to foster improved learning environments. In ongoing research on emotion in Australia we were undertaking research in classrooms, focusing on the expression of emotion and ways in which emotion was associated with the quality of interactions between teachers and students, emergence of shared mood, collective effervescence, solidarity, and changes in prosody (Tobin, Ritchie, Hudson, Oakley, & Mergard, 2013). We noted that there appeared to be low incidence of mindfulness. Also, collective effervescence of emotions, such as happiness, disrupted participants from academic work for extended periods of time. Emotions seemed to be stuck, mediating teacher and student participation in deleterious ways. With this in mind, we designed breathing meditation as an intervention and a mindfulness heuristic that could be used to view a potentially changing landscape of mindful action and serve as a tool to foster transformation (Tobin, 2016b).

Our approach to research. When I first began to do research in science classrooms in 1973, there is no doubt that my goals were to use interventions to improve teaching and learning in ways that had been worked out by me and those with whom I collaborated. We not only designed interventions such as wait time and questioning quality, but we also designed lesson plans to ensure that enacted curricula were somewhat controlled. It was more than a decade later, in 1984, when Walter Doyle, then a researcher at the University of Texas, challenged me to study more closely what teachers did in the classroom when they did what they valued and/or were constrained to do. Since that time, I have embraced coparticipant/collaborative forms of inquiry that have been framed by multiple ontologies and axiologies. I have not sought to privilege my axiology over others or to undermine macrostructures like high-stakes testing, or unfair accountability systems – preferring instead to afford success as participant communities expressed their goals and priorities. The authentic inquiry we engaged is intended to be emancipatory and responsive, consistent with hermeneutic phenomenology and principles of emergence and contingency. Importantly, we valued ethical conduct that included a multilectical mix of honesty, truthfulness, courage, and compassion. When I saw injustice, I stepped forward and spoke out – in ways intended to support those who could not so easily speak for themselves and stand in opposition to powerful others. Ethical action, including speech, is part of authentic inquiry (i.e., tactical authenticity). Usually, this involved acting with equity/social justice, if, and as necessary.

Physiology and emotion. The connection between emotion and physiology was prominent in the literature I was accessing at the beginning of the millennium. For example, a study by Pierre Philippot, Gaëtane Chapelle, and Sylvie Blairy (2002) was an aha moment for me. The research revealed that breathing was closely related to an individual's emotional expression, and changes in emotion were related to the individual's breathing patterns. My awareness of this study catalyzed my uses of breathing meditation in numerous activities as a researcher, teacher, and more generally in my daily practice. My goals were not so much to enhance the quality of a forthcoming activity, as to signal my priority for the value of breathing meditation as part of a toolkit that people could use to ameliorate emotions – if, as, and when they so desired. In addition, since I was persuaded by the research, I considered that breathing meditation might be a tool that would be useful in producing and maintaining wellness. Having such a tool available was a useful outcome for the education programs in which I was involved as a professor. Examples included doctoral level courses I taught weekly at the Graduate Center, a seminar program I coordinated each month, and weekly research meetings. Also, with colleagues, I studied breathing meditation in my research, including research conducted at Brooklyn College that involved several of the chapter authors of this volume (e.g., Malgorzata Powietrzynska, Konstantinos Alexakos, Olga Calderon, & Ferzileta Gjika).

When we enacted breathing meditation, we did not seek to control students who agreed to participate. Simply put, we regarded meditation as a lifestyle change, for citizens to use in their lifeworlds as they deemed it desirable. Like chemistry and physics, I regarded knowledge of meditation to be a tool that would enrich life in and out of school, now, and in the future. Although I valued research on meditation and wellness, including neuroplasticity and resistance to disease (Davidson with Begley, 2012), I had a more generic view that meditation might be used when an individual wanted to detach from intense emotions, to address perceived health concerns (e.g., panic attack, dizziness, nasal drip, and road rage). I did not pre-plan or prescribe meditation as a solution to macrostructures that pervaded education in the US. Instead, through educative authenticity, research participants would find benefits of meditation, hear others talk of benefits they experienced, and possibly read what had been written by researchers and regular citizens who happened to find breathing meditation beneficial, or for that matter, harmful. Similarly, participants would learn about contradictions and harms through first-hand experiences, including others' reports.

Applications of meditation and mindfulness. When I first used meditation in the Brooklyn College study, my colleague, Konstantinos Alexakos, was nervous about the intervention being regarded as religion (Alexakos, 2015). Accordingly, to the extent we could, we made meditation optional and emphasized that several religious and secular institutions used meditation for purposes that suggested it would foster productive learning environments, improve learning, enhance wellness, and be a useful tool in social life. Having said that, I was acutely aware that there was much

K. TOBIN

more to meditation and mindfulness than was expressed in the academic, secular, literature. This idea is taken up in depth in the next chapter.

Like many of the authors in this book, I felt there were additional toolkits that also were a priority for use in my teaching, research, and other dimensions of personal life. Chief among these was mindfulness. I felt strongly that the demands of life necessitated a mindful approach to being in the world. I did not feel a need to separate science from religion, and was determined to learn from many discourses. A personal goal was to learn much more about meditation, and mindfulness, through a deepening understanding of Buddhist literature – including the work of Thich Nhat Hahn (2011) and Ajahn Brahm (2006). In this volume, several chapters critique the appropriation of mindfulness in education – see for example chapters authored by Heesoon Bai and her colleagues (Chapter 2), Caroline Castano Rodriguez and Deborah Tippins (Chapter 7), and David Forbes (Chapter 10).

Learning and generalizing from research. I share a concern that is explicit in chapters written by Forbes and Bai et al. concerning micro-determinism. Because of amazing advances in technology, we now have windows into previously indiscernible aspects of social life. New tools and associated theories enhance learning potential – sometimes expanding what we have learned and in other cases contradicting parts of the knowledge base. How to deal with the contradictions can be a problem when researchers make claims about what they have learned without the nuance that comes from identifying and interpreting contradictions. Nuance can be a hedge against a temptation to use what is learned from research as a master narrative.

My work in multilevel studies has revealed patterns we didn't even know about before we used technology to look at the voice (Roth & Tobin, 2010). For example, we learned a great deal by looking carefully at intervals of hundredths of a second of digitized video, teasing apart utterances into constituent amplitudes, frequencies, and durations. What we learned at a micro-level informs what we could and did learn at a meso-level. In aggregating across levels, fresh insights (i.e., patterns) were obtained and, of course, contradictions emerged, demanding nuance. We resolved not to privilege micro-level data or meso-level narratives associated with everyday life. Similarly, we acknowledged that macrostructures saturated every field of social life, but should not be privileged over what was learned from micro- and meso-level studies. Synthesizing across social levels was no easy matter and we fought the common sense of applying Geertzian views of culture (Geertz, 1973). We resisted master narratives, insisted on nuance, and above all the necessity for humility. Whatever we could learn from inquiry always would fall short of what could be learned, and in fact, our representations of what we learned, we knew, always would be underrepresented.

A need for more and different forms of research. I am comfortable for calls for more research and deeper understanding of mindfulness and wellness. My comfort rests within a polysemic frame, grounded in hermeneutic phenomenology with a critical edge, that culture reveals itself in unsettled times (e.g., Swidler, 1986). That

is, to ascertain what is really going on in a social setting, and to get to the truth of the matter, it is often necessary to push to unsettle – to cast a boulder into an otherwise placid pond carefully studying the ripple effects, which is akin to generalizability. Other studies also are essential, including those framed to produce and elaborate new theory. Such studies, might be empirical, or they might not. Importantly, the criteria for judging viability and associated worth of studies designed to generate theory would not be the same as those used to assess the validity and reliability of statistically oriented research. As Margaret Eisenhart (2009) made clear, theoretical generalizability has its own quality criteria. Similarly, philosophical and historical analyses (Kincheloe, 2008) also can yield new insights into mindfulness and wellness, and judgments on quality should reflect the methodologies utilized in studies that incorporate such logics.

Much of the research I engaged in the past decade has employed authentic inquiry and focuses on an ethical stance that research, to the extent possible, should benefit all participants in a study, not just in the places where research is undertaken, but throughout their lifeworlds (e.g., not just in schools, but also in homes, employment, recreation, and other fields such as visits to the doctor). An important part of authentic inquiry involves use of emergent and contingent designs, to enable what is learned from ongoing research to benefit individuals and collectives associated with the research. That is, interventions are designed to benefit participants. As individuals learn and change on the basis of their participation in research they interact differently in many and perhaps all fields of their lifeworlds. Accordingly, others with whom they interact experience changes in their interactions, and thereby in the cultural flux they experience. That is, they too can change and benefit from a process we refer to as ripple effects.

In a call for more research on mindfulness and wellness, we no doubt will have in mind the forms of inquiry we value, and will eschew forms of inquiry for which we have little respect. I am not exempt from this likelihood – so, I am not blaming others when I urge caution on this matter. We all should take heed that research is methodological and the theories we use illuminate reality in particular ways while obscuring what is outside the illuminated orb (Tobin, 2008). All forms of inquiry are potentially useful in adding to the knowledge bases of what we know about mindfulness and wellness. At the same time, all social inquiry, including the hard sciences and Western medicine, underrepresent what we know and what we can know. Research and its representations are fallible. Of course, this is no reason to cease doing research – just a cautionary note to be nuanced in claims based on research and the critiques we make of others' efforts to contribute through research we consider to be flawed in the many ways flaws are packaged.

COMPLEMENTARY APPROACHES TO WELLNESS

For many years I have urged science educators to expand their roles to embrace a birth through death continuum and research fields across the lifeworld, not just those

K. TOBIN

formally designated as educational institutions. Throughout this chapter, and many I have written previously, I advocate emancipatory interests – education for freedom – especially from hegemony of modern lifestyles. Wellness is paramount, a field that is germane to science educators and especially to my argument about present day lifestyles. The vision I have for educators is to include contemplative inquiry as a central part of education and to connect contemplative inquiry to wellness, using what we presently know about contemplative activities, such as meditation and mindfulness, as they relate to physiological changes and good health. I do not enter the debate about complementary and/or alternative practices in considering Western Medicine alongside wellness grounded in other modalities, such as Traditional Chinese Medicine. Instead, I lay out some examples to illustrate that the public can be educated to employ simple practices that can harmonize Qi flow in the body and remediate symptoms of disharmony, such as sore muscles, bones and tendons, allergic reactions, headaches, addiction, and digestive problems. In the book, we have chapters that address yoga, sexuality, and counseling in relation to wellness. Also, we have six chapters that lay out how Jin Shin Jyutsu (JSJ) can be used to address a variety of health projects, either as self-help or treatment from a qualified practitioner.

There is no sharp dividing line between meditation, mindfulness, and wellness. These constructs are interrelated, compelling me to take a stance that all citizens should learn to know their own bodies and be aware of symptoms associated with disharmony and what it feels like when body systems are both harmonized and disharmonized. I adopt a stance that learners learn what to do when health projects become apparent, and to alleviate symptoms using regular routines from the JSJ knowledge base – to address health projects and restore wellbeing. A high priority is to develop a toolkit for restoring wellness through self-help. We can enhance agency relating to wellness by expanding what is known about improving the health of self and others. Just as individuals presumably can choose whether to consult their doctor, knowledge about complementary medicine practices opens the door for individuals to maintain wellness and deal with symptoms in the moment, as they emerge. That is, self-help can be a viable option alongside of consulting a doctor or going to the pharmacy.

Overview of What Comes Next

In the remainder of this chapter I provide some examples of ways on which JSJ is used as a complement to Western medicine. My purpose in providing these examples is to contribute to documented research that provides insights into uses of complementary medical practices to sustain wellness. I regard it a high priority to undertake research, report what has been learned, and address the problem that, although JSJ is practiced throughout the world, there is a dearth of research to support its use. The chapter is first of many in this volume that contribute to a growing research base to support use of JSJ as an aid to promote wellness.

JSJ and Wellness

JSJ is often referred to as light touch therapy. Based on a practitioner's reading of the body, the two hands are placed in specific locations to feel universal energy flow in the body (i.e., Qi flow). When artfully placed on the body, the fingers and palms assist in maintaining the flow of universal energy, as the body intends, to sustain harmony and well-being. A JSJ practitioner uses her hands to touch, and thereby connect, different parts of the body. The connections made by the practitioner's hands are metaphorically like jumper cables. When blockages in universal energy flow occur, placing the hands strategically in relation to those blockages and build ups (areas of congestion) can get the universal energy moving in an appropriate manner. Many people go to JSJ practitioners because the additional help they get is valuable.

Jiro Murai, Mary Burmeister, their students, and many with whom they collaborated, have created an impressive knowledge base, consisting of principles and practices that are grounded in Eastern medicine (e.g., Kaptchuk, 2000). As is clearly explained in other chapters in this book, and in the seminal texts published by Jin Shin Jyutsu, Inc. (Burmeister, 2017a, 2017b), JSJ is an extensive knowledge base that practitioners can use to understand different ways that universal energy can move through healthy living bodies/structures (e.g., humans, other animals, and plants) and foreshadow what can be anticipated when blockages and diversions occur in the flow of universal energy in particular locations within those structures. Based on extensive, worldwide uses and validation of JSJ's principles and practices there are carefully documented sequences of holds (i.e., sequences of placements for the left and right hands) that can assist in removing obstacles to the flow of universal energy and restore the natural energy flows, vertically and diagonally throughout the body. Blockages and diversions in energy flows can be associated with health projects such as stomach acidosis (acid reflux) and osteoporosis. Disharmonies can be addressed by sequences of holds for organ energy flows (e.g., stomach organ energy flow) and/or flows to harmonize one or more of 26 safety energy locks (i.e., SEL 1–SEL 26). The location of the safety energy locks (i.e., SELs) can be seen in [Figure 1.1](#).

To provide deeper insights I provide a more detailed example. There are three locations where energy flow can be blocked on or near the shoulder blades (i.e., scapula). At the lower tip of the scapula is an important safety energy lock (SEL 9). Blockages in the flow of Qi, at the lower scapula (i.e., SEL 9), might be associated with a large variety of physical ailments, including soreness on the sole of the foot, corns on the toes, problems with the ankles, an enlarged chest, allergies, and high blood pressure. A potential blockage in SEL 9 might be inferred by feeling the density of the body at the lower tip of one or both scapulae. If a client is lying, back downward on a massage table (for example), the body feels heavy or dense when you endeavor to slide your hand under her body at the level of the scapula. Similarly,

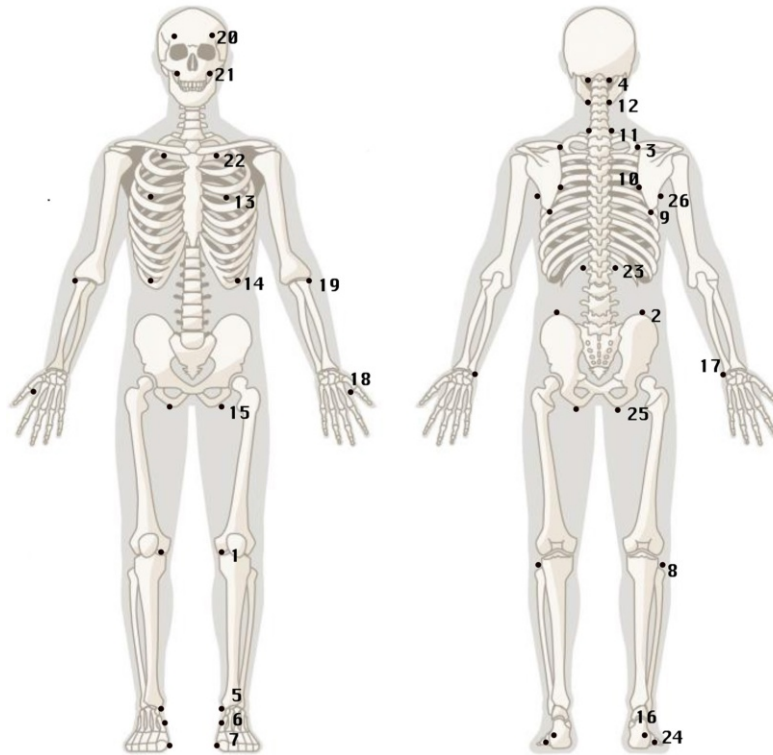


Figure 1.1. Jin Shin Jyutsu's 26 safety energy locks copyright for skeletal sketches:
https://www.123rf.com/profile_elenabsl (elenabsl/123RF Stock Photo)

listening to what a person says, in terms of health projects like those listed above (e.g., my left ankle is really sore), can point to a potential blockage of Qi at SEL 9. A blockage in left SEL 9 might be associated with physical symptoms below the waist on the left-hand side (e.g., my left foot is sore) and above the waist on the right-hand side (e.g., an elevated right chest).

Self-Help

I awoke at 6:30 am after a night of feeling cold. I noticed a pain in the left sit bone region of my body (ischial tuberosity), and decided it was better to get out of bed than to try to get back to sleep. In JSJ the sit bone is the location of a safety energy lock, through which numerous energy flows pass, or can be blocked. As I made my way down the stairs to my study, where a massage table is set up, I decided that discomfort in the sit bone was possibly due to disharmony in bladder energy flow. Of course, there are other possibilities, and so I read my pulses to help decide what to do.

The pulses of both wrists, left and right, were faint, with the left wrist being least energetic. My reading of pulses on the left wrist suggested that gallbladder and heart energy flows each were not in harmony. Also, on the right wrist, pulses indicated that spleen energy flow was more prominent than others, seemingly confirming my low energy condition. There is more. I was craving coffee, a condition I associated with gallbladder energy flow. It happens that I have a caffeine allergy and often get nasal congestion if I drink too much coffee. Usually this symptom is quickly remedied by self-administration of gallbladder energy flow, on the same side as the nasal congestion. On this occasion, the problem was just the opposite. In terms of my body letting me know there was too little caffeine. My concern was not so much with craving for coffee, but with the ache in the sit bone region. I decided that gall bladder energy flow could address both issues.

When I administer self-help I usually opt for an energy flow on the same side as the most energetic pulses. However, on this occasion, my sit bone was aching and I decided that bladder energy flow left, which runs through the aching sit bone, was the flow of choice. Each step in the bladder flow took longer than usual since the pulses were slow to emerge and synchronize. I remained on each of the six steps of the flow for at least three minutes to assure myself that the pulses felt by the fingers of each hand were in harmony. When I completed the self-administered flow, my mind seemed clearer and my sit bone was no longer aching. I checked the pulses again and decided on a change of plan – to include a left kidney energy flow, which is also associated with pain in the buttocks region and is closely associated with bladder flow energy.

Also relevant is an associated decision to follow up with left heart energy flow. Whereas bladder energy flow focuses on energy moving through the safety energy locks on the back, the heart flow addresses safety energy locks mainly on the front of the body, the anchor point being a safety energy lock situated where the neck and shoulder meet. Relevant to the decision to administer heart energy flow is that my neck was stiff on both sides. Accordingly, I decided to administer heart energy flow.

As I began the left heart energy flow my right hand rested on the left ulnar styloid, the bump on the back of the wrist on the pinky side. I was aware that this safety energy lock, when harmonized, could change heartbeat rate and blood pressure. After a few minutes, I was feeling relaxed and the energy was draining away from the neck region of my body. When I completed the left heart energy flow, I initiated a left gallbladder flow, even though the pulses were now appropriately harmonized. I did not pause to reflect on this decision since my body consistently shows signs of disharmony in gallbladder energy flow. It is not just my attraction to caffeine. For example, my left middle finger, which is associated with gallbladder energy flow, was damaged during a fall some years ago and the finger still is slightly rotated, I have a tendency to get cranky, and I often have gas projects. Also, my skin tends to bruise easily. Each of these body characteristics is associated with disharmonies in gallbladder function energy.

I completed my JSJ self-help session by holding the safety energy locks at the occipital condyles (bones at the base of the skull), on either side of the spinal cord

K. TOBIN

(SEL 4). This hold is the traditional conclusion for a JSJ session – however, on this occasion it was especially salient since I woke up with a stiff neck on both sides. After approximately five minutes of holding these safety energy locks I completed my JSJ self-help session. I knew to be careful as I sat up and got to my feet after more than two hours of JSJ. I anticipated that I may be lightheaded and in need of water. Physical changes catalyzed by the flows afford Qi flowing harmoniously through the body, with changes occurring in the minutes, hours, and days ahead. What began as a response to an aching body, concluded with a clear head, no discernible aches and pains, and a sense of anticipation for a productive day.

Expanding Agency Regarding Wellness

Consider agency in the following vignette. Jennifer, a 77-year old woman wakes up coughing and then repeatedly sneezes in bursts of 7–8 sneezes. Reluctantly she scrambles out of bed, and visits the bathroom before carefully descending the staircase to the kitchen. As she moves she engages in audible, lengthy sighs and yawns. Another day is beginning.

As I experience what is happening, I think that Jennifer needs more sleep and the lengthy sighs are indicative of resignation about myriad underlying wellness projects. The sighs are signs that Jennifer does not feel well. As she prepares breakfast, Jennifer works her way through a cocktail of prescribed medication that includes tiotropium bromide for emphysema, amitriptyline for depression, and diclofenac for arthritis. Breakfast, consisting of eggs, toast, a slice or two of pear, and coffee is prepared and consumed. After breakfast, Jennifer leaves to buy a newspaper and take a walk in the winter sunshine.

I wondered about simple non-threatening ways to help Jennifer when, during a live telecast of a sports event, she began a ritual of lengthy sighs, occasional wheezing, and frequent bouts of coughing and sneezing. My background in JSJ prompted me to suggest Jennifer hold, respectively, her left and right middle fingers to harmonize gall bladder energy flow. My reasons for leaning toward this flow rather than others, such as lung or large intestine organ flows, were the long sighs and what I considered to be a depressive framework. Jennifer enthusiastically held her middle fingers and in 20 minutes there were no more sighs.

In addition to the symptoms broadcast by sight and sound, I noticed that Jennifer suffered throughout the previous day, from constipation – likely a side effect of prescription medication. Earlier in the day, I suggested she seek relief from constipation by holding the outer, back-side of the knees, working her hands and fingers downward slowly, fingers pointing down the upper calves. Later that night she was no longer constipated. Although she did not approach me for additional suggestions about uses of JSJ as a self-help tool for her myriad health projects she did discuss possibilities with two other women who were using JSJ regularly (including Tina, see next vignette). Both women recommended that Jennifer try Waltraud Rieger-Krausse's (2014) *Health is in your hands*. This easy to use

resource provides summary cards that would allow Jennifer to align her symptoms with particular JSJ holds and flows. Importantly, Jennifer was interested in the experiences of others like her who had used JSJ as a self-help practice, and she did not want to be persuaded what to do – rather, Jennifer wanted to review possibilities and make up her mind. Presently, she is waiting for the arrival of the JSJ card set.

JSJ as a Complementary Practice

Tina, a friend of mine, experienced discomfort during a leisurely walk in the park. Accordingly, she decided to return to her home. By the time she walked a half-mile to her home, she experienced considerable pain and, within an hour, could only walk with the aid of crutches. Because this event happened at the weekend, I was able to administer JSJ to provide some relief. The top of the left foot was swollen, the big toe was stiff and sore, and the ankle, on the little toe side, was discolored and swollen. I felt/read Tina's pulses and decided on several appropriate flows. After an hour of treatment, the pulses were balanced but the swelling and pain were sources of ongoing discomfort. Cognizant of the complementary role of JSJ, Tina made plans to seek the opinion of a Western doctor, a podiatrist she had previously visited. Before the visit Tina used the Internet to shed light on the likely problem – identifying gout and stress fracture as potential labels for her symptoms. The podiatrist agreed with her diagnosis and ordered a variety of tests that included bloodwork, x-ray, and MRI. The blood test showed that uric acid levels were normal and the x-ray and MRI showed no evidence of fractures. Even so, the podiatrist leaned toward gout as the most likely cause of Tina's significant pain. While pushing gout as the likely culprit, the doctor recommended foods to avoid and others to include in the diet. Since Tina is vegetarian, diet was not a strong contender as a causal factor for gout. The doctor's suggestions concerning diet were accompanied by others, including the use of an orthotic insert in the left shoe.

Over a period of seven months Tina obtained regular diagnoses and suggestions from medical practitioners and continued to have tests that included a bone scan and an ultrasound analysis. All tests revealed nothing more than "just arthritis." A second doctor felt that arthritis was the most likely cause of the problems, especially in the hip region – which was catalyzed by a heavy fall about two decades ago. During this six-month period of time, Tina got around as best she could, and developed an abnormal gait that may have precipitated additional problems in the tendons, ligaments, and muscles. These additional problems included severe pain in both hips at various stages, and swollen ankles, on the little toe side of the left foot. Because of months of using modified gait, excruciating pain frequently occurred in the hips, knees, and ankles. As was the case from the outset, the big toe remained especially painful.

Using the JSJ framework, the foot contains numerous safety energy locks, at which Qi might be blocked. These include sites on both sides of the ankle, both sides of the foot, and the big toe. In addition, when I looked at the toes, they were bent, inward, especially the big toe and the pinky. Although the pain was associated

K. TOBIN

with the left foot, the toes on both feet were indicative of disharmonies in several energy flows. During the six-month interval, I conducted JSJ sessions with Tina at least once a week and often, every day. When the pain was at its worst, for example in left and right hips, I conducted flows that took into account resolution of the pain and treatment of the long-term problem. As well as the toes on both feet being bent toward the center, they also were pulled back toward the chest, and the tips of the toes were pulled downward toward the soles of feet. There were two sets of hammer toes – one set on each foot. That is, all toes showed signs of being pulled away from their normal orientation by blockages in the Qi flow. I considered these flows created vulnerabilities for symptoms like those Tina was experiencing, and unless corrections occurred and were sustained, serious damage might occur to bones, tendons, ligaments, and organs associated with the blocked flows. My sense is that the blockages were likely due to lifestyle, including intensive involvement in sports, including tennis and netball. I was confident that regular use of JSJ would facilitate harmonized energy flows, reduction of pain, and associated symptoms, and regeneration of damaged cells and body structures.



Figure 1.2. Tina's foot soon after the injury became apparent

My approach is to pay attention to what I hear from Tina, what I see on her body (e.g., symmetries, asymmetries, and changes), and what I feel with my fingers. Also, I listen to the pulses after I complete most flows, as well as at the beginning and end of each session. For the entire six months, the right-side pulses were quiet at both the superficial and deep levels. In contrast, the left pulses are relatively energetic and it is customary to begin a session with flows on the left side of the body, including gallbladder and liver flows.

JSJ Makes a Difference

Because I am treated by, and learn from Jed Schwartz (see Chapter 19), he asked me how my treatment of Tina was progressing. After telling him what I had done,

he suggested I try to clear the blocked energy by holding consecutively the left and right safety energy locks at the groins (SEL 15), while holding different parts of the left foot and the base of each of the left toes. The purpose was to move the energy blocked in the groins to the feet. Jed modeled what to do on my body and immediately I realized I also had buildups of energy in the areas likely associated with Tina's debilitating injury. I followed his suggestions and Tina's problems are beginning to be resolved as I also use the same approach in my own self-help routine.

SETTING THE STAGE

This chapter is an introduction to a volume on mindfulness and wellness, which builds on an earlier volume I co-edited with Malgorzata Powietrzynska (Powietrzynska & Tobin, 2016). The chapters expand what we accomplished in the first volume, which also was international in scope and addressed important issues pertaining to contemplative inquiry and wellness. This volume includes many of the authors who contributed to the first volume, plus scholars who were not involved in the first volume. The chapters go beyond description and advocating for new directions and practices. As a set, the authors incorporate a critical perspective grounded in diverse research methodologies and theories used to frame meditation, mindfulness, wellness and numerous constructs associated with contemplative inquiry.

In my introduction, I use an autobiographical approach that situates mindfulness and wellness in a web of interconnected social practices that provide a foundation to set new priorities for educating citizens for productive, sustaining lifestyles that acknowledge the importance of autonomy, emancipation, and responsibility for self and others while enacting roles as stewards of all ecosystems that comprise Mother Earth and the universe in which we live.

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K. TOBIN

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Kenneth Tobin came to the Urban Education doctoral program at the Graduate Center of CUNY in the fall semester of 2003. Presently he is coordinator of the Learning Sciences strand. Prior to his position at the Graduate Center Tobin had positions as tenured full professor at Florida State University (1987 to 1997) and the University of Pennsylvania (1997 to 2003). Also, he held university appointments at the Western Australian Institute of Technology (now Curtin University), Mount Lawley College and Graylands College (now Edith Cowan University).

Before Tobin became a university science educator in Australia in 1974, he taught high school physics, chemistry, biology general science, and mathematics for 10 years. He began a program of research in 1973 that continues to the present day – teaching and learning of science and learning to teach science.

PART I
MINDFULNESS IN EDUCATION

HEESoon BAI, MICHELLE BEATCH, DAVID CHANG
AND AVRAHAM COHEN

2. RECALIBRATION OF MINDFULNESS FOR EDUCATION

ABSTRACT

In this chapter, we the authors critically examine how mindfulness is taken up in education, and attempt to re-calibrate its use in education so as to suggest better ways to work with what mindfulness practice is truly capable of: liberating humanity from the narrow and limiting confines of reified ego consciousness and its perpetual condition of schism and conflict, internal and external. We make the case that for mindfulness to fully function in this liberatory capacity, it must not be offered as a stand-alone technique, taken out of the whole contemplative ontology and epistemology, such as, for example, the Buddhist path of liberation. As well, the usual cognitive approach to mindfulness that leaves out the affective dimension of contemplative practice that cultivates compassion, kindness, and empathic joy, is also limiting and does not do full justice to the liberatory aims of meditation. At its most limited application, mindfulness becomes just a temporary pacifier for stress-ridden individuals who have been and continue to be subject to increasing socioeconomic pressures and geopolitical oppression. We are critical of such ethically unaware uptakes of mindfulness, especially in the way schools use mindfulness for self-regulation, and we further raise concerns over the usage of mindfulness for suppressing or controlling feelings, especially negative feelings. Our chapter reiterates the purpose of mindfulness as a practice that aims at the transformation of ego-driven consciousness liable to self-other dualism and conflict to self-other integrative consciousness.

Keywords: mindfulness, Four Immeasurables, education, stress, self-regulation, integration

PREAMBLE

Compartmentalization and disconnection have been pervasive phenomena that have characterized and affected all spheres of human endeavour in modern times, including – and notably for the context of this chapter – education. Modern schooling has increasingly focused on teaching many different subjects, as students move up in

grades and qualify for higher education. Although educators have advocated for care and human development as the primary goals of schooling, the reality is that such aims are most often subsumed under student academic performance. In other words, the primary focus of modern schooling has been knowledge and skills acquisition. Human flourishing and personhood development tend to play a secondary or instrumental role. In response to modernist educational aims, strong attempts have been made by educational leaders, philosophers, and practitioners in recent decades to steer education more towards development of whole human beings and whole communities, not just primarily as students and classroom dwellers who learn and master subjects and acquire skills. Holistic education movements, and more recently, contemplative education movements (Bai, Cohen, Culham, Park, Rabi, Scott, & Tait, 2014; Barbezat & Bush, 2014), which can be seen as part of holistic and contemplative educational reform, are at the vanguard of such educational reform or at least enhancement.

Unfortunately, contemplative methodology itself has been subject to the same pressure of compartmentalization and disconnect. For example, consider what yoga has generally become in North America: a billion dollar industry that proffers a homogenized version of the original intent of the practice and idealized and extreme images that consist of young and sexy bodies. Mindfulness has not escaped similar commodification and appeal to short-term benefits. In education, mindfulness has been turned into a technique for “self-regulation” that is brought into schools to manage students who are, in this age of distraction and dis-regulation, increasingly less able to perform academically.

Mindfulness in the context of education at times appears to be undertaken as a skill-based, cognitive-behavioural approach where its utility seems to be isolated to support individual cognitive processes. Such reductionist interpretations of mindfulness have resulted in it having lost connection to its original meaning in Western psychological theory and practice, and has led to the misconception that ethics and the discernment of the wholesome from the unwholesome are not part of mindfulness, when in fact they are central.

This chapter by the four authors critically examines how mindfulness has been taken up in education, and attempts to re-calibrate its use and offering in education so as to suggest better use of what mindfulness practice is truly capable of: liberating humanity from the narrow and limiting confines of a reified ego consciousness and its perpetual condition of schism and conflict, internal and external.

THE CURRENT MINDFULNESS UPTAKE SCENE IN EDUCATION

The growing popularity of mindfulness programs in schools can be traced in part to neuroscientific studies on the effects of contemplative practice on the brain. Beginning in the late eighties, scientists began to investigate the physiological correlates of meditative states as well as the effects of contemplative practice on neural circuitry. Ancient forms of Buddhist meditation, whereby the practitioner engages in full

and present awareness, have been known to produce mental states, characterized by clarity, and in some cases, ecstatic joy and warm compassion. Such meditative techniques have traditionally fallen under the purview of monastic contemplatives, who have renounced worldly life in pursuit of spiritual illumination. With the spread of Buddhism in the West, and interest in Eastern philosophies gathering momentum, Buddhist adepts who have devoted much of their lives to meditation became the subjects of study, and the states of consciousness arising from meditative practice began to attract scientific attention.

The neuroscientific study of meditation coincided with the neuroscientific revolution, also known as the decade of the brain (Jones & Mendell, 1999). The advent of imaging and diagnostic technologies such as functional magnetic resonance imaging (fMRI), and positron emissions tomography (PET) allowed scientists to peer into the operational and structural intricacies of the brain. Using a variety of monitoring methods, scientists are able to correlate mental states with activity in different regions of the brain, and thus construct a physiological map of neurological functions that correspond to subjective mental states. Moreover, researchers have been able to detect changes in cortical structure as a result of repeated practice of certain activities, including spatial navigation, and memory (Maguire et al., 2006). These advances in neuroscience have produced the empirical evidence of physiological changes as a result of periods of intense meditative practice (Lazar et al., 2005).

Neuroscientific investigation into the effects of meditation effectively imports an ancient practice into a scientific paradigm. Experimental design attempts to isolate a variable in an effort to determine and measure the *effects* of meditation. Whereas ancient Buddhist traditions utilize meditation as merely one among a suite of practices that aim to develop and transform consciousness, neuroscience only measures the observable effects of meditative practice. The articulation of neuroscientific findings can sometimes convey observable *effects* as *outcomes*; changes in the brain are presented as the result of exposure to a given variable (i.e., meditation). In this figuration, significant results are often read by the wider public as recommendations for meditative practice. If meditators demonstrate emotional stability in the face of stress, and emotional regulation is thought a desirable feature of mental wellbeing, then the merits of meditative practice become apparent. However, this scientific apprehension tends to examine meditation outside of its traditional context, omit its original purpose, and neglect the suite of practices of which it is meant to be part. Thus, *effects* are mistaken for *aims*, and outcomes for methods. In Buddhism, emotional stability is correlated with deep and lucid non-dual awareness, consciousness that manifests when the ordinary consciousness of subject-object dichotomy dissolves, giving way to subject-object unity or integration. In common language this is often described as a flow state (Csikszentmihalyi, 2008). Western observers, however, are likely to adopt meditation as a means to achieving what is only the secondary effect of a more fundamental transformation in the quality of consciousness and in the emergence of an increasingly kind, compassionate, and peaceful society.

As neuroscientific knowledge garnered attention, coupled with empirical science's current repute as epistemology *par excellence*, educators began to incorporate neuroscientific findings into discussions of pedagogical methods. Bolstered by scientific evidence, educators have turned to mindfulness practices in an effort to cultivate emotional stability, resilience, empathy and positive affect among students. The MindUP program (Hawn Foundation, 2011) is one example of a comprehensive mindfulness curriculum, designed to introduce students to the basic awareness and self-regulatory practices along with the rudiments of brain science. With lessons and activities for students from K-10, MindUP aims to “foster social and emotional awareness, enhance psychological wellbeing, and promote academic success” (Hawn Foundation, 2011, p. 6). Each lesson includes a segment on the brain and the physiological effects of recommended practices. MindUp sees wide implementation by teachers, and some academics have now presented its salutary effects (Schonert-Reichl & Lawlor, 2010).

In addition to mindfulness-based interventions for children, programs have also been developed for educators. Mindfulness can be brought to the classroom directly through programs for children, indirectly through programs for teachers, or through a combination of both approaches. Two interventions offered to teachers in Canada are Mindfulness-Based Wellness Education (MBWE) and the Stress Management and Relaxation Techniques (SMART) in Education program. Both programs draw upon MBSR and include teachings on mindfulness, and practices such as guided sitting meditation, body-scan meditation, and yoga.

A third program from the United States and just recently being brought into Canada is Cultivating Awareness and Resilience in Education (CARE). Founded on mindfulness-based practices and the Prosocial Classroom model, CARE emphasizes how teachers themselves must possess social-emotional competence and attend to their own wellbeing in order to develop and maintain teacher-student relationships, classroom management, and effective Social and Emotional Education (SEE) implementation.

A mindfulness-based program that combines both direct and indirect approaches is the Inner Resilience Program (IRP), which is grounded in research in SEE and contemporary mindfulness-based interventions. In 2009, the IRP became a two-year pilot project within ten New York City public schools (Lantieri, Kyse, Harnett, & Malkmus, 2011). It was hypothesized that there would be greater positive effects if administrators, teachers, parents, and children from each school all participated in various components of the program. The activities primarily focused on administrators and teachers, and were intended to reduce teacher stress, and increase their concentration, attention, and job satisfaction. It was theorized that such changes in teachers would have a positive impact on their classroom environments that in turn would affect students' wellbeing relative to their attention, frustration levels, stress, and acting out behaviors. In addition, students' wellbeing would further be improved by activities provided in the Building Resilience from the Inside Out curriculum (Lantieri et al., 2011).

RECALIBRATION OF MINDFULNESS FOR EDUCATION

The IRP brings together direct and indirect approaches to SEE, and suggests further consideration be given to balancing our efforts in SEE; we must not only consider the child, but the people comprising the context in which children live and learn. As the field of mindfulness and contemplative practices grows, what remains in the context of education is a bridging between teachers and students, where we attend to the psychological wellbeing of the individual students and teachers, as well as the student-teacher relationship itself.

BEYOND SELF-REGULATION AND MANAGEMENT

The mindfulness programs widely adapted for schools attend closely to the prevalent discourse on self-regulation. Such programs enlist data from neuroscientific research to present a physiological picture of the brain in distress, and proceeds to offer methods for alleviating anxiety and tension. This presentation construes the brain as the seat of negative and distressing experiences – the solution to which lies in mindfulness practice. The amygdala is often associated with “fight, flight or freeze,” whose stress-induced, reactionary impulses are moderated by the prefrontal cortex (Hawn Foundation, 2011, p. 27). Such simplistic presentation of the brain is misleading in three ways: first, the reduction of cortical structures to a short list of functions tends to misrepresent the complexity of the brain and the vastly integrated circuitry across the entire cortex, while essentializing the role of each cortical region (Varela et al., 2001; Rodriguez & Martinerie, 2001) second, the simplification of regional function tends to establish a hierarchy of brain functions, i.e., the executive role of the prefrontal cortex is privileged over the supposedly reactionary impulses of the amygdala; third, the association between amygdala activation and negative affect implies the need to subdue the amygdala. Such depictions of the brain misrepresents the vital functions served by the amygdala, which includes pro-social behaviours and empathetic attunement (Adolphs, 2010).

Increasingly in education we see such terms as “self-control,” “self-management,” or “self-regulation.” The concern about the use of this language is similar to the oversimplification of mindfulness as it is often equated with simply being “aware.” When taken up as a means of self-regulation, mindfulness risks being perceived as a means to eliminating or preventing particular emotions, thoughts, and/or actions. The self-regulation model of mindfulness may lead educators to see negative feelings as something to be avoided or suppressed. Furthermore, what may be lost is the value of the emotion, positive or negative, as important indicators of what the child may need.

Epstein (2013) outlines some common misperceptions about being with emotions, such as believing that they must be managed or suppressed. When emotions are viewed as something to be controlled, the author describes, “[i]n this view, the emotions are personified as wild animals lurking in the jungles of the unconscious – animals that must be guarded against or tamed to the greatest extent possible” (p. 96). This misconception of emotion results in emotions being

identified as “real entities” over which we have little control, and that rather than working with the emotion, we see our task as subjugating or controlling our emotion in order to avoid calamity. When we view emotion as beasts to be tamed, we lose the opportunity to learn about the nature of the mind and emotion; how to be with the emotion, and to see the emotions naturally passing away. In addition, the more we cut off the emotion, the more we continue to identify with them. If our efforts are to control or inadvertently eliminate, we may be reinforcing the very emotion of which we are attempting to rid ourselves. What tends to happen commonly is confusion between feeling and off-loading feelings in the service of relieving the pressure of feeling. Feeling means only that: feeling. To repeat (as it is a significant insight): what is usually identified as feeling is more often than not an effort to get rid of a feeling and involves an action. Mindfulness practice provides a way of being with feeling. Inner work with the egoic selves provides the opportunity to know the self that has the feeling and that was wounded repeatedly until the wound itself became reified and buried in such a way that an egoic structure developed that powerfully suppressed feeling and being that was natural to a person (Schellenbaum, 1998/1990).

To reiterate, the practice of mindfulness meditation is not about stopping emotion, but rather, being with and understanding what we feel. It is learning how to be with our emotions, and recognizing whether they are wholesome or unwholesome, healthful or harmful, that enables change and/or transformation. When we use the language of self-control or self-regulation, we are focused on an end point without understanding the means to such ends, and in this case the value of being with emotion. Moreover, when we come up against or try and control what we feel, and fail to do so, this potentially creates a greater sense of failure and self-loathing, further perpetuating established harmful thinking patterns.

The proliferation of mindfulness-based programs intimate a turning point in the career of an ancient contemplative practice; the transplantation of meditation from a religious to a secular context is accompanied by significant changes to its supposed purposes and aims. Western adaptation of meditative practice, and its numerous variants, inevitably shifts the supposed goals and use of meditation in the direction of Western values. Let us here note that the use to which something is put tends to define what this something is. For example, if in one’s household one were to use a book of Shakespeare’s collected works only as a doorstop for the front door, never bothering to open it and read it, that book in that household will be known as the doorstop. While it’s wonderful that a book can be used as a doorstop on occasion, if it’s not opened and read, its possibility to open one’s eyes and move one’s heart and to transform one’s life is lost and wasted. Our sense is that mindfulness practice currently so ardently pursued in schools and military or corporate environments is being similarly used.

This section of the chapter exposed the doorstop use of mindfulness in contemporary school, and in the subsequent sections, we shall explore possibilities of reclaiming, to continue with the analogy, its Shakespearean-like use.

RE-MINDING MINDFULNESS

To further build on the analogy of Shakespearean doorstep, the particular use to which we put something tells us a lot about the user's mindset. In our imagined household where a heavy tome of Shakespeare is used only as a doorstep, possibly the householder is illiterate, or, even if she can read, she doesn't imagine any worth and merit in the contents of the book. Similarly, ignorance or lack of understanding regarding the purpose and use of mindfulness seems to be behind the current scene of mindfulness in education.

The best purpose or use for which mindfulness is intended is enlightenment or awakening. Just as ordinary waking up signals a transition from a sleep state to an awake state, enlightenment signifies a transition of human consciousness from that of being limited and bound to ego identity to its liberation. What do we mean by these words? What is ego or ego identity? What is it to be liberated from the ego or ego identity?

While there are different meanings and different nuances for the word 'ego,' in the context of enlightenment discourse, such as Buddhist psychology, ego signifies the self seeing itself separate from the rest of life and universe: "I am not you; I am not this tree; I'm not that woman; I'm just this me, this person whose physical boundary lies at my skin surface and whose mental and emotional boundary lies in my beliefs, my religion, my nationality, my gender, my money, my interest, my words, my taste, and so on." In setting up the clear and categorical separation between what is me and mine and what is not, and insisting on what's 'mine' and what's not 'mine,' the reified ego consciousness is rigid and defensive. It is alert all the time, which causes stress, in looking out for foreign encroachment and invasion and, when the latter is detected, it's swift in reacting to the invasion either by withdrawing and running away, or by fighting and attempting to eliminate the foreign other. It's fair to say that within these parameters a person does not 'have an ego': the ego has the person. An awakened person will have an ego, not be had by it, and it will, in subtle and not so subtle ways, never be the same in its manifestation twice. The latter kind of self is fluid, flexible, and responsive to the entire context within which it arises, and is a vehicle for optimal expression of life energy. We invite our reader to look around and look within to see if what we are describing as ego consciousness is at work and whether it is so pervasively. Good news is that where ego consciousness is discovered, we can welcome them as sites for inner work (Cohen, 2015) that is transformational.

From world political scenes to interpersonal dynamics, such as in public and private organizations (to which the institution of schooling belongs), family, spousal relationships, the ego consciousness presently prevails. Conflict, domination, defamation, intimidation, war, marginalization and slaughter all take place in the field of ego consciousness. The message that egos communicate to each other, implicitly or explicitly is this: "I am not you, and you are not me, and we don't like and want each other. One of us has to go." The reader's response might be: "Oh, come on! It's not that bad, is it? People cooperate, get along, make love, make peace, make

a family, do business ... ego consciousness works O.K., right?" Yes, we try and try hard: we teach people to be tolerant, respectful, control their impulse to lash out; we teach people to be kind, etc. Of course, these are not useless injunctions. However, we only succeed in this effort to the degree we manage to soften our ego consciousness and expand its boundary. If we have not been fully liberated from the confines of ego consciousness, our progress is unstable, episodic, and therefore limited. The battle of ego consciousness will continue: anger, hatred, greed, grief, and vengeance seeking will persist. This has been the story writ large of humanity for the past few millennia.

Teachings and practices of mindfulness squarely aim at transforming the ego consciousness. In its aim and execution, mindfulness as taught in the Buddhist tradition is accompanied by the Eightfold Path: *right view, right resolve, right speech, right conduct, right livelihood, right effort, right mindfulness, and right concentration*. Two main points we wish to draw out of our reference to Buddhist teachings here are: (1) mindfulness aims to transform consciousness; and (2) it doesn't and can't accomplish the goal alone, as it needs to be supported by and to support other effort-making compliments (e.g., Eightfold Path). Thus, for example, to apply mindfulness to exploitative profitmaking (as in business), killing (as in military), or competition (as in school) is completely misguided, destructive, and certainly shows ignorance of what mindfulness is about.

We the authors of this chapter do not object that mindfulness is used at school to alleviate test anxiety and help children become less reactive and self- and other-destructive; that is, more regulated. We do not deny that mindfulness can assuage stress, reduce anxiety, boost immunity, or even raise test scores. What we want to emphasize and highlight here, however, is that mindfulness is for a vastly more important and critical purpose than these incidental uses, however beneficial they are. Mindfulness can, in conjunction with other practices, transform the egoic consciousness into one of greater consanguinity and connection. If we want the matrix of our civilization to change, if we want to enter a new axial period of human development (Bai, 2013) that will usher in a different civilization from the one we currently know, then we will need to facilitate the return of mindfulness practice to a holistic and integrative paradigm. (Please note that we are not saying or implying that this paradigm has to be Buddhist.) This paradigm will encompass a comprehensive, wide-angle understanding of shifts in consciousness and accompanying practices that promote such transformations. In the following section, we will discuss this returning of mindfulness to a holistic paradigm in education.

PUTTING BACK WHAT IS LEFT OUT OF MINDFULNESS

We are glad that there is enthusiastic reception to mindfulness in education, and we hope that future mindfulness programs will be strengthened, made more comprehensive, integrated, and moving towards becoming a vehicle for human liberation. The depth and fullness of mindfulness practice was laid out by the historical Buddha in his discourse on mindfulness (*Satipathana Sutta*). In this discourse, the Buddha set up

mindfulness cultivation in the four fields of our being: body, mind or consciousness, feelings or sensations, and mental or conceptual categories. Now, the reason for our mentioning this seminal text on mindfulness is not to impart something about Buddhism but to illustrate the comprehensive and holistic nature of mindfulness practice. Mindfulness is the calm but energetic, alert but relaxed awareness that attends comprehensively to present experience. This acute and lucid awareness is an integral part of human consciousness, a fundamental and inalienable quality of awareness that underlies all forms of experience.

We can cultivate mindful awareness in all domains of our being so that, as a whole, in all our intentions and actions, we are established in mindfulness. This prospect of mindfulness cultivation then goes far, far beyond the current interest and application of mindfulness that is primarily focused on calming and soothing a “deregulated” nervous system. As well, the purpose of the latter, for example, reducing students’ test anxiety and “problem behavior” in school from a behavioural management point of view, is fragmentary and shortsighted, and perpetrating of social inequity and injustice. Behaviourally (and neurobiologically) adjusting students whose life history bears psychological (and even physical) wounds so that they won’t be “problem students” is not a liberatory pedagogy.

Pedagogically, mindfulness can do a lot more than just calm deregulated nerves. For example, when we apply mindfulness cultivation to our feelings and sensations, we can work on not only deregulated, reactive emotions but also we can cultivate wholesome emotions that have moral/ethical power. That is, we can cultivate moral emotions such as kindness, compassion, empathic joy, and inner freedom and peace. Call it “affective meditation” or “heart meditation.” In the Buddhist literature and practice, these are known as The Four Immeasurables. Their utmost importance to human collective and individual wellbeing, and simultaneously the recognition that they have been sidestepped and overshadowed by mindfulness uptake in the West, are being noted and made in recent works (Feldman, 2015). Cultivation of The Four Immeasurables through mindfulness application to one’s consciousness would be the most radical moral activism in today’s world seething with greed, discontent, and hatred.

Meditation is not limited to the popularized depiction: for example, sitting cross-legged, eyes-closed, and manifesting a mudra. While formal meditation practices are important, our efforts are not limited to our time on the cushion (or chair). Beyond the cushion, mindfulness becomes a moment-by-moment meditation as we go about our day. “Whatever you do mindfully is meditation,” says Thich Nhat Hahn (2011, p. 15). In particular, Thich Nhat Hahn speaks of loving (being kind, being compassionate, being empathically joyful) as a true meditation. In “real meditation,” says Thich Nhat Hahn, “all at once there is love, compassion, joy, and freedom ...” (p. 18).

WHAT DO “MINDFUL” SCHOOLS AND CLASSROOMS LOOK AND FEEL LIKE?

In this last section, we, the four authors, present a short interview/dialogue on the topic of implementing the deepened and expanded understanding of mindfulness in

various educational settings. We talk to each other about the kinds of effort we have been making within our own educational settings and teaching environments, as well as share our future dreams and hopes.

Heesoon Bai (HB): Colleagues, I would like us to take this opportunity to talk about the work we have been doing in practicing, teaching, mentoring, and researching in mindfulness. I would like to hear how you have been bringing in mindfulness for liberation and enlightenment, as we talked about in this chapter, for your professional and personal environments. Michelle, would you like to go first? I know that you have been very active in your community, for example, offering mindfulness workshops to parents. You also use it in your counseling and psychotherapy work, right? On top of that, you are writing your doctoral dissertation on the topic, yes?

Michelle Beatch (MB): Yes! I have spent the last decade studying and practicing Vipassana. I personally came to mindfulness meditation as many do, as a means to care for chronic health issues. I was so taken by the effect of meditation on my body, mind and relationships that it sparked a lasting passion for studying and practicing the trainings offered by the Buddha. I quickly realized how important it was to hear the teachings of the Buddha, and that his wisdom as a whole (e.g., the Four Noble Truths, Eightfold Path, Four Immeasurables, Ten Perfections, and etc.) was profoundly transformative. As I began to study and embody what I was learning, I could not help but bring it to my work as a psychotherapist. With many of my clients being cautiously curious about meditation, as they were concerned of its religious overtones, I worked very hard to describe the Buddha's teachings in an accessible language as possible. At times, this meant not referencing the traditional languages of Pali or Sanskrit, as well as not referring to it as a spiritual practice (if that was not suitable for the client). This secularization came easily as I saw the Buddha's teachings as simply pointing to the way things are and that the teachings could hold their meaning in the absence of the above references. Working primarily with adults, when I saw the benefits my clients were gaining from the Buddhist understanding of suffering and the means to addressing it, I became interested in examining how these teachings were and could be shared with children. So, I returned to school to do my PhD and when I started, I was first looking at the mindfulness-based programs being offered to K-12 students. It did not take long to see that mindfulness was being extracted from its historical roots, with no recognition of the Buddha or his depth of insight. This was understandable, given the view of Buddhism as a religion. The timing felt right though to move beyond just mindfulness and I felt that the decades of work that had come to pass paved the way for us to share more; to honour the very practical wisdom of the Buddha. While examining mindfulness-based programs, I was also concerned about what little support there was for teachers to practice meditation themselves and anyone else for that matter in and around

those children participating in such programs as MindUP. The above concerns led me to develop an introductory mindfulness meditation program for parents, grandparents, caregivers, teachers, community members, school counsellors, really anyone who would listen! My intention was to introduce people to meditation; acknowledge the Buddha; share how Buddhist teachings such as the Four Noble Truths and Eightfold Path are integral, and how the Buddha offered a way of life or a Social and Emotional Education program in and of itself. When I started offering these classes in my community, I knew that I would also need to create something to support participants to continue on in their practice, so I also run a weekly sitting group, where we sit together for 40 minutes, and then I share a Buddhist reading, and we have time to reflect on our practice or study of Buddhist teachings. Currently, my PhD thesis aims to, (1) provide a critical examination of Social and Emotional Education and the challenges of integrating mindfulness-based practices within a neo-liberal context, (2) highlight the need for more community based resources and support for teachers, parents, school counsellors, etc., and, (3) make additional Buddhist teachings more accessible in order to add greater depth and meaning to Social and Emotional Education, and provide a greater balance between individual and relational processes in schools.

With my thesis nearly done, I am closely reflecting upon, “What have I learned?” and “What’s next?” I have come to see that mindful schools do not come to be simply through teachers taking up a packaged curriculum via one-day training. It seems most viable when teachers and administrators embody “mindfulness” in all its richness – where staff champion contemplative practices. In terms of supporting children to develop mindfulness-based skills at school – I have learned of the complexity of the conditions necessary for children to thrive, to be mindful. We need to include in our care consideration of whether children have access to safe living conditions, are in a home that is able to provide economic security, have access to healthy foods, are safe at school and feel supported and cared for by their teachers, to name a few. As many have argued, mindfulness is not a panacea and we need to see the big picture and all that affects children’s social and emotional development. Looking ahead, I will continue to try and make the Buddha’s teachings accessible; to share the Buddha’s teachings in my private practice, and offer the Dharma ... to anyone who will listen. I believe if we are going to foster mindful children, we need mindful adults in their lives. In order to support these children and adults, I envision them having free access to more community based resources (hence my vision of a Contemplative Community Centre).

HB: Precisely! Meditation is a community-supported endeavor. By the same token, meditating together creates a wonderful community. This has me curious about your interest in living like a hermit, David. You are planning on pursuing twelve-month solitary off-grid living as part of your doctoral

research, right? Is your solitary living an extensive Zen retreat? Will this be an all-out enlightenment pursuit for you? Once I saw a cartoon whose caption says, “Nirvana or bust”! I also know that you wrote your master’s thesis that researched neuroscience behind mindfulness meditation.

David Chang (DC): I suppose my doctoral work extends from my attempt to reconcile my personal practice with what I have seen in the proliferation of mindfulness programs in recent years. For my Master’s thesis, I examined the intersection between meditation and neuroscience. My thesis coincided with the popularization of mindfulness programs; as a secondary teacher at the time, I was one of many teachers who incorporated mindfulness-based practices in classrooms. In the ensuing years, however, I have developed a more critical view of mindfulness in classrooms as a result of further scholarship and Zen practice.

From my own study of Zen, I came to appreciate meditation as a formal discipline that helps me attend to my present condition. Meditation is demanding work because the rawness of emotional states, and the tempestuous fluctuations of mental life, not only impart unpleasant valances, but also trigger conditioned reactions that furnish the habits of inner experience. The disciplined practice of remaining with inner storms and witnessing conditioned impulses is challenging, and not congruent with the popular notion of meditation as a blissful trip through poise and equanimity. I gradually came to see suffering as a pattern of my own mind, a recurring confusion and a set of ongoing insecurities. These insights make way for a more capacious way of being, a more open attitude toward one’s own inner world. I don’t think meditation has made me happier; rather, pain is more acute – but by the same token, joy is more exuberant. So, I think meditation broadens and deepens the scope of human experience – I feel everything more vividly.

Further, commitment to this practice reveals one’s deepest inclinations. I became more sensitive to the things that produced more anxiety, confusion and chaos; at the same time, I gravitated toward perspectives and philosophies that led to a healthier condition of mind. It’s this evolution of my own habits and values that led me to give up a full-time salary (and the financial security and status afforded by employment) to pursue doctoral studies. This drastic change is part of an ongoing evolution of self. In Buddhism, we tend to hear a lot about “letting go.” In my experience, relinquishment is not about “letting go” (prying one’s fingers off of some indispensable treasure) so much as “falling away.” The things that used to stick simply fall away, and you find yourself unfettered. Only after many years of practice have I come to see the cumulative outcomes of Buddhist practice, which is not about feeling good per se, but honest engagement, moment after moment. In doing this, I become a different person. The things that used to hold sway have lost their charm.

The proposed study of solitude in the woods is a way to immerse myself in conditions that fully support Zen practice, and to test the kinds of comforts (social and material) that I've taken for granted as parcel to a good life. I expect to live on only the essentials, and I'm sure it will be difficult. I don't think I would've been ready for this even five years ago, but somehow I've changed. Austerity and asceticism does not frighten me anymore, because I see it as a form of simplicity. I would not have come to this project if not for the continuous attention to my own inner experience through meditation. Perhaps this is why I'm a little weary of the tendency to associate meditation with tranquility and happiness. Don't meditate if you're not prepared to see your life turned upside down!

HB: I am deeply moved and inspired by what I heard from you here. I clearly see how the fruit of mindfulness practice is ethics: how one's life stands in relationship to the world and life. Thank you, David. I now turn to you, Avraham. I know you to have been a long-time meditator in many different traditions: Sufi, Daoist, Buddhist, Qi Gong, and so on. But perhaps the most important influence on your mindfulness practice is your psychotherapy practice and teaching. You and I have talked a lot (for 12 years!) about our work in the intersection of psychotherapy and meditation. What would you say is the most important contribution that psychotherapy has made to mindfulness/meditation? And how have you been extending the insight you gleaned here to your teaching? What has been your path that brought you to the present interest in integrating mindfulness into psychotherapy as well as teaching?

Avraham Cohen (AC): Firstly, let me comment on the narratives of my colleagues, Michelle and David. Michelle, I am most appreciative of the depth and breadth of your personal work and your efforts to integrate the whole of the Buddha's teachings into your own life, your practice, and in the service of transforming mindfulness within educational contexts. David, I am totally struck by your courage to leave a secure livelihood and to throw yourself into doctoral studies in the service of personal transformation and service to the larger community. Your research that will have you off the grid for twelve months and that is in the service of deepening your knowledge of self, other, relationship, and the world, I see as immensely bold and courageous and having great potential to bring something back that will have deep and enduring ripples.

Well, regarding myself, please allow me to start at the beginning, which was many decades ago. I discovered that I was trying to become a member of a club that barely existed and that eventually I realized I did not want to be a member of. As a teenager and young adult, I thought there was something wrong with me as I did not seem to be able to discover the way into the groups that seemed to exemplify the good life. Eventually, it became evident to me

that my ‘strangeness’ was in fact my uniqueness and my unconscious rebellion against mainstream ways of being and striving that I now see as anti-human and even dehumanizing. Now with my new vocabulary, I would call these, the ways of egoic consciousness. From there it was and has been a long path of self-discovery, other-discovery, self-other discovery, relational discovery, meaning searching, searching for the Way and myself simultaneously, increasing discovery that my inner world in all its formation and dis/formation was and is a crucial element in my path finding and that seeking and finding were increasingly aligned. I discovered and continue to discover inner work, which integrates mindfulness practice with process-oriented psychotherapy approaches. I have the view that education primarily is education about life and that this is intrinsic to a vibrant educational experience. I see self-discovery as a profoundly educational experience and that integration of such inner work with curriculum learning in educational environments is crucial to learning in all realms and is supportive of optimizing human possibilities. Such optimization is, in my view, essential to the survival of the human species and the planet as a life-viable environment. This latter, of course, assumes that this is a core value for humanity.

So, to answer your question, Heesoon, about what I have been doing with psychotherapy in relation to meditation, I offer the following brief synopsis. As is outlined above, I see a close and essential relationship between meditation and psychotherapeutic ways. This relationship can be facilitated by someone who is practiced in both dimensions. (I am not implying that one has to be a psychotherapist to do this work. Having some psychotherapeutic knowledge and familiarity is helpful. The difference I’m implying here is the difference between, for instance, being a trained chef and being a good cook for everyday life.) As well, a person can learn to do inner work on their own, using meditation and psychotherapeutic knowledge. In fact, meditation helps a person to learn to develop the focus that such inner work requires. The paradigm in brief is to sit in meditation and notice what happens. This is awareness training. Expanded awareness is liberating experience.

However, as a person works in this way, there is the likelihood that something will arise that will ‘oppress’ the expression of life energy. This arising experience is to be noticed and over time appreciated as a gift. The gift is the light that is shed on reified egoic structures that are oppressive to life energy. These egoic structures were originally and unconsciously developed in the service of survival and the obtaining of whatever scraps of love and attention that were available. Inner work with these structures is in the service of transforming the experience of being ‘had’ by the egoic structure to one of having it. This ‘having’ means that the egoic structure is now at the service of the person’s nature/life energy rather than the opposite, where life energy/nature are compromised.

HB: Your insights here are profound, and I am intrigued by how you do this inner work. I wonder if we can explore what you are saying about how to work with the egoic identity structure and mindfulness practice. Perhaps you can illustrate the work through a dialogue with me? For example, suppose that I sit in meditation and at some point, realize that I have been lost in thought and unconscious about this for a number of minutes.

AC: Okay. The key to this kind of work is finding or identifying the egoic, personality structure that has been built, and the best guide to finding this is paying attention to feelings that arise. Going into your example, the first signal is the noticing of the 'lost' time period. The traditional teaching is to go back to the meditation method and to let any associated feelings, the feeling self (Feeling Self=FS) pass. A more useful approach in my view is to identify and articulate the egoic self that was 'lost' (Lost Self=LS) and assume the identity of this self temporarily in the service of understanding it and its intent, and also do the same with the egoic self that is providing this blanket of unconsciousness to protect (Protective Self=PS) the lost self. We then put the three selves into a dialogue:

LS: I am very sleepy. I am not aware of much. I don't really feel anything.

PS: I don't want LS to feel any pain or discomfort. I will isolate and block the FS.

FS: I am all alone. It is very dark where I am. I have an idea that there are others but I'm not sure. I don't know how to find them if they do exist.

LS: I am very tired. I would like to feel better.

PS: I am doing my best to help you to feel better.

LS: It's not working. I am just getting increasingly tired as time goes by. Couldn't you please stop protecting me so much. I am living a life that repeats over and over and over.

PS: I don't know how to do anything different.

FS: Let LS know me, and let me know him!

PS: That will hurt. I can't stand the thought of you, dear LS, feeling any discomfort.

FS: I don't really know much but I have an idea that if he can know me he can learn to have discomfort and that really will help him to grow (up) and feel more alive.

PS: I don't know if I can stop doing what I am doing. It is the only thing that I really know how to do, and I don't know if I can tolerate seeing LS in pain.

FS: Please, please let me and him connect a little. If it's too much we can always go back to the old ways.

LS: Yes, yes, please let me know FS. And, PS, I think you have been alone for a long time. You can join in with us to be an inner community. I think that protecting against feeling is a trap, and we are all in the trap separately. We are all lonely. And this is a perfect reflection of our early years when we were not connected very well at all to our parents, and now is a reflection of our current significant relationships that are not really connected.

PS: I will need a lot of support as I am used to protecting against you, LS, and you, FS, connecting. I don't know what will happen, and I do not feel at all comfortable about 'not knowing.'

HB: Wow, that's wild! Dialogue amongst different sub-selves of the inner community! I can now see what psychotherapeutically informed mindfulness practice can be like. I would say that what took place amongst the three selves really was a 'mindful dialogue'! Such dialogue could be fostered, encouraged, to go on over an extended period of days, weeks, month, and even years, until better integration of consciousness, therefore harmony and peace within, takes place. I can see how the process is healing the inner wounds, opening up the inner relationships, and re-initiating processes of growth and development that came to a halt many years ago and over a period of time.

AC: Yes, mindful dialogue is powerfully transformative. I have my clients and counselling students practice it. And of course, I do it, too. And finally, Heesoon, we would like to hear from you what you have been doing in bringing mindfulness and enlightenment to your own teaching and other areas of professional practice.

HB: Thank you for asking. Like many people, I went into mindfulness practice when I was in the depth of my own personal suffering. I was gripped by and "eaten alive" from the inside by my anger and grief. I knew then that I had to change my perceptions of the world and my self. This is when studying Buddhist philosophy in my earlier years came to the rescue, for, the idea I remembered was that mindfulness could help one to grow the eye of compassion, the "Buddha Eye," through which I would see the world without hatred, with equanimity, and with kindness and forgiveness. Through research – I wrote my doctoral thesis about nondual perception and compassion – and contemplative practices, I confirmed the theory of enlightenment (I have had moments of enlightenment but I have a long way to go for becoming more stably established in nondual consciousness), and I have been making various attempts at bringing the enlightenment discourse/studies and contemplative practice into my own teaching. I published my first chapter article on mindfulness in 2001 (Bai, 2001), and since then there have been numerous chapters and journal articles on the subject that I authored and co-authored with colleagues and students.

I am most particularly pleased with my effort at bringing enlightenment discourse and contemplative practice into higher education, and this took a variety of forms. For example, with a large undergraduate lecture course in Philosophy of Education that I taught more than a decade ago, I introduced 5-minute silent contemplation at the beginning of each class. That was the beginning of my “subtle activism” (Nicol, 2015). Subsequently, I did this silent sitting in just about all courses I taught over the years. More recently, two years ago, my colleagues and I at Simon Fraser University founded a Masters in Education program that approaches education as a contemplative inquiry. We would explain to people who ask about this program, that contemplative ways of inquiry and practice are infused throughout the two-year program of studies in different education subjects. In all this my emphasis has always been on the integration of such practice into everyday life activities. Like Michelle, I would tell to whomever I was introducing mindfulness that having a regular and formal practice, like sitting meditation, is very helpful and recommended. I would also emphasize that integration of mindfulness into every day life takes the form of doing it – whatever one is doing – mindfully.

Most recently, in working with a doctoral student who is a Buddhist meditation teacher and social and eco-activist, Derek Rasmussen, I have been focusing on the cultivation of the Four Immeasurables. The latter was already a central topic in my doctoral dissertation; however, now, I am going into it with greater depth of understanding and breadth of application. I work with the Four Immeasurables with the Masters of Education students in the Contemplative Inquiry program, and I am working with it with my psychotherapy clients. These are very powerful in dissolving suffering through overcoming the dualistic, ego-bound consciousness and transforming the latter into nondual, post-egoic consciousness. I admit that this academic vocabulary, although good in being technically precise, is too arcane to be useful to many. Instead, I am now using the language of the Immeasurable and speak of its everyday practice! Genuine compassion, love, kindness, joy-sharing ... and feeling oneness with all: these are the attributes of post-egoic, nondual consciousness, of being enlightened. And it is truly a lifelong process of education. I personally find the learning for enlightenment very challenging. Everyday I struggle to stay “awake” from delusions of egocentric thinking and seeing; I am challenged to face the personal limitations in compassion, kindness, and forgiveness, and I despair from the torments of past grief and loss, not just of my own but also of my ancestors. Yet, the touch and feel of “enlightenment” is never too far away, even as I stumble through my days, learning to welcome them as messengers from reality.

Colleagues, it has been an immense joy to closely collaborate with you in crafting this chapter on mindfulness. Thank you. In closing, I would like to share the following words from Thich Nhat Hahn’s “True Love”

(2011, pp. 6–7): “The most precious gift you can give to the one you love is your true presence.”

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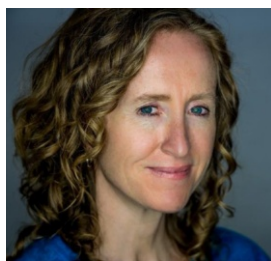


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H. BAI ET AL.

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XICOTÉNCATL MARTÍNEZ RUIZ

3. THE GIFT OF THE PRESENT

Mindfulness for the Future of México

ABSTRACT

México's youth are facing a major educational and mental health challenges with growing effects of social inequality, violence, and stress. The social and economic impact of poor mental health, violence, and social inequalities is a major economic issue for the Mexican Government. Many countries around the world, like México, are facing a rising demand for mental health services as well as having to carry the economic burden caused by violence, stress, depression, addictions, and very recently an addiction to technology. New approaches to these problems are urgently needed, especially in the development of new education and social policies. The aforementioned serve as a background for this chapter in which I focus on two intermingled problems: violence and its cost, and high levels of stress with loss of experiences of being in the present moment. I specifically bring into focus the Mexican educational system to introduce a framework for a non-traditional approach that underscores the importance of non-violence, mindfulness, conscious attention experiences, and meditation techniques, looking to impact the design of peace education, as well as social and health policies for the future.

Keywords: non-violence, conscious attention, *dhāraṇā*, Mexican education, *bhāvanā*

THINKING ABOUT THE COST OF VIOLENCE

In 2012, I conducted a project focused on ways to answer, in a non-violent manner, violent scenarios. This project resulted in a collaborative book titled: *Studies of Youth and the Philosophy of Non-Violence* (Martínez Ruiz & Rosado Moreno, 2013). That book, as well as this chapter, juxtapose two complex problems that exist in today's educational spaces for young people. The first is the perception that young people have of themselves in violent scenarios. In particular, how does violence influence their vision of the future and the socio-educational dynamic of a web of social inequities? The second is the influence of a project which proposes non-violence, *ahimsā*, as an element in the education of young people, and simultaneously as a ground for constructing citizenship. Both faces of this juxtaposition are viewed

as new possibilities and hope for the future of young people. The aforementioned juxtaposition is my starting point for self-awareness about the inner and external causes of systematic violence. The second starting point is the interconnectedness of the inner state of equanimity, conscious attention, an experience rooted in the present moment, and non-violence, *ahimsā*. To deal with violence it is necessary to have an inner state of conscious equanimity, silence, mental calm, awareness of the present, something akin to meditation in action. A non-violent attitude emerges from that inner state. Then, it is supported actively by truth and actions rooted in creative contemplation (*bhāvanā*).

Thinking about the cost of violence for our societies, I do not aim to review the literature on violence, which is vast and extensive, anthropological or sociological, descriptive or analytical. I am not interested in providing another addition to the overwhelming, yet silent indifference to the statistics of violence. Descriptions that are indifferent, or rather, indifferent descriptions are numbing. It is precisely this numbing of critical faculties that has inured us to visualize a population of youth with no future and responding to violence with more violence.

In this chapter I want to provide glimpses of hope that signify we are capable of constructing or imagining current and future prospects for young people grounded in a hope of non-violence, *ahimsā*, conscious attention, *dhāraṇā*, meditation, *dhyānam*, and creative contemplation, *bhāvanā*. What is a young person without hope or dreams? What are we – if we hold positions in educational spaces – if we do not promote young people's hopes and dreams? This idea can be improbable for some, but when we must remember figures such as Gandhi, who simultaneously formulated and materialized one of the central axes that stitches a framework of non-violence as practice, training, and a means of social transformation for young people, even in contexts of violence and despair.

When did this project on *ahimsā* and conscious attention begin? I began this inter-institutional project a little more than a decade ago. The antipodes of this project can be traced to 2001, with simple concerns and modest pretensions working with meditation techniques for young people. In my conceptualization of this project, the most relevant aspect of this stage was the clarity of purpose inspired by Chakravarthi Ram-Prasad (2002), who expressed it in this way:

Many years ago, Bimal Matilal (1986) emphasized (as he did on many other occasions for 25 years) a relevant parallelism between classical Indian and contemporary Western philosophy, in which the former could clarify problems in the latter. (p. 339)

Parallelism, as an application that Ram-Prasad implemented, is but one example of why in México a different approach to mitigate violence, stress, and depression of young people is necessary. Considering the recent problems amongst young people in México through the lens of South Asian thought, I suggested a project focused in three specific areas. The first area of study is developed within the frontiers of education and the close connection with existing social problems. The suggested approach is

ahimsā or non-violence. The second concern is the educational dilemma of stress and psychological factors such as those which affect young people. In this case, the approach was founded upon the Sanskrit concept *dhāraṇā*, sustained attention cum concentration and *dhyānam*, meditation. The third area of study focusses on addressing the need for education to combine *bhāvanā* or creative contemplation, imagination, and aesthetic experience intermingled with the states of equanimity and clarity similar to meditative states. In a more comprehensive terminology, I propose the term *educational poetics*, which is an intermingled meaning of Sanskrit terms such as *ahimsā*, *dhāraṇā/dhyānam* and *bhāvanā*. In intermingling these terms my goal is simple: contribute to a new understanding of contemporary problems in education for young people through three filters: *ahimsā*, *dhāraṇā/dhyānam*, and *bhāvanā*.

It is important to consider that more research is published in English on *ahimsā*, *dhāraṇā/dhyānam* and *bhāvanā* than research in Spanish. The difference reflects a general doubt in the Spanish-speaking world about the traditions of thought in Asia framed by limited visions and prejudices, some of which originated in the 19th century and are expressed by Hegel (Halbfass, 1990). Today, knowledge generated by new studies and translations of Sanskrit sources, as well as interdisciplinary research, reveal the obsolescence of prejudices in the Spanish-speaking world regarding Asian thought.

That which encourages us also consumes us like miniscule embers which is, I suggest, the paradox between utopia and the practice of non-violence. There are historical examples of the practical application of ideals such as the case of non-violence as action and social transformation through Gandhian utopia that ultimately led to the independence of a country. We should also remember that the dream of a creative education that is meaningful and fully connected with life was carried out by the educational model of Rabindranath Tagore.

What makes non-violence relevant to the education of a young person? Violence, in its many and frenetic forms, takes place like a numbing-sleeping spell, strangling human capacities, such as citizenship, critical thinking, creative imagination, argumentation, and understanding, to name just a few. However, this numbing-sleeping spell is more complex. It provokes the fading of our capacity for wondering about the mysteries that bring a human being to life. A loss of consciousness is at the same time the forgetting of a common, but jeopardized, task of our human condition which is the search for meanings. Very probably, the disappearance of this search triggers the abandonment of inquiry into the nature of this universe and the human condition. This numbing-sleeping spell recklessly dissipates our capacity to hear vibrating waves of the delicate mystery that is life. Society is being fragmented by a powerful, uncontainable yet fragile fountainhead: violence. Fragility, even more than strength, drives violence and cultivates this numbing-sleeping spell resulting in the annihilation – whether sharp or gradual – of something. For example, life and death are two mysteries that make us human, but the complex web of violence can nullify or put us to sleep about what it means to live and die.

Throughout history, there have always been times of crises. The state and the idea of any crisis affords us opportunities to expand and grow ourselves to achieve a better condition of humanity. However, things don't always work out that way, especially when a crisis – education, social, financial, or moral – becomes a subterranean river that continues flowing, constantly working, without warning those on the surface of its complexity. Martha Nussbaum (2010) defines the crises with the most impact as the silent ones. For example, the educational crisis or unobvious crises, or better yet, minimized crises, the ones that pass by unnoticed even if we know they exist. I suggest they go unnoticed because of the dizzying dynamics of contemporary changes, the distractions, the thousands of images that leave no room for silence, contemplation, and critical thinking. All of this exhausts the mystery of, and respect for life. Without these and other experiences, the sacred in the world and the sensitivity that makes us human, vanishes, provoking a feeling of orphan hood that young people try to alleviate with different sedatives, some of which are expressed in human conflicts – such as the various forms of violence that impregnate our modern society – or even the use of drugs. In the prologue of *Excursions and Incursions*, Mexican Nobel Prize recipient, Octavio Paz (1994), expresses it in this way:

I don't aim, of course, to treat this subject and limit myself to observing that, if we really want to combat the use of drugs, we must start from the beginning, that is to say from the reform of society itself and its social and spiritual foundations. Once laid this humble premise, I will make one more comment. I said that abandonment creates a necessity: what is the nature of that necessity; what is its name? It rises from a lack and has many names. It manifests itself sometimes as a thirst for rest and forgetting, others as the thirst for reaching beyond our paltry lives and touching what the tales and myths have promised us. It is an anxiety to escape from ourselves and find what? No one knows exactly. What we do know is that this anxiety is the thirst for happiness, the thirst for wellbeing. (pp. 22–23)

The possibility to cultivate non-violence cum wellbeing and understand both, not as passiveness, but as action and construction in the present moment, is an incentive, in the midst of modern numbness, which finds its counterpart in what Octavio Paz (1994, p. 23) calls the “thirst for happiness.” In the simplicity of this intention we can hear the echo of the Aristotelian voice speaking of happiness or *eudaimonia* that, as complete simplicity, is chosen for its own sake and never for any other reason (Aristotle, 2003). The abandonment and sensation of orphan hood are experiences of youth that can be covered up by the use of drugs or thousands of other meaningless things, or they can trigger the search – in the broadest sense – of something that transcends the paltriness and inspires a *thirst for happiness*. However, we must recognize that there is a deeper cause which is the oblivion of the nature of Self. A loss of awareness in everyday life of the *conscious I* rooted in the present time. Being aware of this self-conscious experience is the recognition of what and who we are. In the midst of that experience *the thirst for happiness*

creates a silent revolution, where a change begins with an individual. In this search, inspired by happiness, there are moments in which what we know as social and educational should be lived with the same passion with which we live our small private worlds.

THE SILENT REVOLUTION

The term *revolution* implies the idea of a sudden change or a spiraling eruption which takes place during what seems a continuous timeline. However, it can push suddenly towards the future; in other words, “revolution is not a return to the origin, but an establishment of the future” (Paz, 1996, p. 592). If the idea of revolution is to become important in the 21st century for bringing about the possibility of a better future, then this possibility must also be accompanied by a non-violent, rather than a violent transformative process. In the last century, there are examples of revolutions framed within a pacifist independence movement, such as that of M.K. Gandhi, which provided light in the midst of desperation. The rare relevance of Gandhi’s movement should concern us now because it is a call to understand our times to guide us towards the establishment of a relevant future for young people. We are in a time of silent crises in education (Nussbaum, 2010), which necessitates me mentioning that there are revolutions that will not necessarily make us better human beings, such as the revolution of artificial intelligence in terms of a superintelligence (Bostrom, 2014). We are in the midst of a sophisticated reconfiguration of our social relationships, and the perception we have of ourselves, via information technology (Floridi, 2014). This is an expanding, continuous and silent revolution that has led to secular treatment in educational spaces of techniques of mindfulness and meditation.

Let us return to the silent educational revolution. Revolution and silence are two opposing ideas, and their coexistence can imply a delicate balance of opposites, but it can also mean the irreversible destruction of one or the other. When revolution and silence are reconciled, meaning that they coexist without destroying one another, both become alive and create the possibility for transformation. The meaning of revolution becomes more important with the implicit critique of silence; the former ignites, and the latter contains, preventing the drive to consume everything in a single instant. In other words, silence can bring the unconscious inertia of impulses to a halt – amidst the euphoria of change – leading to awareness, to looking twice and listening even to criticism. Contention is strength, it recovers the meaning of time, no longer like lightning, but like a continuous light immersed in silence; until it becomes whole, completely strengthened, the revolution – the sudden change in spiral time – turns into the establishment of a future that redeems us, that cures us. The eruption is no longer eruption and becomes unfolding and expands the highest capacities that exist in us. The mechanisms that lead us to this – and that have been incorporated into secular educational contexts of children and youth – configure the silent revolution to which I am referring.

What are these mechanisms? One of them is the group of techniques that enable mindfulness. In other words, full and attentive awareness in contemplative silence without prejudice, which is completely sustained in the moment in which all moments come together: the present. Silence – and the awareness of it – is the possibility to look at something twice, even in daily life, with all the distractions, noises, sounds, violence, inattention, information, images, pleasures, pains, complaints and choices that bombard the mind. When we sustain attention and awareness in this state of silence without judgment, skills are gradually developed that allow us to recover the possibility to speak, think, act and make decisions based on this awareness, which is attention and silence.

The implications in educational terms are just now being considered in a few countries. *The Mindfulness Initiative* (2015) in the United Kingdom, in which it has been possible to incorporate an initiative in the agenda in the All-Party Parliamentary Group is one example. Unfortunately, countries like México do not have national curriculum programs that include conscious attention, meditation, creative contemplation that are important concepts for the development of a peace culture.

For many policy makers, inclusion of conscious attention, meditation, and creative contemplation in the national curriculum would perhaps seem to not fit the western tradition of education. What precedents exist to speak in a space for publishing academic research on mindfulness as a silent revolution in contemporary education or its relevance? The topic – from a wider perspective – is the recovery of encounters between different worldviews. In this case, the precedent is the epistemological interaction between two ways of understanding reality, in which the analysis of traditions of Asian thought is predominantly Western. The following comments are intended to contextualize the reader and provide an example of precedent, though evidently not exhaustive.

PRECEDENTS OR THE REREADING OF THE GREEK WORLD

One of the oldest documented encounters between the West and South Asia is in the fragments left to us by *Indica* by Megasthenes (BCE, pp. 359–290; Halbfass, 1990). I must clarify that this is not the only encounter, but one of the oldest of which we have historiographical evidence today. In the work of Megasthenes we can observe an attempt to understand another way of looking at the world, another philosophy, culture and society, based on the encounter brought about by Alexander the Great's arrival in the Indus Valley (BCE, pp. 326–323). The Western recovery of the South Asian tradition allows us to highlight some similarities between the two traditions. One of them is related to the Greek philosophers' states of attention, concentration, introspection, contemplation, wonder or *thaumazein*, and their similarity with mindfulness. By underlining these similarities, I want to illustrate that the techniques of mindfulness and contemplative meditation are neither distant nor foreign to the Greek or Western philosophical tradition. For example, Diogenes Laertius discussed the hypothesis of a possible Asian influence in Greek thought in his work *The Lives and Characters of Philosophers* as Halbfass (1990) noted, which influenced the

rereading of the classics from its translation to Latin in 1431, resulting in a prolonged European silence with regard to Asian thought.

A notable case can be found in the practices recommended in the works of the philosopher Pythagoras, which refer to an understanding of reality that is not separate from the way of life. Said understanding is mentioned by Aristotle (1994) in *Metafisica*, as well as by Iamblichus (Iamblichus, 2012); and more recently in the critical history of the Pre-Socratics written by Kirk and Raven (1957) in which we read of the function of *acusmata*, or *things heard*, alluding to a phrase or sentence grasped by the student (Kirk & Raven, 1957). It is very probable that the origins of this exercise were developed by concentrating one's attention on the variations of the lyre. Those who developed these capabilities – attention and memory – were called *acusmatics* (Eggers & Julia, 1998). The forms of developing attention, increasing and sustaining it, were mechanism to access a deeper understanding, or a disposition that implied being aware of the present moment.

Another example is the state of serenity and awareness captured in the Greek word *ataraxia*, which alludes to a state of inner balance or the absence of perturbation. The term, and its meaning, are mentioned by Epicurus as *imperturbability* (Konstan, 2016). The affirmation of philosophy as a way of life becomes meaningful when we reread Greek philosophy from the states of consciousness narrated and experienced by the philosophers. The very *ataraxia*, described as *imperturbability* and serenity, is a suspension of judgment. There are dialogues in which Plato describes an introspective Socrates, abstracted and in states of unalterable serenity, states of *ataraxia* (Cooper, 1997). Perhaps this state of equanimity and *imperturbable* serenity – even in quotidian interaction – could be induced through specific techniques? Can we say that the Greek philosophers were interested in reproducing this state? It is likely, but we cannot today declare that it has been the focus of modern historians of Greek philosophy, although there are in fact works that take up the topic, as in the case of Pierre Hadot in his *Philosophy as a way of life* (1995).

What happened in the case of South Asia is that the possibility to return to the experience of serenity and mindfulness occupied and continues to occupy an indispensable role. Diverse methods were developed for this purpose, and each one established hierarchically organized groups of techniques. For example, the focus of some was originally non-religious as is the case of the origins of Buddhism itself (Keon & Prebish, 2007). By implication, the specific techniques that allow us to return continuously to the experience of serenity and full awareness were systematized. It is no exaggeration to say that the methods, observations, categories and ways of corroborating the experience of serenity and mindfulness provided a scientific focus, because there was a direct observation of how these states affect the basic processes of human physiology – e.g., Powietrzynska and Tobin, *Mindfulness and Science Education* (2015). The relationships identified among serenity and mindfulness or thought and ways of behaving were not only fascinating – in their complexity – but were also interpreted holistically.

It is not absurd that in the 21st century I suggest that the silent revolution is an impetus towards the future based on the recovery of ancient thought and a series of techniques for developing human skills, that are not only relevant now, but also for the future that we are constructing. Even Arthur Schopenhauer (1960) surprised himself by the relevance of his analysis on Western society's necessity to recover Asian thought, an idea expressed in *The World as Will and Representation*.

MINDFULNESS IN CONTEMPORARY EDUCATION

In recent decades, the practice of mindfulness has been considered in educational interventions, interdisciplinary research, and science and humanities departments, among other academic spaces. The English word that is used in the West is mindfulness, and other modern languages have incorporated the term as is. Incorporation without analysis, however, has its risks. One of them is assuming its meaning is understood, and another is converting a term into a kind of box in which everything fits. For example, the uncritical use of the term in Spanish already presents, in many cases, a risk of incomprehension and an easy use for something that does not have semantic precision or at least a reference to its etymology. I must clarify that what is relevant here is not just to give a definition or carry out a mere etymological exercise. It is important to emphasize not lending certainty to assumptions, but rather trying to understand a series of practices that are able to relieve various social, psychological, and human imbalances of our era. In the last three decades, both in the United Kingdom and the United States a considerable amount of research has been developed around mindfulness in schools (Burnett, 2011).

Where does the term *mindfulness* come from? It is a translation of the Pali word *sati*, which relates to the Sanskrit term *smṛti*, meaning to remember, and is used as a conscious action in which that which is remembered may be the very tradition of scripture (Monier-Williams, 1999). In other words, its importance lies in the fact that it is not only a theoretical, but also foundational reference to a tradition that transmitted its corpus orally: adequate recollection – attentive and without distractions – expressed in Sanskrit as *samyak smṛti* (Monier-Williams, 1999). This South Asian tradition required the total development of attention and concentration skills, both intimately linked to what we call memory. The process is associated with an awareness of the present that transforms the person who develops it. The word in Sanskrit *samyak smṛti* can be translated as a state of conscious attention, i.e., can be understood as the total state of attention in which experience is not judged, but rather the awareness and focus of the present are increased – not in terms of mental contents, but in the space where these contents emerge, alluding to the Sanskrit term *samyak smṛti* and the Pali term *samma – sati* (Keown & Prebish, 2007). This kind of attention implies a secular treatment of focus, concentration, and meditation techniques that allow the experience of the state of mindfulness. In general, I refer to these techniques with the Sanskrit term *dhāraṇā*, which I translate as a means to sustain mental concentration, direct it intentionally and focus it. *Dhāraṇā* is a

practical way to sustain mental non-distraction. *Dhāraṇā* is a group of methods or practical teachings whose purpose is to direct the mind to a conscious state of sustained non-distraction, defined in the Sanskrit terms *nistaṅga upadeśa*, as the Kashmiri text the *Vijñānabhairava* reveals (Lakshman Joo, 2002).

We have, therefore, in Sanskrit, the state of awareness (*samyak smṛti*) and the method (*dhāraṇā*), and in Pali, *samma – sati*, translated in English as *mindfulness*, and in Spanish *atención consciente*. I must emphasize that this encompasses groups of techniques that are reproducible and adaptable to our era, some of which have been secularized in the West and have been applied in educational interventions. The descriptions of this group of numerous techniques is in the text *Vijñānabhairava*, possibly composed before the 8th century, which is one of the most complete references to understand and learn more not only about the techniques, but also about the state of conscious attention (Lakshman Joo, 2002).

Before continuing with this analysis, I want to illustrate these techniques with an example. There is a very common technique, which because of its simplicity is easily reproducible by centering your attention on your breath, *praṇā*, in other words, in the space between the inhalation and exhalation. The purpose of this is, primarily, to focus your attention amidst the flow of mental contents from the day-to-day and the past, or rather our projections into the future. Gradually, and by sustaining the focus on the present moment, the exercise is to move from a mind submerged in distracting thoughts, to a state of awareness in the here and now without repressing the aforementioned mental contents that create distraction or lead to depressive states. The objective is not only to reach a state of relaxation, but also, primarily, to enter an experience of equanimity and internal silence.

EDUCATIONAL POSSIBILITIES AND APPROACHES FROM ASIAN THOUGHT

The previous outline is intended to provide a foundation for exploring the potential of mindfulness in contemporary education from a secular perspective and with a vision towards the future. The diverse interventions and research carried out in the West since the 1970s have tried to attend to adult-related problems, which later were applied to youth and children, such as stress, depression, lack of concentration and addictions. An example is the work of William Linden (1973), who researched the effect of meditative practices in children. His study was a pioneer in the education field, revealing the relationship between anxiety and cognitive skills. The same can be said of the work by Gina M. Biegel and collaborators focused on young patients (Biegel et al., 2009). In 2010, educational interventions were developed and directed towards high-risk populations and school interventions, such as the *Mindfulness in Schools* program co-designed by Richard Burnett (2011), which was applied to groups of young people in England. The program designed by Burnett is an important precedent because it reveals the potential of such practices in the treatment of stress, depression and emotional imbalances that affect academic performance, as well as an increase in the risk for addictions. The program was designed to reduce stress

in adolescents between 14 and 16 years of age in weekly 40-minute sessions in Tonbridge School in Kent and in Hampton School in Middlesex, England. These were pioneering educational intervention programs that integrated *mindfulness* in the curriculum of students of 13 and 14 years of age (Jenkin, 2014). The program for Tonbridge School was designed by the *Mindfulness Centre* of Oxford and Cambridge University, as curricular support, and was directed towards students to aid in reducing stress and developing concentration skills.

Pioneering educational interventions have now reached more schools, and have mainly appropriated the techniques of the Buddhist tradition in a secular way, meaning that they have not disrupted the laicism of the educational systems. One of the most common misunderstandings is the belief that this practice implies a conversion to Asian religions. On the contrary, what is demonstrated is scientific evidence of the effects of mindfulness and meditative techniques. The evolution of this interest has been observed since 1970, but it was in the 1980s that researchers began to develop a growing and sustained scientific literature, and now there are studies that not just analyze the scientific documentation produced during more than three decades (Williams & Kabatt-Zin, 2011), but the application of that knowledge to approach some practical problems.

BHĀVANĀ OR A CONTEMPLATIVE STATE INTERMINGLED WITH AESTHETICS

Can we affirm that conscious attention developed for education improves social, artistic, and creative abilities? What is the relation between the conscious attention and the aesthetic or creative experiences? In the 21st century, the development of creativity and innovation has become an indispensable factor to reach the educational goals of our times. If this is so, the methods and goals that work towards the recognition and development of these factors would be of great importance. There is thus not very much to explain other than to remember Goya's reflection: *reason creates monsters*. Therefore, when we speak of artistic education in innovation and the learning of the sciences, we must consider the focus on ethical and social development and not egocentrism and consumerism. In other words, can we speak of innovation without creativity, creativity without reflection, and humanism without human beings?

Artistic education can develop the skills we desire in a citizen in this and coming decades. It seems a simple and obvious affirmation, but it is not, because it requires evidence and rigorous analysis of data in order to confirm that art can nourish these skills. The philosophical reflection about art can be condensed by a single word: *aesthesis*, sensitivity. In the 18th century, Baumgarten used the term aesthetic, in his oeuvre *Aesthetica* published by 1750 (Guyer, 2016) from the Greek *aesthesis*, to refer to a philosophical theory of sensitivity, but to a great extent he points not only towards a theory, but the core of our relationship with art: the aesthetic experience. Reflection on this experience as a fundamentally important philosophical subject can be found in Plato in the dialogue *Hippias Mayor*, as John Cooper edited in *Plato: Complete Works* (1997). Plato refers to an interrelated experience, capable of being

awakened by the experience of the beautiful, *kalós*, not just as a concept, but as an experience. This brings us back to a persistent thought, redefined by a new impulse, and that is what causes the experience of the beautiful, the object, the mentality of the observer, the imagination, an ideal, or a relationship among all these components?

In another dialogue of Plato, *Phaedrus*, (Cooper, 1997) in addition to delving deeper into the Greek ideal of beauty, Plato reflects on enthusiasm and fury. Both experiences are capable of generating a transformation in humans deeper than a mere change of conduct; indeed, they precede a state of greater transformation: in the space where paths of aesthetic experience blend together, something happens that transcends us and which we sometimes call *sacred*. For this reason, in various cultures and eras, the experience of the artist or the observer captivated by a work of art is expressed through a language similar to the mystical. During the Renaissance, Marsilio Ficino experienced, conceptualized and translated this, based on his reading of Plato's work in Greek (Celenza & Christopher, 2015). Pleasure does not come to an end, it moves from art to an intuitive realm, sometimes ineffable, sacred; it is a transition, an indissoluble bridge towards the aesthetic experience, just as it was understood in South Asia:

The concept of *camatkara* – or *chamatkara*, as it is pronounced – alludes to a state of ecstasy, which emerges when a surprising emotion provoked by beauty, love, the unexpected, is instantaneously transmuted into extreme pleasure. (Cross, 2006, p. 41)

This dissolving point of the limits of aesthetic experience transmuting into this “extreme pleasure” is the entrance to or sacred ecstasy itself. Even today this relationship is an inseparable part of how we understand the arts, aesthetic experience and what we call artistic education in the South of Asia. In western references, this relationship occupies one of the fundamental places in Greek philosophy. Plato attributed this relationship to Diotima a woman from Mantinea. She described an aesthetic experience of ascension, which goes from the contemplation of the beautiful in art and the human being – illustrating a transition through diverse states – to a similar experience in the unifying path, the intuition of beauty in itself, of that which forms the essential nature of this reality (Cooper, 1997). This experience, described by epithalamic poets, is a mystic ecstasy.

In the 18th century, the aesthetic experience was understood in the context of a philosophical system described by Kant in the *Critique of Pure Reason*. With Kant, the imagination earns an important role in aesthetic reflection, but also in the understanding of the sublime. I have tried to link art, the aesthetic experience, and a type of transformation of the character and action of the human being in a non-conceptual way: they are rooted in sensitivity, pleasure, and the intuition of something that transcends us and probably encompasses the term sacred. In other words, reintroducing a topic that is part of the history of the human being – art and the sensitivity that creates and appreciates it – carries the intention of considering this sensitivity as a constructive path towards a better human being.

If it is true that the arts and their instruction have a purpose in themselves – they are autotelic – as in the aesthetic experience (Kant, 1961), they also possess the

possibility for education in general through the transference of skills. In other words, they are capable of developing skills desirable to learning creativity, and social skills and character. The evidence of the impact of the arts in education and the possibility to transfer the skills they develop to other areas of knowledge is documented in *Art for Art's Sake?: The Impact of Arts Education* (Winner, Goldstein, & Vincent-Lancrin, 2013). The work offers evidence of the influence of practicing artistic education in students who have studied music, theater, visual arts and dance, then when we have evidence of this and evidence of the effects of conscious attention.

What does a child or youth feel when he expresses feelings or communicates his understanding of the world to someone through a drawing, painting, clay sculpture, rhythmic movement or harmonic sound contribute to the development of learning in general? This question encompasses a suspicion and a certainty. Suspicion is beneficial, but as it dissolves it gives way to certainty. Suspicion and certainty also lead to another question that goes beyond the concern of enhancing the learning of sciences and technological subjects and also the cultivation of social, creative, and civic skills. In other words, can we say with any evidence that arts education improves social skills, the capacity for innovation, and the shaping of critical thinking involved in citizenry?

We face concerns today that have overtaken us. Some are variations from other times, others are inherent to the human condition, but something differentiates our present moment: the speed of change and the restructuring of social interaction by technology and global connectivity. It is here where the vision of the future is not fiction. A glimpse of the future based on what we see in the present is a shared concern (OECD, 2008). Confronting the future, valuing and developing social skills in multicultural and multilingual environments, creativity, conscious attention, and non-violence are indispensable practices found in the educational objectives of our time. Can the arts develop or enrich these skills such that this is a desired educational goal for the upcoming decades? What evidence do we have?

Founded by Rabindranath Tagore, Santiniketan, was the school of a poet and a great artist with the vision of an educator. He himself was his research laboratory. Through experiencing and recreating certainties, he organized a framework of educational practices based on his observation of the effects of arts education on learning. In this way Tagore understood the fundamental importance of the arts in the total development of personality. In one of his texts, Tagore (1988) revealed the first link in the harmony between learning in a different field of knowledge and the practices inherent to arts education, particularly in music, dance, theatre, and poetry. Tagore held other topics in high regard such as meditation, imagination, and creativity which he felt should be fostered in school. Imagination and creativity were concrete tools to express what one has learned situated within a profound social and humanist sense and not for the mnemonic study of information.

Creative contemplation, *bhāvanā*, is a state of mind and an experience of silence, that is, a deep commitment within the present moment, to hear our self again and contemplate what it is to be a human being, to be a young person in this time of global

connectivity. Thus, through arts, contemplation, and meditation we seek to generate a space for silence, wandering through creation, inquiring into the experience of speaking and seeing through the written word or any type of art. Exploring in order to find that something which constitutes us. But, we have numbed this exploration and the capacity to create Utopias. Encouraging the existence of a better society requires freedom and creation. Freedom and creation are inextricably bound in a movement that shakes up what we consider as a given, beliefs that have been accepted without question, without inquiry. In this dynamism, the search for freedom becomes our first creative essay. Essaying in its two meanings which are both writing and playing. To create, it is necessary to play, to attempt, to imagine, to dream, to long, to search, to invoke. All of this is necessary in order to break the rigidity of speech, of writing, of vision and to open oneself to a writing that is dialogue and revelation. When a dialogue is written, or spoken, it is vital because it reveals our condition, but the revelation is not solely for the other who listens or reads, but also for the one who writes. Within the act of dialogue lies the possibility to look anew at what we are, or to see ourselves for the first time. This is how freedom can appear when we essay, when we glance again, when we recreate through words and through sight. We attempt and we play, we delve deeper into the hunger for Utopia. However, Utopia is not an immobile object but an ungraspable possibility. Even with its ungraspable nature, Utopia is a motor, a continuous movement to attain what is not present, but is possible. There is a constant force from creative contemplation and silence, a pursuit of liberty, a going beyond mere individuality in order to create, to approach Utopia, to essay it, to see it, and to recount it.

AS A WAY OF CONCLUDING

When we think of how the near future will be, we undoubtedly feel the desire to dignify human beings and ensure the balance that allows us to conserve our habitat. If we consider these two desires in relation to a prevailing state of equanimity, the meaning of mindfulness will reach beyond the mere reduction of stress, since this kind of attention corresponds to a state of imperturbability that leads to the processes of dignifying and conservation. Equanimity is founded in the awareness of the present, which is no more than a characteristic of mindfulness, and it is here where we can fathom the value of previously mentioned desires; where we can measure, and question such basic behaviors, such as why do we consume more than we really need? The problem contained within this question seems simple, but if we see it in perspective, overconsumption generates a series of imbalances related to various problems. If these imbalances are observed in the context of their proportions and growth, they reveal a tragic inequality: the waste of some is the scarcity of others.

Imbalance in consumption is linked to – among other things – an inner imbalance of the human being. It forms part of a series of behaviors that have increased in contemporary societies and caused a direct impact to the environment. The imbalance in human behavior is reflected in an unavoidable mirror: the state of deterioration of

natural ecosystems and resources. For this reason, the perspective of the experience of mindfulness is not merely a mental exercise to reduce stress. In order to have greater scope it seems necessary to reestablish the ethical foundations of our behavior, the serenity and openness to understand what the future could be if an inner balance is not reached in a scenario of technological innovation that will not be stopped.

Looking towards the future, we must ask ourselves: in the coming decades, how will this imbalance in general consumption affect the resources that enable life and food production, that is, nature? Let us suppose that it is very probable that some technological innovations provide a solution. Indeed, the very idea of a supercomputer similar to human intelligence that glimpses solutions is now a reality, but it implies an unmeasured risk for the future of humanity. What is the risk? For instance, synthetic biology has been promoted and invested in without clear ethical regulations, the precariousness of current food subsistence, aggravated by the growth of our population on this planet, the development and investment in artificial intelligence, and the imminent possibility of creating a super non-human intelligence in the coming decades, just to mention some risks for humanity.

To conclude, I want to recover the possibility of a silent educational revolution through conscious attention, *dhāraṇā*; mindfulness, meditation *dhyānam* and non-violence, *ahimsā*, in its widest sense: not only as a technique to reduce stress, but as a way to recover what has been numbed in humans. The imbalances and risks that we observe in our interactions, among ourselves and with our environment, must allow us to recognize other ways of intervening, reflecting on and designing the training given to children and youth.

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X. MARTÍNEZ RUIZ

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OLGA CALDERÓN

4. AWAKENING MINDFULNESS IN SCIENCE EDUCATION

ABSTRACT

Contemplative/mindful education focuses on practices that enable class participants to develop awareness of the events that transpire in the moment in the classroom. Breathing meditation, radical listening, awareness of own and others' emotions, compassion for self and others, reflection and conversation, are practices used as interventions to manage and ameliorate diverse emotions that often arise in the science classroom. This study took place in a graduate History and Philosophy of Science Education class for pre-service and inservice teachers at Brooklyn College of the City University of New York in the spring of 2014. The goal was to encourage participants to embrace mindfulness practices throughout the semester in an effort to awaken their sense of compassion with themselves and others during class interactions. Controversial topics involving history of science, religion, gender, ethics and other issues were presented and discussed every week as part of the curriculum. Historically, the aforementioned topics generate a rollercoaster of emotions in class participants; this factor and the experiences class participants deal with in their daily personal lives can present challenges to the class dynamics and to teaching and learning. Mindfulness practices were used in this class as pedagogical tools to provide a judgment-minimized space where class participants could express freely their emotions and perspectives on debatable topics in the field of science education while teaching and learning.

Keywords: breathing meditation, radical listening, compassion, mindfulness

Mindfulness is a term that has been described by Malgorzata Powietrzynska and Kenneth Tobin (2015) as a non-judgmental act that involves paying attention to present moment experience in a way that challenges our innate constant preoccupation with past or future thoughts of events passing through our minds. I have adopted mindfulness in the science classroom after being introduced to the practice in a previous study at Brooklyn College. I consider contemplative/mindful pedagogy a rounded approach in the process of teaching and learning. However, most present-day teaching focuses on the empirical aspect of epistemology without paying much attention to how the brain receives information, processes

it, and transforms it into a valuable lifelong asset to the learner. This prevalent pedagogic approach is rooted in the traditional Western Aristotelian logic approach. In science education, the method is further reinforced by the Cartesian-Newtonian-Baconian ideology where objectivism is not only the best, but also the only way to understand science and the world (Kincheloe, 2003). In my class, participants practice contemplative/mindfulness education that provides a deeper focus to what is being learned. Several mindfulness tools that include radical listening, empathy, respect, compassion, and collaborative work are nurtured throughout the semester, thus facilitating an atmosphere of comfort, respect, and openness about ideas, thoughts, and different perspectives on controversial issues. A series of mindfulness characteristics (Figure 4.1) in the form of a heuristic developed during the previous study (Powietrzynska, 2015) was given to students at the beginning and end of the semester. The purpose of having students complete the heuristic was to awaken awareness in the classroom and obtain feedback about their experience utilizing these tools while teaching and learning. In this chapter, I use hermeneutic phenomenological narratives to describe how a pedagogical mindfulness approach allows participants of a History of Science Education class for teachers to focus and concentrate their attention on the in-the-moment events. One of the main goals shared by Brooklyn College as an academic institution and me, as a teacher, is for all class participants to increase their cultural capital while completing the curriculum. It is my responsibility to help develop a safe place where students feel free to express their ideas and views without feeling judged. Discussing emotional topics in a mindful, respectful, and supportive atmosphere helps create safe spaces for different voices and values to be heard and for learning from the “other” to take place (Tobin et al., 2015).

The positive implications of approaches such as mindfulness meditation have been suggested by Fadel Zeidan and colleagues to be involved in the promotion of higher-order cognitive processing that deal with facets of monitoring and cognitive control processes (Zeidan et al., 2010). Zeidan and associates push further this idea by providing robust evidence and correlations of mindfulness meditation with decreased negative mood, enhanced ability to sustain attention, improved visual-spatial processing, maintenance of focus and accurate retrieval of information from working memory under conditions that require more rapid stimulus processing (Zeidan et al., 2010). I believe that such cognitive aspects are pivotal in promoting a healthy and productive learning and teaching environment. Furthermore, there is personal enrichment through individual and collective interactions. Mindfulness interventions were encouraged in this class with the purpose of transforming the axiology of class participants (i.e., their respective value systems). At the same time, the expectation was that participants would grow comfortable using these tools and become mediators of the practice in their own classrooms. The design of the curriculum embodies scientific epistemology tangled up with sociocultural forces that have shaped and continue to shape teaching science.

1. *I am curious about my feelings as they rise and fall.*
2. *I find words to describe the feelings I experience.*
3. *I identify distracting thoughts but let them go (without them influencing future action).*
4. *I am not hard on myself when I am unsuccessful.*
5. *I recover quickly when I am unsuccessful.*
6. *I pay attention to my moment-to-moment sensory experiences.*
7. *I am aware of the relationship between my emotions and breathing patterns.*
8. *I am aware of changes in my emotions and pulse rate.*
9. *I maintain a positive outlook.*
10. *I can tell when something is bothering the teacher.*
11. *I can tell when something is bothering other students.*
12. *The way in which I express my emotions depends on what is happening.*
13. *The way in which I express my emotions depends on who is present.*
14. *I can focus my attention on learning.*
15. *I feel compassion for myself when I am unsuccessful.*
16. *I feel compassion for others when they are unsuccessful.*
17. *When I produce strong emotions I easily let them go.*
18. *I gauge my emotions from changes in my body temperature.*
19. *I am aware of others' emotions from characteristics of their voices.*
20. *I am aware of my emotions being expressed in my voice.*
21. *I recognize others' emotions by looking at their faces.*
22. *I am aware of my emotions as they are reflected in my face.*
23. *My emotions are evident from the way I position and move my body.*
24. *The way I position and move my body changes my emotions.*
25. *I can tell others' emotions from the way they position and move their bodies.*
26. *I am aware of emotional climate and my role in it.*
27. *Seeking attention from others is not important to me.*
28. *Classroom interactions are characterized by winners and losers.*
29. *I meditate to manage my emotions.*
30. *I use breathing to manage my pulse rate.*
31. *I use breathing to manage my emotions.*

Figure 4.1. Characteristics in the mindfulness in education heuristic

TRYING TO START WITH A CLEAN SLATE

The brain is wider than the sky,
 For, put them side by side,
 The one the other will include
 With ease, and you beside.

O. CALDERÓN

The brain is deeper than the sea,
For, hold them, blue to blue,
The one the other will absorb,
As sponges, buckets do.
The brain is just the weight of God,
For, lift them, pound for pound,
And they will differ, if they do,
As syllable from sound. (Emily Dickinson, 1830–1886; Silberstein, 2005)

Mindful education is a growing trend among educators worldwide. Richard Brady, founder of Mindfulness in Education Network, describes this pedagogical practice as an invitation to new emergent possibilities for creativity and for promoting deep understanding of course content (Brady, 2007). Mindful education uses breathing exercises as a mediation instrument to focus in the present moment. This educational approach is rooted in the traditions of Buddhism and Hinduism (Tomasino, Chiesa, & Fabbro, 2014). This new pedagogical approach to teaching and learning may be met with resistance from students and teachers. In other words, not everyone in class is receptive to the idea of incorporating mindfulness into the curriculum. Explaining to students the power of breathing meditation in the context of physiological wellness, and the benefits of mental ability to pay attention and learn, is fundamental to the integration of the approach in the classroom. Mindful education means taking in what we are learning and letting it sink into the deepest part of our consciousness, dissecting it in our mind, allowing it to exist for what it is, and being open and non-judgmental as we realize it represents something different to what we thought it meant or was. Such an approach can be quite intimidating for both teachers and students. The idea of giving up the traditional way of learning and teaching seems a bit risky, since as instructors, we must relinquish control of the class and pass on much of the responsibility for *active learning* to students. On the other hand, students may feel that too much is expected of them, and ask why they should be held responsible for teaching when the curriculum has always been presented by the teacher. This History of Science Education class has been designed to be cotaught by all class participants. In a period of fifteen weeks, controversial topics such as Evolution, race, gender, Eugenics, and other science education topics are prepared and taught by all class participants. This deliberate approach enables students to have their first teaching experience among peers and at the same time to obtain feedback about the strengths and weaknesses of their teaching style.

To ameliorate some of the misconceptions about *active teaching and learning*, discussions about the role of everyone in the class occurred often during the semester. Such discussions allow time and reflection for class participants to embrace and grow into their new role in the classroom. I look at *contemplative or mindful education* not as the only way to educate, but as a succession method, taking

AWAKENING MINDFULNESS IN SCIENCE EDUCATION

over and replacing the empirical way of learning and seeing the world. I regard mindful practices as a crucial element to understanding epistemology. Especially in science education where analysis of data measurements is often limited by a rational empirical approach, contemplative perspectives, may offer valuable insights to existing knowledge. Following this train of thought, Tobin Hart alludes to the idea that the contemplative mind has the potential of balancing and enriching the analytic. It has the potential to enhance performance, character, and the depth of students' experiences (Hart, 2004). This undertaking on educating future scientists is informed by my view on the role of the teacher to afford the limitless capacity of the students, to unveil their innate inquiry and problem solving potential, while building their science identity through self-reflection.

COMING TOGETHER BY BREATHING IN SILENCE

Our class was scheduled in the evening, and by the time we got to the classroom we were all done with a full day of activities, working, taking care of children at home, and teaching for those that are already inservice teachers, or those involved in student teaching. Some of us had to drive an hour or more to get to our class, while others dealt with New York City public transportation, which can be unreliable at times. I decided that I would start each class on a clean slate and do a six-minute breathing meditation practice before we engaged in the activities of the night. I informed class participants of the mental and physiological benefits of this practice on the first day of class. I thought those six minutes of breathing meditation seemed not only a practical way to start the class every night, but could also provide a space to set aside the activities of a busy day and focus on the work we were about to do. Before we embarked on the breathing practice, I mentioned that although the roots of this practice were embedded in Eastern philosophies and religions, our practice was absolutely secular and it was being adopted to facilitate and improve mental and physiological factors associated with learning. Nonetheless, I also said that it was an optional exercise and that if anyone decided not to participate, it would be okay and it would not affect their course grade.

Many students showed interest in doing breathing meditation. Some said that they had done it before; others asked me to guide them on how to do it, because they did not know exactly how to do it in the right way. I began the introduction of this pedagogical intervention by explaining the difference between upper chest breathing and abdominal deep breathing. As we learn from the work of Kenneth Saladin, the latter is quite effective during breathing meditation because it uses the entire lung capacity as the diaphragm and abdominal muscles pull down on the abdominal cavity, expanding it to fully inflate the lungs. As a result, the types of breath tend to be slower and deeper which allow for the delivery of larger amount of oxygen (approximately 3,000 ml of air) to the circulatory system during inhalation, hence more oxygen is delivered to the brain and tissues throughout the body and a larger amount of carbon dioxide is also exhaled from the body. In upper chest breathing, only the upper lobes of the lungs inflate while the chest expands and

O. CALDERÓN

contracts causing a quicker and shorter delivery of smaller amounts of oxygen to the circulatory system during inhalation (approximately 500 ml of air) and smaller amounts of carbon dioxide are exhaled out from the body (Saladin, 2012). When it was time to meditate, students asked if I could turn off the lights, so I did. That became the routine every time I announced that it was time for silence. I reinforced every time that those that opt out of the practice, were to respect those of us that were in meditation by remaining quiet for that period of six minutes. Our breathing practice was the transition period between our day experiences outside the classroom and our experience in the classroom. By making this practice part of our daily routine, we allowed ourselves to step into a unique space, where we could be mentally open to what we were about to learn and discuss.

IT IS NOT ABOUT WHAT YOU SAY, BUT HOW YOU SAY IT!

Every night after our breathing meditation, we had a few minutes of housekeeping announcements and we also spoke about salient events of the past week. After that, student teachers presented topics assigned to them as part of their curriculum and practice of instruction. They were scheduled to coteach twice during the semester on various topics related to history of science education and the philosophy of science. After their presentation, they were given feedback about their teaching style and pedagogic method. In this class, we used constructive feedback at the end of each coteaching presentation. This scheme was adopted with the purpose of providing ideas of how to improve the way we teach and to make student teachers aware of how different activities used for teaching and learning were helpful in clarifying the material being presented. During these sessions of constructive feedback, there was always a sense of compassion for the presenters. There would always be praise on the method of moderating the class and if something needed improvement, it was always brought up in a clear and mindful manner to avoid anyone being offended. For instance, after Lucy presented, one student commented: “Lucy, I admire the fact that even though your English is not the best, you didn’t shy away from the role of actually taking a firm part and a major role in this discussion and there was no fear, so I encourage you to keep practicing and it will get better!” I thanked that student for bringing up the issue of language in her feedback. I spoke about my own experience as a non-native speaker of English, and how after many years of public speaking, I would sometimes still get nervous and even forget the words I want to use to express an idea. I reiterated to the class that it was okay to not have a perfect presentation and that we were there to learn from one another, and nervous or not, what better way to practice than in front of your peers! My goal was for the class to experience an atmosphere of cooperative teaching and learning. Anthony Lorsbach and Kenneth Tobin proposed the importance of the involvement of others’ participation, and using community of teaching and learning approaches where others’ feedback to our ideas cause perturbations that help us reflect on the conflicts, so we can then make adaptations to fit a new experiential world (Lorsbach & Tobin,

1992). How experienced and effective we become at teaching depends a great deal on the feedback we get from our peers. We can be very honest in our feedback, but the way we convey the message can either turn criticism into constructive critique or raise negative emotions in the person receiving the feedback. In this class, students were very cautious about the way they presented feedback to their peers. Many of the class participants, including me, had been introduced to the tenets of cogenerative dialogue (hereafter cogen) previously. In cogen, the discourse is dialectical and there is careful equitable distribution of talk among participants always maintaining focus on the topic of dialogue and carefully listening with the purpose of learning rather than opposing what is being said (Tobin & Ritchie, 2012). The mere fact that students were practicing mindfulness, contributed to the soft tone of voice used, the choice of words, and even facial expressions of class participants as they provided opinions on the presentations.

WHEN YOU ARE ENVIRONMENTALLY ATTUNED, YOU CAN HEAR A PIN DROP!

I often asked the class during feedback time what they would like to see in other presentations. Students gave their opinions about the structure of the presentations and how other activities may be incorporated as part of the lesson. One student in the class commented on how sometimes she was not able to hear what presenters were saying, because our classroom was next to another class that often made a lot of noise. I suggested that students who spoke softly tried to project their voice a little louder until I could find another room to conduct our class. Having this type of response from the class members is important in the development of effective teaching and learning. Students feel all class participants are involved and are really interested in everyone's point of view about the topics discussed. The way the topics are presented and the structure of the lecture is important, but so is the space where the class is conducted and the environment surrounding it. We were very much attuned to any external force that would disturb our class and our insightful conversations. Mindfulness in the classroom involves *radical listening* or paying close attention to what others are saying. *Radical listening* provides a platform where the listener can use what is being said to complement or expand knowledge. *Radical listening* was introduced to this group of students in the previous semester by Konstantinos Alexakos, who adopted the term from Kenneth Tobin as understanding and valuing the possibilities, personal values, and potential of others, and encouraging those with difference to participate and share their voice (Alexakos & Pierwola, 2013). Students who were new to the program quickly learned from their peers this term/quality and practiced it often.

AGREE OR DISAGREE?

One of the first activities done by student teachers was to read philosophical statements on education by Aristotle and Ibn Sina. Class participants were given an opportunity to agree or disagree with the statements and explain their reasons for

O. CALDERÓN

their stand. This activity was a very effective way to implement radical listening and respect for others. Everyone took a minute or two to reflect on what others were reading, and then there was an orderly sense of respect in taking turns to talk and present individual perspectives about the reading. It was evident that students were paying close attention to what others were saying, because they would pick up on others' opinions to build their arguments. There was also a sense of having fun while learning. Groups of 3–4 students were formed to read and discuss what they had read; then a representative of each group was chosen to form a fishbowl activity, where they presented what was learned through the readings and group discussions. This type of team activity fostered a social interaction that otherwise would not happen in a traditional class setting. There were quite a few times each night when the class would burst into laughter when someone said something funny. This made me think that even if class participants were disconnected from the rest of events in their lives; at least for that moment they shared and were connected with the group in solidarity or what Randall Collins (2004) coined as collective effervescence.

WHAT IS GOING ON WITH THE CULTURE OF SCIENCE?

One of the topics scheduled for class discussion was the culture of science. The purpose on presenting this topic was to dig into the factors that constitute the science culture, such as the way people involved in science think and try to make sense of the world around them, the inquisitive and problem solving approach people in science use to explain phenomena, and the underlying reasoning behind natural processes. In the culture of science discussion, inservice teachers expressed how sometimes they feel a lament from their students about an inability to connect to science. This pattern of longing to connect science to life is a constant issue teachers deal with every day in their classroom. One of the presenters posed a question to the class regarding the possible ways culture affected their learning of science. The question provoked an interesting interaction among five students, in which they described personal anecdotes about their respective families' approach to learning and how this persuaded them and how it ignited their passion for learning science. One of the remarkable features of the conversation was the careful attention and radical listening that happened throughout the room. Once a student finished her own story, words of affirmation and stories told by other class participants reflected how all stakeholders were paying attention to those who have spoken before them. At one point, a student asked what the class thought was wrong with the culture of science learning. A few class participants expressed their thoughts by saying that a lot of it has to do with the fact that students don't feel that science connects to their lives and they often do not see the relevance of learning science and its application to their lives. The discussion on the issues that have shaped the culture of science provided a platform for class participants to think and reflect on the issues that the field of science education faces. Students were aware and attentive to what others were saying and they also wanted to express their views based on their own experiences as students

and as prospective science educators. I believe having reflective discussions on the evolution of science education is crucial in the preparation of future science teachers. The teacher's axiology or own experience with science has powerful value on the way science is taught. His perspective of science often contributes to their approach to teaching. After a few comments on historical events in science and the students' own experiences learning science, there were a few seconds of silence in the class. Pausing between speakers had become a common practice among the members of the class after the mindfulness heuristic was introduced. Pausing is one of the conditions for radical listening, one of the tenets of mindfulness. Radical listening is a quality of mindfulness that was constantly practiced and observed by members of this class.

I AM SO TIRED! – A PLEA FOR COMPASSION?

It was week five of the semester and we were about to get into a discussion about race and education. After our breathing meditation, I asked if someone wanted to share any news events from the past week. Someone mentioned the conflict in Ukraine and the Russian occupation of that territory. The news of the week was not uplifting and it was coupled with the harsh cold winter we were experiencing. I could see that everyone was less enthusiastic about being in class than other nights. Perhaps the gloomy mood had to do with the topic we were going to discuss. In my experience teaching, the topic of race is one of the most challenging parts of the curriculum. When race is discussed, it triggers all types of emotional arousal in class participants, and most people hesitate to express their opinion about it, whether they are white, black or any other skin color. While students were setting up their weekly coteaching presentation, a student in the back of the room commented that she was tired. I could sense an overwhelming feeling across the room. I asked if there was anything in the class that was contributing to the stress level the students were experiencing. There was silence and students were just in a quiet mood until finally one of them expressed concern about the amount of work I was requiring for the semester. I have to agree that the amount of reading and writing expected for the course was intense. Most of us are given a syllabus by the institution to follow, which includes the objectives of the curriculum. However, I felt that as the instructor of the class, I could make slight changes that are deemed appropriate, and that in this case I could decrease the level of stress to students. I decided to adjust my syllabus and reduce the number of reading and writing assignments for the remainder of the semester. I do not think I would have done this if I had not asked the class about what was contributing to their stress level. Asking students for feedback about the amount of work expected of them may not be a common practice among teachers. Yet, I believe that in this case, it was appropriate, because of the mindfulness approach I have decided to adopt when teaching the class. My interaction with students in the classroom has definitely changed since I started teaching 14 years ago. My approach to dealing with students has evolved into a more relaxed and confident relationship. I try to keep a balance between the goals

O. CALDERÓN

of the curriculum and the ability my students have in understanding complex themes. Furthermore, I believe that there has been a deeper transformation in my approach to dealing with students since I incorporated mindfulness into the classroom. I have a sense of calmness, patience and compassion towards students, that I had no idea I was capable of having. I have a responsibility to educate in science, but that responsibility extends to identifying factors and challenges that may cause struggles and low academic performance of my students. A simple question on how they are doing or what they think of the organization of the course can provide me with valuable insights into students' capabilities. The design of the class to cover the curriculum through collective activities such as coteaching by all participants provides possibilities for development of teaching strategies often absent in individual teaching. Wolff-Michael Roth and Kenneth Tobin refer to this approach as a "dialectical relationship with the collective," in that individual development automatically means collective development (Roth & Tobin, 2005). In other words, we all learned in this class, including me.

HISTORY PREVENTS US FROM MAKING THE SAME MISTAKES

After our class introduction, the student-presenters for that night started a series of activities where the history of education for Blacks was discussed. Race may be considered a "thorny issue," because it often triggers feelings of tension, anger, frustration and pain among class participants. Thorny issues have been described by Alexakos and his colleagues (2016) as "sensitive and vulnerable sociocultural questions associated with identity and valance with strong emotional energy" (p. 2). Throughout the night some people expressed their views about race in relation to education, while others chose to remain quiet and just listened. The following are excerpts of a powerful conversation that happened that night.

Maria (Caucasian student): I have a question and it may be controversial. Is it completely necessary to talk about history? Not to downplay anything, but to look at the history to study the current situation? Could we have had the discussion without the history and could we in a sense advance us even more? Maria reiterates: not to forget the history ...

Kurt (Caucasian student): I know what you are trying to say, that history is holding us back a little bit. I think what history does is that it gives you a perspective about certain people like when you saw the movie, after that you understand what these people went through.

Maria: And I understand, but why can it be shown that everyone has equal footage?

Maria was trying to say that talking about race and segregation was not helping us move forward, but rather challenged the idea of equality. Angie (Black student) raised her hand and said:

Angie (Black student): I think a lot of the issues we saw today are still present, but now they are more underlying as opposed to like just out in the open, and so I feel that we have to know these things, because we won't necessarily know what to look for otherwise ... it is like saying everyone is accepted in America! But that is really not the case. You have to be able to identify what still exists through our history.

Rick (Caucasian student): The equal footing is not the question! It is that we have to address every single historical problem that we have to actually close that enmity and divide. We have to go back and bury the hatchet with every type of relationship that we have with all the groups that exist in America. And you can only do that by looking at the history between us. What is the past injury? ...

Maria: But it is not about the history! I always wonder if it is potentially debilitating in a sense ...

This was a moment of tension in the room, because in order for Rick to make a point about how hard it is to resolve conflict by ignoring history, he spoke about the ongoing Palestinian-Israeli conflict. Maria happens to be Jewish, so Rick was trying in a way to tell her how easy it was for her to talk about race and segregation when she never experienced it. On the other hand, he tried to explain with an analogous problem that she was familiar with. Rick also tried to explain some of the reasons why we cannot ignore history. Maria grew up in Pittsburgh and she mentioned that she never felt any racial tension where she grew up. She felt that it was in New York where the racial tension existed. I asked Maria whether she knew how others felt about racial issues in her community, and she responded that there were not many segregated communities, so everyone was just in one place and she could not really speak for others. Pittsburgh has been historically segregated and Maria was clearly unfamiliar with this fact. At this point, several class participants raised their hands wanting to respond to Maria's comments; Trish (Black student), Kris (Caucasian student) and others just looked around waiting for someone to say something.

Kris: I feel that not everyone is ever in one place. The readings made me think how there are even different levels of segregation and even teacher-student interactions.

Kris continues, she looks at Maria and says:

Kris: It is easy just to look past it, but once you become aware of it, you pick up on things like ... and think that we are all equal, but there are little discrepancies that if you are living in the majority are easy to overlook!

The room remains still for a few seconds until Angie breaks the silence; she looks at Maria and says:

Angie: If you haven't had a negative experience you seem to be inclined to think sort of that there are no negative experiences, and so for someone who

O. CALDERÓN

is a person of color who has had even a slight negative experience in their education, they automatically are very aware of it.

Angie's and Kris's comments triggered ideas in my mind relevant to our personal living space and our individual experience in relation to how others experience the same space. I was reminded of theoretical frameworks proposed by Michalinos Zembylas and Lynn Fendler (2007) when they reference bell hooks to make a point about the feeling of comfort about a place or situation based on how everyone may experience it: "the feeling of comfort has no universal applicability; there is no satisfactory basis on which to assume that an atmosphere that feels safe, welcoming, and caring to one person will feel that way to another person" (p. 325). Maria's past living environment seemed to pose no threats to her, yet she appeared to have been living in an area where she was sheltered from anything that would constitute making her feel uncomfortable, so she assumed that other people in her environment felt safe as well. Zembylas argues that when people acknowledge their difference in anything but trivial ways, those differences can be expected to be unfamiliar and very likely to be uncomfortable and disconcerting. Furthermore, people who face systemic injustices daily generally recognize that feelings of trust and safety are not prerequisites of participation, but privileges endowed by existing hierarchies (Zembylas, 2014). Although the people that had just spoken were very cautious about the way they said things, I could sense a little bit of tension in the room about the conversation that had taken place. I certainly did not want anyone to end our discussion on a bad note. I proceeded to say that there was a new type of discrimination on the rise in schools, a discrimination that involved charter schools and special education. We were to have that discussion in the following weeks, but for that night I thanked everyone for participating in a great discussion even though we were all tired at the beginning of class. We managed to have insightful conversations that allowed us to learn about others' perspectives on race: a topic that is rarely discussed in class with an open mind. Race, is a "thorny issue" for the majority of students in American classrooms. Discussing "thorny issues" in the classroom is often avoided, because such conversations usually bring pain to those that are sensitive to them or have had a negative experience in relation to the topic in question (Alexakos, Pride, Amat, Tsetsakos, Lee, Paylor-Smith, Zapata, Wright, & Smith, 2016). That night, class participants were open to explore talking about race; I sensed it was different for everyone in the room. Some dared to talk with what seemed to be the intention of healing, others with the purpose of trying to understand the underlying forces of this very difficult topic. Maybe those that stayed quiet were intimidated by what others would think of their perspectives and decided to keep their thoughts to themselves instead. I would like to think that those that stayed quiet were just trying to be mindful of others' feelings. I asked how people felt about talking about this topic. One person said that it was one of those topics that everyone would avoid. A couple of people said they felt comfortable talking about it and expressing their views. Trish said that she had to be reminded

AWAKENING MINDFULNESS IN SCIENCE EDUCATION

at one point by her co-presenter that this was a historical presentation on race and education. Trish felt very passionate about the topic and she wanted to jump right into the discussions and talk about social justice.

I said to the class how in the previous year there was a lot of tension in the room when we discussed the same topic, but I felt that this class was more open to bringing their thoughts to the table with less animosity. I thought it was definitely a moment of growth and awakening of awareness for all of us. I think it was a step forward in the realm of things, since we at least were willing to talk, listen and discuss this thorny issue, as opposed to avoiding it altogether as many still do.

MEDIATING EMOTIONAL AWARENESS IN THE CLASSROOM

It was the end of the semester and we were bringing everything we learned during the semester under the same umbrella by connecting it to ethics and bioethics in science and scientific research. However, before our discussion, I had students fill out the same mindfulness heuristic they had completed at the beginning of the semester. I also wanted to take 10–15 minutes of the class to hear about their thoughts on whether the mindfulness approach to the class mediated any transformation in the way they felt in the classroom and about teaching and learning. What was supposed to be a short feedback period, turned into at least 45 minutes of valuable reflections for students and me. In the following section, I present narratives about how my students experienced mindfulness in this and in another class as they became aware of the interactions among them and the instructors moderating both classes.

Angie started the conversation by saying that if, as a teacher, you become aware that something is bothering your students, you should address the issue immediately. She proceeded to describe an incident that occurred in another class and that involved Trish. Angie continued by saying that everyone in the class seemed to have been aware of what was happening. I asked Angie about her own feelings when the incident happened and she responded that they were of fear.

When I looked around the room, there was a smile with a touch of fear on everyone's face as if students were concerned that by talking about the story they were going to get Trish upset again. At this point, a few students expressed feelings of anger and frustration about what had transpired during the incident, but they also felt compassion and fear towards Trish. Marisol described holding her breath, lifting her shoulders as her body became tense; she said she definitely remembered those feelings.

Angie: We were all feeling her ... with her [Angie points at Trish] and it was an awkward touch!

Rick: I remember also in that same class... I remember at the end, after our presentation, she [the instructor] asked the class is everyone satisfied? And she got nothing but positive answers.

O. CALDERÓN

Trish: Well, I can answer that. At the moment, I didn't feel that we had the community or she [the instructor] hadn't established a community in her class. And I didn't feel like I wanted to revisit that moment. In my head, I thought I didn't want to recreate that moment, because I knew how I would feel afterwards. Then I went and spoke to her after class about it, but at that moment I didn't feel we had established such a community with her, to open up with her and discuss those feelings.

Angie: Umh, I get that ...

According to the recount of events, Trish had done a presentation in another class where she felt she was not given an opportunity to hear feedback from her classmates about the presentation. The instructor gave Trish feedback in front of the entire class in what Trish perceived as being a very authoritative manner. This response from the professor prompted an uncomfortable moment for Trish and her classmates.

Trish: Plus, she was perched on the table in a very authoritative status and that [deep breath] did not sit well with me ... [Trish laughs and everyone follows].

Trish's description of the instructor's body position and gestures is an indication that students are quite perceptive to emotions of classroom participants as well as the moods and the teachers' predispositions towards them.

Trish: No, I was just thinking that if you [the instructor] want for us to share how we felt, it would had been nice to be seated with us, at our eye level and take away all that authority.

The conversation was a good segue to talk about body language in the classroom. Rose mentioned that when she was an undergraduate student one of her professors had said that, as a teacher, you should be aware of how you position yourself in front of your students. Rose explained that certain postures could be perceived as being closed off and could also be taken negatively by the person you are talking to. She continued to say that your body language as a teacher affects the people you are talking to. This moment made me aware of how much students pay attention all the time to the body language of their teachers. Kurt contributed to the discussion and said that every time he had to do a class observation, he always noticed that the teachers that tended to connect with students, tended to keep their hands down. These teachers gave students a little more space. They didn't come off as authoritative, but rather as somebody in the class that is just talking. A teacher's body language is readily perceived by students and may be involved in the development of different grades of emotional climate in the classroom. "Emotional Climate (EC) is the set of emotions shared by a group of individuals implicated in common social structures and process" (Barbalet, 1995, p. 23). In research conducted in a classroom in Australia by Stephen Ritchie and colleagues, using video-recorded events, students identified patterns in speech and body language that signaled how their instructor was feeling at key moments during lessons (Ritchie, Tobin, Hudson, Roth, & Mergard,

2011, p. 752). Ritchie and his associates provide concrete and clear evidence in their research that the science classroom interactions are embedded with social constructs filled interaction rituals (Ritchie, Tobin, Hudson, Roth, & Mergard, 2011, p. 762). According to Randall Collins, “interaction rituals are momentary encounters among human bodies charged up with emotions and consciousness because they have gone through chains of previous encounters” (Collins, 2004, p. 3). Identifying such interactions in the science classroom may provide insights to “teachers and researchers that can help them change negative emotional events and change them into positive valence emotions that may be beneficial to students and teachers” (Ritchie et al., 2010, p. 762).

Angie spoke about the dynamics of class presentations for the class in comparison to another class they had taken together. She talked about how the atmosphere was different. Angie used the analogy of a road test and what was expected from the evaluator to describe what the dynamics of presentations were in the other class. She said that they were expected to exaggerate their movements and expressions as they presented for the instructor to feel that they had done an effective presentation. She continued to say that in this class they just needed to present the information in a less rigid manner and there was more freedom about what students could do.

After listening to my students talk about how the opportunities given to them to express their autonomy in different contexts in the classroom have given them a sense of freedom and comfort, I feel I can’t go back to the traditional way of conducting a class. The conversation with my students had transformed the way I teach, especially the way I listen to my students! Listening to my students’ stories about the incident that transpired in another class and the way it was handled by the instructor makes me reflect on my own teaching style. I learned from the discussion I had with this group, about the importance of developing a collective dialectical relationship in any class, which may contribute to the amelioration of negative emotions and situations that often arise during class interactions.

Eva: I feel that there is a sense of community in this class. Like, we are more understanding with one another ... and it probably has to do with Olga being more understanding of our presentations and the way we envision the presentations. So, it has to do with us being more creative and not following a strict rubric that we have to go by [People in the background responding: ... yeah, yes]. And I don’t think we are publically criticized while the presentation is going on, so that we can actually perform much better ...

People in the background: ummh ... and nodding their heads as a sign that they are agreeing with what Eva is saying.

Eva’s words provided me with an idea of how students feel in my classroom. An overall sense of respect seemed to be the pattern. My classroom is a place where I feel students are given space and freedom of expressing their views without being judged in front of a crowd. I felt at that moment that what we set out to do at the beginning of the semester had worked! I was hearing from my students in their own

O. CALDERÓN

words, how the approach we have taken on mindfulness practices in the classroom enabled us not only to learn from one and other, but also to transform the way we teach and learn! However, when I looked at heuristic-2 output completed by class participants at the end of the semester I was confused. Six class participants chose responses reflecting a shift of mindful mindset in a negative way. What was surprising to me was that the data conflicted with the feelings these students had expressed during cogenerative dialogue about how comfortable they felt in my class.

Kurt: I was in another class when somebody was presenting and their presentation wasn't really going well and you can tell that they really didn't get what they were supposed to be doing and the teacher was kind of on top of them, like you should be doing this, you should be doing that and what that did for me was that it totally took my mind out of the learning that was going on and the topic that she was presenting and it made me think more of what was going on and how she was feeling and I think a lot of people in the class felt like that as well ... so I think that ... to me that rigid kind of stuff doesn't work! It clams out on creativity; it puts off kids, or students that might be shy ... I feel like it creates a bad classroom atmosphere ...

Kurt was referring to how the emotional climate (EC) in the classroom can drive the way students learn and the overall dynamics of the class. A study by Alberto Bellocchi and colleagues (2013) on EC in a preservice teacher's class, suggested that positive EC was associated with classroom interactions in which the students and professor were engaged in dialogue. "A decrease effect on EC appeared to be indicative of instances of monologues by students and the professor" (Bellocchi, Ritchie, Tobin, King, Sandhu, & Henderson, 2014, p. 1307).

Olga: I agree, last year I had the same class and I had a student that in the middle of a presentation ... it was the first time that these two girls were presenting and in the middle of ... one that is very shy, this other student went: "that is not true" that is not that way! And I said, can you please have a little bit of respect for those that are presenting and maybe at the end you can give your feedback? I did have a conversation with this person, because as a teacher you need to have that ... compassion for your students and I think it is a quality that ... you can work on that, but sometimes we are not aware of that and I find that a lot among science people ... not that they interrupt and that they don't respect, but ... they want to get to whatever is correct, and so I think this class [pause] ... learning about the philosophy of science and seeing the scientist more as a human being ... helps us realize all of these things that we may not be aware of ... and that we may do wrong maybe ... in the classroom ... to be more compassionate about our students and not to be so judgmental.

Olga: Sandy you mentioned that in the past you were very strict and that if a student ...

Sandy: Yeah ... I learned not to take things personally in the classroom. Over the years, working in school or in summer camp, I used to think that kids were misbehaving or being rude to me and when I learned to separate that, I realized that they are just being kids and they just behave like that. It helps me a lot in managing my emotions and how I react to them ... I respond to them as their teacher, not as someone who is being affected by them.

An important aspect of dealing with emotions in the classroom is to be able to take others' perspectives with an open mind and not take responses or input from others in the class in an antagonistic way or as a personal attack.

Thea: Sometimes, students come and apologize to me about their behavior and I tell them: "next time don't apologize, just behave. You make me feel like a bad teacher" ... and that hits them and it's like ... "no, you are not a bad teacher." That sort of puts things in perspective and they see then I am not just a robot standing in front of them and that I am human, so they get it...

Sandy: I was in charge of 150, 5th graders this past summer and I used to get very upset when they did something they weren't supposed to do...

Angie: I have a question [She directs her question at Sandy]. So if you are put in that situation now, do you think now, you will act differently? You just would not?

Sandy: No, I won't let it bother me. If you want to keep doing that, it is not going to bother me. I will just concentrate my efforts on the kids that want to be there and want to collaborate. If you let it bother you, they are just going to keep doing it ... sometimes kids just want to bother you ... [Laughs]

Olga: Yes, I mean, you really need to find a balance as Thea was saying, and set your boundaries, you know. Especially with kids, sometimes they just want to play and may not want to do the work ... But there is a different way of approaching your teaching, and that is also something that I learned when I started working with Konstantinos and Ken Tobin ... umh. I used to be very explosive and show my feelings and now ... I try to step back a little, you know ... People are coming from work, they are coming tired, they have, not just this class, but they have many other classes, and so I understand. It is just the way it is ... It is kind of developing that compassion and I think everybody is capable of doing that if they want to.

FINAL THOUGHTS

After my last conversation with the class I analyzed data sets associated with two administrations of the mindfulness heuristic at the beginning and at the end of the semester in order to ascertain whether there were any differences in the participants' responses as mediated by mindfulness interventions enacted throughout the semester.

Here, I present a comparison of heuristics 1 and 2 (H1 & H2); the frequency of the type of response and the percent of responses chosen by each class participant when responding to 31 characteristics. The data were responses from each class member to heuristics one and two (H1 & H2), completed at the beginning (H1) and at the end of semester (H2). Choices in the responses scale 1 = never/very rarely and 2 = rarely are interpreted as selections representing none or rarely experienced mindful mindset. Responses 3 = sometimes, 4 = often, 5 = very often are indicative of an improvement or the presence of a mindful mindset.

Comparison of overall data (Table 4.1) indicates that at the beginning of the semester (H1) the class's overall responses to a mindful mindset was 74%, while at the end of the semester (H2) the overall class mindful mindset had increased to 82%. Heuristic 2 responses for Maria, Sandy, Shirley, Rick, Tere, Lucy, Marisol, Guy, and Holly suggest an increase in awareness about their emotions, breathing, and awareness about their surroundings and others in the class in comparison to their responses to heuristic 1 taken at the beginning of the semester (see Table 4.1). According to the

Table 4.1. Heuristic -1 versus heuristic -2 output comparison among class participants (1=never/very rarely, 2=rarely, 3=Sometimes, 4=often, 5= very often, always)

<i>Students</i>	<i>Heuristic 1</i>	<i>Heuristic 1</i>	<i>Heuristic 2</i>	<i>Heuristic 2</i>	<i>Observed change</i>
Maria	22.60%	77.40%	9.70%	90.30%	↑
Sandy	45.10%	54.90%	35.50%	64.50%	↑
Shirley	25.70%	74.30%	3.20%	96.80%	↑
Rick	45.10%	54.90%	35.50%	64.50%	↑
Tania	19.40%	80.60%	19.40%	80.60%	no Δ
Kris	0%	100%	0%	100%	no Δ
Tere	16.30%	83.70%	6.40%	93.60%	↑
Thea	12.80%	87.20%	12.90%	87.10%	↓
Lucy	16.10%	83.90%	12.90%	87.10%	↑
Kurt	9.70%	90.30%	16.10%	83.90%	↓
Marisol	6.40%	93.60%	3.30%	96.70%	↑
Guy	48.40%	51.60%	45.10%	54.90%	↑
Holly	9.70%	90.30%	3.20%	96.80%	↑
Angie	22.60%	77.40%	29%	71%	↓
Trish	32.20%	67.80%	41.90%	58.10%	↓
Eva	9.70%	90.30%	16.10%	83.90%	↓
Rose	19.30%	80.70%	25.80%	74.20%	↓

data output of H1, Tania and Chris were very much in tune with mindfulness at the beginning of the semester and remained the same as they completed heuristic 2 at the end of the semester. Conversely, Thea's frequency of responses to heuristic 2 decreased by 0.1, when compared to her responses for heuristic 1. Also, Kurt's, Angie's, Trish's, Eva's, Rose's responses to heuristic 2 for choices indicative of an increase in mindfulness decreased by 6.4 (Kurt, Angie, & Eva), 6.5 (Rose) and 9.7 (Trish) compared to their responses to heuristic 1. The results above indicate that while 12.5% of class participants (Tania & Chris) considered having and sustaining a mindful mindset throughout the semester, 37.5% of class participants (Thea, Kurt, Angie, Trish, Eva & Rose) did not appear to gain significant benefit from the mindfulness intervention. However, 56% of class participants (Maria, Sandy, Shirley, Rick, Tere, Lucy, Marisol, Guy, & Holly) appeared to have benefited from the mindfulness pedagogic approach implemented in the class by becoming more mindful and aware of their emotions and the emotions of their peers (Table 4.1). Class participants seemed to be more in-sync with the rest of the class at the end of the semester. A greater number of participants appeared to have made use of the tools provided to them during teaching and learning, while dealing with the complexities and arousals of their emotions as controversial and difficult topics were discussed throughout the semester.

As a teacher, it is always pleasant to have feedback from students about one's pedagogy and overall class environment. Although, we like to hear that our students enjoy the environment we try to co-create with them in our classes, it is of crucial importance to look at the nuances and contradictions in some of the statements students make, in this case in the context of the mindfulness heuristic. Such nuances may be embedded with underlying issues that were not made evident to me (the course moderator), but may have been expressed indirectly in the responses in H2. After analyzing the results of the outputs/responses to H2, I was faced with a data set that contradicted the narratives of six students about their views on mindfulness in my class. My take on the contradictions between students' narratives and the data output is one that may involve existing inhibitions when expressing perspectives on controversial issues and not feeling comfortable expressing their full opinion on the issue being discussed. Coincidentally, the class participants that were more vocal expressing feelings of unhappiness and struggles with power dynamics in another class, as well as overall feelings of segregation presented earlier in this chapter, were those that had a decreased output in mindfulness mindset in H2. This contradiction triggers an open question: How can I make everyone in my class feel completely comfortable to the point that they can express both positive and negative emotions without feeling inhibited by the presence of others? I think there is always room for improvement in the way I provide a safe space to all stakeholders in my class. I continue to work towards providing and hopefully achieving a significant level of comfort that is equally perceived by all students in other classes.

Integrating mindfulness in teaching and learning through heuristics, radical listening, breathing meditation, compassion for others, and collaboration among peers, can promote an environment of wellness that extends beyond the classroom setting. The benefits of experiencing care and mindfulness by the people you interact with, not only will make people feel good in the moment, but will have long lasting effects. My first exposure to mindful approaches in science education was in Konstantinos Alexakos's 2012 graduate course of History and Philosophy of Science Education at Brooklyn College, CUNY. Alexakos and Ken Tobin from the Graduate Center designed a research project that involved approximately 19 Brooklyn College preservice teachers and about 6 PhD students. Their goal was to promote authentic research (Elmesky & Tobin, 2005) in the classroom that would have transformative ripple effects for the participants. In authentic research the researchers change their constructions as a result of doing the research; and one of the benefits is that, "it is educative to all of the participants and catalyzes changes that afford the goals of the participants" (Elmesky & Tobin, 2005, p. 811). I am a teacher researcher at a Community College and I continue to be transformed through mindful teaching and learning. I try to learn from the positive and negative emotions and experiences that arise in my classroom by reflecting on the transmuting possibilities of my praxis and that of those I come in contact with. For me, as an academic, the goal of growing as a compassionate teacher is fundamental to keeping my brain healthy and happy. Rick Hanson and Richard Mendius (2009) use garden and gardener analogy to describe the work we do to keep our brains healthy and happy. They state that our mind is like a garden and we could simply be with it, and observe its weeds and flowers without judging or changing anything. However, we could choose to pull weeds by decreasing what is negative in our minds. Conversely, when we take in positive experiences, we are not only growing flowers in our mind, we are growing new structures in our brain, but also hardwiring happiness (Hanson & Mendius, 2009). Rick Hanson and Richard Davidson have done extensive research on experience-dependent neuroplasticity. Mindfulness meditators increase grey matter, which means changes in three different regions of the brain associated with attention and tuning into others and to us. Research suggests that as synapses intercept, a signal reaches down to the DNA in the nuclei of our neurons and changes how genes operate. For example, if we routinely practice relaxation, the activity of genes that calm stress reactions will increase, making us more resilient (Hanson & Mendius, 2009).

The boundaries of emotions in education have been delineated by the agendas of political interests, by omitting emotional responses to social injustices and inequality. Historical narratives on how scientific discoveries came to be, including the biographies with the struggles and successes of important science contributors are crucial to the education of teachers, because they greatly complement and contribute to the development of the science educator. A reflective approach to emotion such as mindfulness in science teaching and learning is not only necessary in the education of teachers, but also fundamental in the holistic growth of the teacher as a person.

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5. DYNAMICS OF MINDFULNESS FOR PURPOSEFUL LIVING

ABSTRACT

This chapter describes mindfulness meditation and how it impacted individuals' lives positively by developing social skills, reducing stress, recognising emotional patterns and managing emotions proactively. Anecdotes shared by the teachers and professors who practice mindfulness posit that mindfulness help them hold their impulsive thoughts and abstain from harming students and others. This chapter also shares that through mindfulness, teachers refrain from the systematic stressors of time, tests, and burnout and promotes caring and supportive relationships with students.

Keywords: mindfulness, emotions, meditation, emotional regulation

DEFINING MINDFULNESS

Human beings' normal habitual pattern is always to rush through life without pausing to notice much. Every moment in time is driven by goals to be achieved, and aspirations to be fulfilled. Hardly anybody stops to notice anything in the moment. In the rush to accomplish necessary tasks, one may find losing connection with the present moment, missing out on what is being done and how one is feeling. Slowing down one's pace and paying attention to present moment; to one's own thoughts and feelings, to the environment around can improve wellbeing. This process of slowing down and paying attention to the present moment with increased clarity is termed as 'mindfulness' (Haskin, 2010).

Mindfulness is a way of paying attention to, and seeing clearly whatever is happening in daily lives. It is about seeing the present moments clearly and being fully present in life and work (Tobin, 2016). It is about noticing what is normally not noticed, because of being busy in the future or in the past – thinking about what needs to be done, or going over what has been done. Ute Hulsheger, Hugo Alberts, Alina Feinholdt, and Jonas Lang (2013) rightly claim, "In a mindful state, individuals are purely noticing what is happening without evaluating, analyzing, or reflecting upon it" (p. 2).

Thich Nhat Hanh (1976) advocates mindfulness as “keeping one’s consciousness alive to the present reality” (p. 11). According to Nicole Albrecht, Patricia Albrecht, and Marc Cohen (2012), “Mindfulness is mostly used to refer to a way of ‘being,’ which has prescribed characteristics, activities and programs designed to cultivate this way of being, as well as ancient meditation techniques rooted in various religions” (p. 3).

Jon Kabat-Zinn (1990), who popularized mindfulness in the medical field frames mindfulness as an awareness of thoughts and feelings as they happen moment to moment, without filters or judgments but with a relaxed mind, fully focused on the present moment. Mindfulness has also been much associated with the ability to let go of any kind of fixation or limited view. For example, Pema Chödrön (2001) refers to mindfulness as an ability to let go of small-mindedness, learning how to open to thoughts and emotions without getting caught in the grip of one’s own angry thoughts or passionate thoughts or depressed thoughts.

Mindfulness includes inner thoughts, non-striving, patience, trust, acceptance, and willingness to “let go” of thoughts (Hölzel et al., 2011). Encountering the next moment with freshness is another dimension of mindfulness as rightly claimed by Richard Brown (2013) that when one practices being mindful, the ability to notice each distinct experience without judgment heightens. As a result, one is able to let go of the past experience and freshly encounter the next moment. Mindfulness allows knowing directly what is going on inside and outside, moment-by-moment, enhancing the ability to live with a joy of present moment as rightly claimed by Matthieu Ricard (2010):

Awareness of everything that arises within and around us from moment-to-moment awareness of everything we see, hear, feel, and think. It also includes a correct understanding of the nature of our perceptions, free from the distortion that causes us to be attracted to or repelled by them. (p. 49)

The definitions of mindfulness offered by various scholars are similar. Without exception, mindfulness is defined as awareness of what is happening, being attentive to the internal and external experiences occurring in the present moment, without being judgmental.

MINDFULNESS MEDITATION AND ITS IMPACT ON INDIVIDUALS

There are several practices that can cultivate mindfulness, such as yoga, tai chi and qigong. However, most of the literature has focused on mindfulness that is developed through mindfulness meditation (Davis & Hayes, 2011). According to Roger Walsh and Shauna Shapiro (as cited in Davis & Hayes, 2011), mindfulness meditation focuses on training to nurture self-regulation practice that enhances attention and awareness to bring mental process under greater voluntary control to foster mental wellbeing. Similarly, Britta Hölzel, and colleagues (2011) discuss that the practice of mindfulness meditation encompasses focusing attention on the experience of thoughts, emotions, and body sensations, simply observing them as they arise and

DYNAMICS OF MINDFULNESS FOR PURPOSEFUL LIVING

pass away. This awareness practice helps find clarity (Kabat-Zinn, 1994) in which one is able to see clearly the thought patterns or patterns of actions. The excerpt from Lhamo's (first author) journal illustrates how mindfulness practice helps to look at thoughts with clarity so that the action that follows is clear and straightforward:

Whenever I listen to others, I learn to notice the sensations in my body as thoughts and emotions arise in my mind, and gently let them go without grasping or rejecting. This allows me to observe my impulsive thoughts closely without allowing them to react to what others are saying. In this way, I become aware of my feelings and learn to express them without harming others. I have discovered that this awareness practice is very helpful especially when I have difficult conversations with others. (Lhamo, Personal journal)

Mindfulness meditation helps to become aware of what is already true moment-by-moment. It allows one to be more present with oneself by simply being awake and trains the mind to be more stable and clear (Daker, Lhamo, & Rinchen, 2016). Cristiano Chrescentini and Viviana Capurso (2015) rightly claim that mindfulness meditation influences truthfulness of awareness and recognition of one's own life experiences. They investigated the relationship between mindfulness meditation and changes in personality of self-perspectives and found that mindfulness meditation shaped reason and contributed to individuals' healthy sense of self and identity. The excerpt from Lhamo's (first author) journal illustrates how mindfulness meditation heightens a healthy sense of self by discovering a new approach of listening to students:

Mindfulness meditation has been helping me to look closely at my habitual patterns of thoughts and actions. Lately, this awareness practice has helped me listen to my students with a receptive frame of mind. I have discovered that when I am not engaged in deep listening while having conversations with my students, I often become very focused on projecting my opinions and defending my agenda. I fail to hear the voices of my students and this does not lead to a meaningful communication between me and my students. I have noticed that my mindfulness awareness practice is helping me to listen to what is being said with wide-open awareness. Learning to listen to my inner experiences helps to listen to my students emphatically. (Lhamo, Personal journal)

MINDFULNESS IN MANAGING EMOTIONS

Emotions are categorised into four primary emotions; namely, happiness, fear, anger, and sadness (Rinchen, 2014). Happiness is classified as a positive emotion whereas, fear, anger, and sadness are negative. Mixing of primary emotions can generate secondary emotions. For instance, mixes of anger, fear, and sadness produces secondary emotions such as guilt, shame, and alienation.

Emotion regulation is a broad construct which generally refers to the ability to recognize and manage emotions adaptively. We often feel that we could do so

much more if we could get rid of our unpleasant situations and emotions; fears and anxieties. Karen Kassel Wegela (1994) suggests, hiding or running away from emotions do not help, rather it gives way for such emotions to strike us back sooner. Gyalwa Dokhampa (2013) challenges that if we look at our fears from another angle, we would often find something inspiring because our fears are directly related to our hopes. Similarly, Chögyam Trungpa (as cited in Wegela, 2009) draws on the Tibetan tantric tradition of teaching that states, “Within our emotions is wisdom” (p. 145).

Specific skills of emotion regulation might include awareness of emotional experience, identification of specific emotions and their intensity, constructive emotional expression, and distress tolerance (Cole, Martin, & Dennis, 2004). Currently, ancient contemplative or mindfulness-based practices are moving into secular settings as a way of fostering emotion regulation skills and cultivating wellbeing (Hayes & Feldman, 1999). Discussing the benefit of mindfulness meditation on emotional regulation, a teaching faculty from the College of Business Studies shares:

The meditation exercise, mindfulness and loving kindness practice has helped me better observe my surroundings and my students. Earlier, I used to easily get agitated and annoyed when I see students not paying attention while I am teaching the lessons. Now I have become a patient and a better observer and I try to relate the cause of their behavior rather than scolding them for no good reason. Through these mindfulness and meditation practices I am able to appreciate my existence and my purpose of existence. I feel that I can avoid many conflicts and build better relationships both at home and in the college. (Tsagay, Personal journal)

Similarly, an excerpt from Rinchen’s (Third author) journal exemplifies how meditation is helping him regulate emotions to develop relationship with students:

Before I used to get annoyed when students whisper, move around, report to class late or want to visit washroom when the lecture is in session. In the spur of emotions, I end up saying things that put them off not only in the rest of my class but also in other classes too. After getting into meditation I learned to hold my emotions. I no longer use sarcasm or say things that hurt the emotions of my students. (Rinchen, Personal journal)

The study carried out by Teherah Ziaian, Janet Sawyer, Nina Evans, and David Gillham (2015) to investigate impact of Mindfulness Meditation on Academic Wellbeing and Affective Teaching Practices revealed improved psychological wellbeing amongst the participants through increased ability to cope with stress and identify perceived stressors. They concluded the practice of mindfulness meditation was a very valuable instrument to transform negative impulses into positive impulses in daily life and habits. With repeated mindfulness practice, individuals develop a greater awareness of their beliefs and motivations, which eventually allows them to cope with stressors more effectively (Chiesa & Serretti, 2009). One faculty

from Royal Institute of the Health Sciences shares a story of how the practice of mindfulness meditation is bringing positive impulses in her life:

Often times, I felt stressed due to my marital issues. During such times meditation helped me through. In particular, the loving kindness was what I practice ... As I went on practicing meditation I realized that I was able to channelize those good thoughts towards the person with whom I had some misunderstandings and also to all my students, at large. Sending these positive thoughts gave an opportunity for a bud of goodness to blossom in me. Living in harmony is what we all are looking for and this definitely was one way of doing it. (Choden, Personal journal)

The study by Fung Kei Cheng (2016) to investigate the effectiveness of mindfulness meditation on psychological problems for adolescents under the age of 20 demonstrated that mindfulness meditation not only decreased psychological stress but also improved emotional regulation, anger management and social competence. A teaching faculty from the College of Business Studies shares how meditation helps him regulate emotions to live a better life at work:

The daily mindfulness practice seemed to make me happier at work and become more spiritual. The fruit of meditation, as I reflect, has not only helped tame my temperament at the levels of body, speech, and mind; but its natural outcomes seem to appear in the limelight of interaction with my family, the students, and the colleagues ... Thus, the daily meditation practice has become a habitual tool that could help control the temper and irritations under any of my work-life circumstances. (Dawala, Personal journal)

Hanh (2006) clearly discusses the use of mindfulness practice to regulate emotion by transforming disruptive emotions into creative energies:

When we live in mindfulness, we are able to see the interdependent nature at the heart of things and transform our ignorance into insight. Delusion becomes enlightenment – we see that what we formally perceived as samsara is really none other than nirvana, the realm of suchness. Meditating on the nature of interdependence can transform delusion into enlightenment. (p. 199)

With conscious effort to notice and focus on the present moment without judgment, one develops a sense of awareness that widens one's resilience to any emotions or situations that are painful. Being resilient to all these painful events may be understood as one's wellbeing. Wellbeing is not the absence of distress and difficulty but it is the capacity to cope and respond to distress and difficulty. Kabat-Zinn developed the Mindfulness Based Stress Reduction program (MBSR) to investigate how "open-hearted, moment-to-moment, non-judgmental" perception contributes to stress-reduction in patients who have exhausted other medical options. Interestingly, MBSR has been shown to diminish the habitual tendency to emotionally react to and ruminate about transitory thoughts and physical sensations; reduce stress, depression,

and anxiety symptoms by modifying cognitive–affective processes (Chiesa & Serretti, 2009).

Many Western psychotherapies offer the view that the person is not the problem; problem is the problem, as opposed to the person being seen as the problem (Morgan, 2000). A mindfulness-based approach to wellbeing is based on the premise that actually, the problem is not even the problem. As Steven Hayes (2004), rightly points out, the problem is not the mere presence of particular thoughts, emotions, sensations, or urges rather it is the constriction of a human life. A person's wellbeing is supported by the ability to choose how to relate with one's emotions and reactions in relationships. Therefore, the relationship to the problem, the ways of making sense of and responding to the problem, is the problem. Mindfulness practice offers a way to change the relationship to the problems. This is what, a teacher counselor shares in his journal:

With the practice of equanimity and loving kindness in the mindfulness retreat, my judgments towards others have become less. Normally, I am very judgmental and judge my students completely based on their behaviour. I have often punished them for their misbehaviors. I feel I had been ignorant and my ignorance has caused harm to my students, whom I now believe have inherent qualities within each of them. I have learned to appreciate my students irrespective of who they are and what they do through my regular loving kindness practice. (Nima, Personal journal)

The above excerpt demonstrates that healthy relationships, supported by an ability to take responsibility for one's own reactions, support wellbeing. Awareness of emotions, not just their existence but their nature; physical energy connected to cognitive story, allows emotions' grip to loosen and they no longer control one's thinking, behavior, and action. Mindfulness practice nurtures the ability to give up the struggle for control all together and watch the impermanent nature of distressing emotions rise and fall away without having to either suppress them or act them out.

LESSONS LEARNED

Mindfulness practice can become a powerful foundation upon which teachers can start to build their social-emotional skills. Mindfulness actually helps one to become more aware and accept emotional signals – which help to control one's conduct. The positive effects of mindfulness practice shared by some of the teachers in the above narratives demonstrated how mindfulness training can improve one's mental state and wellbeing by reducing stress, resulting in better emotional regulation and an improved capacity for compassion and empathy. Most importantly, teachers demonstrated how practicing mindfulness can help recognize emotional patterns and proactively regulate and respond in the way one wants to rather than reacting automatically. For example, mindfulness meditation encouraged teachers to look closely at their habitual patterns of thinking in being judgmental that did not allow

them to look at students with compassion. Mindfulness practice offers teachers a great physical, psychological, and social benefit that ultimately promotes caring and supportive relationships with the students. Teachers became more compassionate and empathetic to students in the classroom.

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DYNAMICS OF MINDFULNESS FOR PURPOSEFUL LIVING

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DAVID GENOVESE

6. MINDFULNESS

A Tool for Administrator | Teacher Self-Care

ABSTRACT

As school administrators and classroom teachers we spend endless hours thinking about instructional pedagogy, teacher and student interactions and experiences for growth. These priorities consistently devour not only our school budget to provide classroom resources, but also consume our time beyond the classroom, to research innovative unit plans and to create compelling, differentiated lessons. Yet, the myopic frenzy of punitive teacher evaluations mandated by the regulations of a new rating system; and the conflict and contradictions in the roll out of the common core standards tied to divisive and competitive high-stakes tests threaten our administrator | teacher well-being. In this chapter, I share my school's journey with the introduction of growth mindset and mindful practice in professional development with high school teachers.

Keywords: mindfulness, public high school, school climate, administrators, teachers, mindset, self-care, mindful practices, calm, empathy, compassion, listening

THEORETICAL PERSPECTIVES: MINDFUL AWARENESS

In the philosophical framework of *Growth Mindset* (Dweck, 2006), our authentic inquiry is both emergent and contingent on what we learn, embracing values proposed by Egon Guba and Yvonna Lincoln (1989). Our action research is participant-centered and dialectical, as Kenneth Tobin (2015) points out, in dialectic relationships such as administrator | teacher, each constituent informs and mediates the other for mutual coexistence. Our collaborative inquiry about the infusion of mindfulness in professional development for teachers was mediated, motivated, and inspired by polysemia, i.e., differences in our perspectives and emerging understandings.

Mindfulness has been defined by Jon Kabat-Zinn as “the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment” (2003, p. 145). Yet, we have abandoned the fabric of our society in being blind to our shared humanity. Sadly, as reported by Sabrina Tavernise (2016), an American journalist, U.S. suicide rates

D. GENOVESE

have surged to the highest in nearly 30 years. We, the people, are suffering. Although educators have an innate sense of caring, in our public school system there is an emotional intensity, the increasing level of stress is toxic and can threaten self | other well-being. Unfortunately, many teachers respond by leaving the profession altogether (see Ingersoll, Merrill, & Stuckey, 2014, for a recent review). Our pain deserves mindful attention. Clearly, learning to care defines “genuine education” (Noddings, 1992). School administrators who pay attention to school environment can increase a sense of calm and bring greater empathy and acceptance in interactions. At Brooklyn College Academy, an early college high school, we experienced how developing a mindful school culture can leverage equity in safe spaces, while building relationships on trust and respect to enhance the efficiency and quality of education in our school.

WHO TAKES CARE OF THE CARETAKERS

The question of who takes care of the caretakers is important for all educators to explore. We need healthy, mindful, compassionate teachers to help our students succeed. Public schools are mandated to care for a diverse student population. Our teachers are held accountable to the public school system and responsible for scaffolding the holistic growth of young people, many of whom have a plethora of social, emotional and behavioral, physical and cognitive issues. Linda Lantieri and colleagues (2016) compare self-care to an educator’s “breathing mask.” Yet, too often, our teachers perceive students’ needs while considering their own needs as selfish. Instead of holistic self-care, many teachers rigidly and primarily address the pressing technical and bureaucratic requirements such as planning lessons, creating assessments and grading papers. Alternatively, embracing self-care for teachers might include habits like meditating, getting sufficient sleep, eating a healthy diet and exercising consistently. In adapting Kenneth Tobin’s (2016) exploration of the role mindfulness can play in mediating how we enact social life, our concern became, how can opportunities for professional development in our school support administrators | teachers to cultivate a compassionate, mindful community that fosters well-being and transformation of self | other?

SELF-CARE FOR TEACHERS

For our school administrators, incorporating mindfulness as self-care for teachers in a school’s professional development program is important. In keeping with the emergent and contingent nature of our work, our faculty’s willingness to embrace mindfulness led to the engagement of students in mindful classroom practices. These practices included guided breathing meditations or body scans, and free-writing. As teachers and students reset and reconnect, sharing experience and education (Dewey, 1938), both became more consistent in paying attention, sustaining focus, and being primed for teaching | learning. Lisa Flook and her colleagues (2010)

provide evidence that mindfulness can improve awareness and cognitive functioning in teachers. As researchers of our own practice we explored mindfulness as a tool to have in our toolbox to better cope with the demands of a dynamic profession. As a result of infusing mindfulness into our professional development program, a heightened sense of awareness, empathy and compassion for self | other developed in our school environment.

FLEXIBILITY AND RESPONSIVENESS

Incorporating mindfulness as part of self-care can raise a teacher’s awareness of compassion, sharpen her focus, and heighten critical thinking in her classroom. When we speak of teachers being mindful, we aim to develop the qualities that called them to this vocation through secular meditative practices. Meditation has been defined by Matthieu Ricard, Antoine Lutz, and Richard Davidson (2014), as

the cultivation of basic human qualities, such as a more stable and clear mind, emotional balance, a sense of caring, even love and compassion—qualities that remain latent as long as one does not make an effort to develop them. It is also a process of familiarization with a more serene and flexible way of being. (p. 42)

On the surface, this is a challenging definition to deconstruct. It goes against an educator’s linear thinking. As a result, the practice may seem like a waste of precious time, given a teacher’s class set of papers to grade, or an administrator’s district review or preparation for an upcoming classroom observation. School administrators want teachers to be able to manage, to be fully present, to feel empowered to attend, to maintain focus and to respond with an open heart when facing the challenges of events that emerge in the context of classroom interactions. As a school community, we wanted to better ourselves and better our classroom performance. As we began to open up to the process of being present, this is a glimpse of our journey seeing self | other.

REVVED UP: TENSION, PRESSURE AND UNCERTAINTY

As the 2015–2016 school year started, our administration and faculty faced many bureaucratic initiatives. We had three district reviews pending and the beginning of the third year of the rubric based teacher observation system. The latter is part of the pseudo value added rating system in New York State. The faculty showed visible signs of tension, pressure and uncertainty. The administrative team needed something to help us quell these concerns to focus teachers on self-efficacy in their classrooms in order for the school to be successful in student performance and the impending reviews. We began the year like a racecar driver on the starting line – all revved up and taking off way too fast. This chaos sparked the transition to mindfulness practices.

D. GENOVESE

DIVERSE NEEDS AND COMMON PURPOSE

Yet, another challenge our school was taking on was a larger influx of special needs students. This population of students was new to our school. As an Early College High School we have always been focused on moving our students to college. We haven't lost that focus, however, we had to rethink a pathway to success for this new population of students. Many of our teachers had never taught in a coteaching setting before and they were nervous and concerned about it. They had to learn how to teach with a coteacher and educate students with very different needs. We needed a method to help teachers think thoughtfully and clearly about this new work and develop a stronger sense of compassion for our students. Our answer was the introduction of mindfulness. We wanted our coteachers and the rest of our faculty to approach all our students with clarity, empathy, and to consistently reinforce the idea of success to our students.

TIME TO TAKE A DEEP BREATH AND ROLL UP OUR SLEEVES

While attending a mindfulness workshop at the annual conference of the National Network for Educational Renewal (NNER), I had a very moving experience during a mediation exercise. Focus, feeling really good on the inside, and clarity of thought were the results of that exercise. It helped to muffle the noise of the conference and of the worry of being away from school.

After the NNER workshop, I contacted Linda Noble, a learning leader teaching at our school, and an adjunct assistant professor infusing mindfulness into pre-service teacher education. Together, we came up with a vision to introduce mindful practices to our 27 faculty members in a professional development workshop. We appreciated that the initiative required a gentle introduction, being aware of the biases and stereotypes associated with meditation and mindfulness. In keeping with our school policy of grounding professional development in research, Linda and her colleague Małgorzata Powietrzyńska used neuroscientific research findings to introduce mindfulness. In our experience, teachers demand tangible evidence demonstrating that what they are being asked to take on is necessary, adequately accessible, and easy to implement. Mindfulness practice can encompass each characteristic. The faculty feedback from the mindfulness workshop was very positive, leading to a second workshop a few months later to include more advanced techniques such as body scans and heuristics. For example, to a question what she would be interested in exploring, one of the teachers noted:

[f]inding a way to be more kind to myself in bad situations or when things go wrong for me. I care a lot about others' emotions and being positive to others, but I forget about keeping my spirit up in good and bad situations. I forget to take care of my emotional being.

LEARNING FROM ONE ANOTHER

Initial implementation of a professional development initiative including that of mindfulness practices should be done slowly. Enthusiasm should be generated in the “early adopters” and the practice should be voluntary. Therefore, we began to implement a mindfulness exercise at the beginning of every faculty meeting. At least once per week, our teachers are invited to engage in a mindfulness practice that stops the whirlwind of their day-to-day responsibilities and helps them focus on self-care. The practice is voluntary and we ask that those not participating respect the needs and time of those that are. The practice sets the tone for the professional development meeting as the faculty can concentrate on learning from each other with clear minds and hearts during the time they are together.

TAKING RISKS IS ENCOURAGED

As this journey began the teachers and administrators knew they were taking a risk. There were conversations around teacher pushback, the viewpoint of a possible religious component, and a non-committal to the practices by some teachers. Even though we were anxious about the work, we were driven by our belief that, as Daniel and Taylor Rechtschaffen (2015) state, “Mindfulness can be a pathway to the human beings we want to be. First we can cultivate our own attention, self-awareness, and compassion” (p. 62). This was the essential learning our teachers should come away with. However, we were careful not to alienate anyone from the work we had started. We used different types of meditations – mostly those found on UCLA’s website for their Mindful Awareness Research Center. While the majority of exercises focused on breathing, we did venture into other practices like mindful eating and short body scans. As we finished the school year it was clear taking the risk was worth it. The vast majority of the faculty were still engaging in the exercises and from feedback it was clear that they appreciated having a tool to help calm their minds and be self | other aware. A successful first step!

HONING ADMINISTRATOR SKILLS

Teachers were not alone on this journey. In my administrative role I grew stronger in actively listening, being compassionate, sharing problem solving, and remaining open in approaching school situations. I began to take better care of myself and wanted this lust for life to seep through the cracks to re-energize teacher | administrator relationships and transform our school climate. Typically, administrators see self-care as selfish. Most administrators join a school’s leadership team to create an environment of success for everyone in the school community. That’s a calling, not a job or a pay raise, but for the greater good and the belief in the power of education. Mindfulness helps find purpose in my journey. I have learned that I can be present with, and be appreciated by, my faculty in the

D. GENOVESE

same way they can be fully present with, and respected in the dialectical teaching | learning relationships they have with their students. We are educators and role models, charged with developing empathy and nurturing compassion in human nature for coexistence.

Mindful practice has brought out the strength of my compassion. It is in my nature already, but participating in mindfulness exercises accentuates that for me. The administrative team has many conversations over the year about the performance of students and teachers and how that performance is related to something that might be going on in their lives. We then look for ways we can be supportive and ease the burden, at least at school, for them. That's what administrators should do for their teachers and students. In her article, Caryn Wells (2013) states, "It is empowering to learn how to be more responsive and less reactive to tense and challenging situations" (p. 344). If the administration is not strong and thinking with a clear mind, then the school community will not be functioning as it should. Mindfulness helps us develop these skills and the work that we do so that our school community is successful.

COMMITTED LISTENING

Another skill that mindfulness has accentuated for me is listening. This skill is not as easy as it looks. I recently took part in an extensive professional development program that not only focused on leadership skills, but particularly the skill of coaching teachers. In their book, *Coaching Conversations: Transforming Your School One Conversation at a Time*, Linda Gross-Cheliotis and Marceta Reilly (2010) speak about "committed listening." This style of listening occurs when the coach intently listens without interruption to the problem that the teacher is presenting. The listener takes notes and then rephrases the situation back to the speaker to be sure that the coach understands the problem. This is a difficult skill for an administrator, and for me, in that we are always looking for a solution to whatever is being presented. Also, I have many other things on my mind that we need to get to that we do not always give the time we need to give to our teachers who need help. With "committed listening" I have to slow down and give the proper attention the situation deserves. My work with mindfulness has helped me to develop this skill. I am able to listen in a more productive way and allow a teacher to fully talk about the problem she is presenting to me. Sometimes, there is not a problem to solve. She just wants to talk. Mindfulness can open the mind to listening and talking more effectively. It can empower a teacher and at least allow her the opportunity to have her voice heard. It shows support and commitment to helping a teacher work through her issue or just listen to what she has to say. Administrators need to have an open door policy that provides the opportunity for teachers to speak their mind without fear of retribution.

On that note, mindfulness has also helped me, as an administrator, be able to hear and accept critique. Those conversations are not all problems to be solved.

Sometimes they are a critique of something I said, did, or acted on. Teachers will tell me how they feel if I give them the space. That space is important. That is a perfect time to be mindful and call on all of the attributes of mindfulness. One of the hardest things for an administrator to hear is critique from the faculty. It's hard because it brings up all sorts of defensive feelings. In this instance, there is a need to do one's best to recognize those feelings, focus, and move on. Just like in a breathing exercise. Having a mindfulness practice is essential in polysemia, helping to see from a different point of view. One can be mindful and appreciate those difficult moments experienced by teachers. I have learned and heard so many good things in those difficult conversations. Engagement in dialogue around thorny issues brings a critical understanding of, and connection with faculty that administrators can build trust, earn respect, and transform school climate.

TOUGH TIMES AHEAD: NEXT STEP TOWARD GRIT AND RESILIENCE

As our school moves toward the future, we will continue to integrate mindfulness into our work with growth mindset. Carol Dweck's work (2006) is important for teachers to be aware of and to implement not only for themselves, but for their students as well. Our mindful practices will fit nicely into this work as we transform our mindset about our roles, our classroom habits, and our perceptions about our students, while creating an even more supportive and harmonious environment. Moving forward, we will be exploring how mindfulness and Angela Duckworth's work (2016) on grit can help us be successful as it works hand in hand with the tenets of Growth Mindset. According to Duckworth, grit has two components: passion and perseverance. Both of these qualities are necessary in the work of educators. We will further explore mindfulness techniques that can help faculty, staff and students to persevere and sustain our work. This is an exciting time and I can't wait to see the transformations!

Working to become more mindful helps to make us more compassionate, empathetic and thoughtful in our work as teachers and administrators. We made a pact to start small and begin the journey slowly. It can take time to transform and see results. However, we advocate to not be afraid to introduce mindfulness to your faculty as a tool for self-care. This is an important part of any profession and it is necessary to be successful as we proceed through the school year. With all of the "ed speak" and opinionated talk about the education system, it's easy to feel like we are failing. Being mindful and integrating related techniques can help each school community let go of negativity and focus on the philosophy and vision of education. We were called to be educators because we care about children of all ages and we want to shape the next generation of citizens in our democracy. Keeping focused on that calling through mindfulness will continue to help us through the tough times and embrace and savor the fruit of our good work.

D. GENOVESE

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CAROLINA CASTANO RODRIGUEZ AND DEBORAH TIPPINS

7. ISSUES IN ENGAGING MINDFULNESS IN SCIENCE EDUCATION

Critical Perspectives

ABSTRACT

Mindfulness practices are becoming increasingly popular in schools. Mindfulness programs pose high expectations for students, all having little choice other than to follow this practice, promising not only to make them feel better and increase their learning but also make them better human beings. With such promising outcomes, it is not surprising that science educators have recently started taking up the concept of mindfulness into their discourses of educating a literate citizenry for sustainable and healthy lives. However, are those suggested outcomes possible for everyone, regardless of their life histories and sociocultural contexts? In this chapter, we explore this question by critically reviewing the possible limitations of such practice. We discuss other approaches which could contribute to re-thinking science education and engaging students in transformation of their actions towards the construction of more caring, sustainable, and healthy societies.

Keywords: mindfulness, science, critical pedagogy, transformative learning, emotions

The concept of mindfulness has become part of the mainstream discourse in both language and practice in higher education as well as the public at large. Corporate mindfulness, mindful communication, mindful medicine, mindful commentary, mindful choice, mindful stress-reduction, and mindful inquiry are just some of the slogans that point to the prevalence of the concept in society today. We might argue that humans are better off today in terms of material wealth, the eradication of certain diseases and recent advances in communications technology. But at the same time, the persistence of some issues such as long-term environmental destruction and racial hatred are clear indication that the Cartesian separation of mind and matter continues to inflict damage by perpetuating a myth of scientific objectivity devoid of bias, subjectivity, and emotions. Mindfulness has become increasingly popular in western societies as a practice that could challenge historically prevalent dichotomies such as mind/body, reason/emotion, with the expectation of enhancing the quality of life, including education, and personal well-being of those who practice it. With such stated outcomes, mindfulness has permeated discourses in education, including

its possible role in contributing to educate citizenry for sustainable and healthy lives. However, as with any practice, it is important to question its stated outcomes, particularly in how it has been adopted in the west and how different this practice is from its social and cultural roots. In this chapter we consider the possible tensions and limitations of mindfulness. We ask: does mindfulness hold such promising outcomes for everyone, regardless of their life histories and sociocultural contexts? What role, if any, could mindfulness play in the practice of science education to extend its purposes towards wellbeing and transformation of actions for the construction of more caring, sustainable and healthy societies? We also discuss and critically analyse how mindfulness has been adopted in the west within the lenses of opportunity for change and transformation of educative practices, and discourses. As we consider some of the tensions that emerge from mindfulness discourse and practice, we are reminded that these tensions are both creative and necessary to rising above many of the cultural myths that permeate education in today's world. For us, a tension reflects the importance of change, a Buddhist principle known as *Duhka* (Hagen, 1997) which emphasizes that change is at the heart of human existence.

EMOTIONAL REACTIONS

Mindfulness practice focuses on the balance between mind and body through actions such as cultivated silence and stillness. Such practice could contribute to “ameliorate emotions” (e.g., Powietrzynska, Tobin, & Alexakos, 2015, p. 65) and achieve periods of “emotional relief” (Sparks, 2011, p. 39). Even when at first sight the social and emotional aspects of the human condition seem to be privileged in mindfulness discourses, human emotions are presented as feelings to be tamed. Moreover, cultivating silence as a form of “emotional relief” and to “ameliorate emotions” is one of many possible ways of working toward mind/body balance. The traditional instruction to work on emotional personal experiences by “sit with it” (Sparks, 2011) seem to privilege this path as the way to accomplish “emotional relief.” These discourses and practices could be undermining other forms of human emotional reactions, such as crying and shouting, which could be helpful and equally relevant to deal with trauma and any human experience.

As reported by a few other authors who have studied cases of counter-narratives to the all-positive outcomes of mindfulness, working on the balance between body and mind, particularly when there are traumatic life experiences, requires the person to undergo a process of self-healing without much assistance from others (Farias & Wikholm, 2015). Based on the Trauma Resiliency Model (TRM), first proposed by Laurie Leitch and Elaine Miller-Karas (in Leitch, Vanslyke, & Allen, 2009), “the nervous system speaks the language of sensation ... and emotions” instead of thoughts and rationality (Compson, 2014, p. 280). Thus, under severe stress or trauma the person is situated outside his/her ‘resilient zone.’ During this state, emotion-based practices will be better suited to deal constructively with these emotions. As Zen teacher, Flint Sparks (2011, p. 38) explains:

The traditional instruction to ‘just sit with it’ didn’t seem to be enough to undo trauma or to relieve the painful imprint of abusive histories. Although we could occasionally achieve periods of emotional relief through meditation practice, we often continued to suffer in our mindfully cultivated silence and stillness. (p. 39)

Thus, if the person is “out of the resilient zone,” in a state of severe stress as per TRM terminology, mindfulness will not provide assistance in healing and will instead trigger other strong emotions that might need assistance (Compson, 2014, p. 291). In such cases, “the silence and cool detachment of the spiritual community’s life” of mindfulness practice will not necessarily accomplish healing (Sparks, 2011; in Compson, 2014, p. 282).

Additionally, emotional responses could actually be necessary to embrace agency and transformation. For instance, within Critical Pedagogy discourses and Transformative Learning practices, crisis-like experiences and emotional engagement are considered a central aspect of personal and social transformation. Within Critical Pedagogy personal stories and events could empower communities to be mobilized and transformed (Freire, 1970). Emotional aspects of personal events provide a platform for agency. Rather than sit in with those thoughts and emotions to accomplish calmness and balance, emotional engagement and responses are valued as agents of change.

Similarly, Transformative Learning theory describes triggering events as central to personal transformation (Mezirow, 2000). Triggering events are linked with strong emotions and reactions described as confrontational, shocking, challenging, and stressful. Together with such emotions, more positive emotions also emerge during personal transformation processes – e.g., increased awareness, inspiration and empowerment (Carter, Castano Rodriguez, & Jones, 2014). Emotions, together with a cognitive and rational process, provide a platform for change in actions. Emotions and feelings within Transformative Learning theory provide opportunities for moving out of the comfort zone to consider other possible actions and validate new ideas and practices. Rather than being framed as something to be tamed, emotions are valued as essential aspects of transformation (Cranton, 2011).

CULTIVATING SILENCE IN SCIENCE IN RESPONSE TO NEOLIBERAL REFORM

Another tension that concerns us, as authors of this chapter and science educators, is how mindfulness practice of cultivating silence could be playing a role in the contemporary era of global competitiveness. Neoliberalism is realigning science education to fit within a discourse of global competitiveness in ways which sublimate goals of social justice and sociopolitical action and minimize the important role of emotions and affect in science teaching and learning. Neoliberal reforms and policies such as STEM, for example, reflect an ongoing effort to better serve economic interests in a reductionist approach which privileges the selection

and technological training of a few elite knowledge producers. STEM Education with its goal of preparing skilled scientific workers and entrepreneurs for the economy, in effect supplants other important educational goals such as becoming a good citizen, responsible decision-maker, or steward of the Earth. For the most part, neoliberal ways of thinking, reflecting a quest for certainty, emphasize cognitive gains at the expense of notions of whole body and affect. Mindfulness could provide an important alternative framework from which neoliberal ways of thinking/doing in science education can be redefined or subverted in meaningful ways.

In contrast to the STEM focus on the science education of a few elite individuals, at the heart of mindfulness is a concern for the wellbeing of many individuals, societies, and environments. Nevertheless, there remains an inherent tension. When essentially mindfulness, as a construct, becomes an individualized object of psychological interest, it could encourage students to accept a “reality” rather than promoting agency and activism. Stanley (2012) argues that mindfulness “has become individualized and psychologized as a technique for improving individuals’ functioning within a capitalist society” (p. 631). In this sense, we must make every effort to provide teachers interested in mindfulness with the experiences that validate emotions and cultivate agency, rather than acceptance and silence. Stanley calls for a relational approach which characterizes “mindfulness as socially contingent as a potential resource for individuals and communities to cultivate a critically distant stance towards society” (p. 631).

COMMUNITY EN/DIS-ENGAGEMENT

In the western school system, individualism is often regarded of value and is manifested through an atomistic and prescriptive curriculum. Everyone is held individually accountable. By contrast, reflection about the self, through mindfulness, could contribute to develop the skills needed to connect to others. Self-compassion, as pursued in mindfulness practice, could help individuals be more emotionally connected, and provide more social support to others. Despite this, mindfulness in many western societies focuses on the individual, re-enforcing the individualistic approach of the western school system.

Mindfulness as an aspect of a religious community tradition and similar to other cultural traditions, such as cultural aspects of indigenous communities (Keane, 2008), emphasizes the construction of personal identities by the sense of belonging to such community. In this case, collective practice and sense of self as a member of such community is prioritized. Taking mindfulness as an isolated practice of self-discovery, self-understanding, and self-healing could increase feelings of confusion, fear, anxiety or panic, particularly in individuals with previous traumatic events (Farias & Wikholm, 2015). In fact, there is evidence of cases in which participants of mindfulness practice have felt like having to suffer in silence. On such cases the practitioner did not identify clear opportunities to debrief or discuss with experts

in matters of trauma and the mind or with the community of practice (Farias & Wikholm, 2015).

Mindfulness in the west is often decontextualized from the monastic lives or strong community life it has emerged from. As stated by Jared Lindahl, Christopher Kaplan, Evan Winget and Willoughby Britton (2014) “meditation practices that were previously taught within the context of religious traditions are now increasingly being practiced in non-traditional and secular contexts” (p. 1). Communities where mindfulness practices are rooted offer a strong support for each member (Rocha, 2014). Within that context, mindfulness is not perceived in isolation. Practitioners are members of a larger supporting group; a community. However, this is not how mindfulness is often presented in the west. Mindfulness practices and programs for schools need to be considered carefully so that they do not reinforce the individualistic approach of the schooling system in the west and offer supporting structures that might be needed.

PEDAGOGICAL PITFALLS AND POSSIBILITIES

Within the individualistic and community-oriented dichotomy of how mindfulness has been offered in western schools, we consider it critical to review the diverse modes of pedagogy regarding this practice in the classroom. For decades, educational success has been defined in terms of filling students’ heads with pieces of information that can be measured on standardized and high stakes tests. Practices which encouraged the memorization of decontextualized information, repetition and conformity were celebrated, resulting in a form of “pedagogical nihilism” (Kincheloe, Steinberg, & Tippins, 1991, p. 51). Mindfulness, we might argue, offers a productive and untapped form of critical pedagogy that takes into consideration not only the rational self, but the “lived sense of self” which includes the body, emotions, and lived experiences of students and teachers. From this perspective, mindfulness offers, for example, the pedagogical possibilities of exploring the relationship between affect and emotions in the classroom. We might ask: “How do students affect their world and how are they affected by it?” (Kayumova & Tippins, 2016, p. 568). Yet, for the most part, assessment remains an isolated device which alienates students from affect and emotion.

From a critical perspective, we can observe how power and tradition squash creativity and innovation in students and teachers. Additionally, we recognize that school science takes place within societies historically characterized by unequal power relations that are not typically part of the public discourse about schooling. While mindfulness appeals to us as a way of expanding our vision of what schools can become, in the way that we have seen it enacted in schools, we struggle to see it as an “untapped form of critical pedagogy.” In our own experiences we have observed how mindfulness as presented in schools appears to be decontextualized from its roots and does not necessarily engage students in agency. In “School as Home for the Mind” (2008), Albert Costa, for example, equates mindfulness practice with metacognition, providing a list of sixteen

habits of mind that should be cultivated to create a schoolwide culture of mindfulness. Furthermore, in some instances we are concerned that pedagogical understandings drawn from tenets of mindfulness might serve to colonize and commodify wisdom traditions of Asian or Native American communities. An additional challenge is to consider how we might introduce ideas related to mindfulness and engage the wider public in a discussion of its potential role in today's schools.

LOST COUNTER-STORIES

As Lindahl, Kaplan, Winget and Britton (2014) argue, research regarding mindfulness practice in the west has had a strong focus on its beneficial effects, preventing personal cases that fail to fit into the all-positive outcomes view of this practice to be noticed. This poses issues of transparency in the discourses regarding mindfulness, with possible discussions regarding those who failed to accomplish such positive outcomes to remain as a taboo (Farias & Wikholm, 2015).

The first author first became interested in reading about mindfulness and other meditation practices when a person close to her started to experience depressive and delusional thoughts after intense periods of meditation. Acknowledging the possible genetic predisposition towards any of these mental and emotional situations, it remained a concern for her to observe how such feelings and mind states were stronger and more evident after meditation, so much so that this person no longer practices mindfulness.

Similarly, the first author also observed the not so positive impact of mindfulness practice in the perception of self and the construction of relationships in a person she was with for over five years. There was a constant tension experienced when expectations imposed by other practitioners and the practice itself were not fulfilled. Expectations like daily silent meditation practice, retreats, weekly group meditation, and discussion sessions placed pressure on the daily responsibilities of this person and the relationship. It was a constant struggle to juggle work, family and mindfulness practice/expectations. Rather than peace and calmness, there were constant tensions with this practice. Despite this, it was not something that was openly discussed, even when other practitioners had experienced tensions between their regular practice, their daily life, and their partners. As neuroscience researcher Willoughby Britton cautions, "what about when meditation plays a role in creating an experience that then leads to a breakup, a psychotic break, or an inability to focus at work? ... Given the juggernaut – economic and otherwise – behind the mindfulness movement, there is a lot at stake in exploring a shadow side of meditation" (in Rocha, 2014).

One could argue that these are isolated cases and might not have anything to do with mindfulness practice but rather with the person. However, as argued by Jane Compson (2014), in those few cases that have been reported, the person has felt stigmatized, feeling that there is something wrong with him/herself. Furthermore, in the traditional literature of contemplative traditions, a variety of experiences which challenged the commonly reported positive effects are described (Kornfield, 1979).

As identified by Willoughby Britton's (in Rocha, 2014) study with more than 40 experienced mindfulness practitioners and well known meditation teachers, there are several difficulties that could arise from mindfulness practices:

- Cognitive and Perceptual difficulties – physical world is not perceived as solid and the sense of time dissolves, thus perception of future and past is lost and sense of identity and agency lost.
- Emotional or affective difficulties – previous traumas start to ‘pour out’ bringing feelings of confusion, fear, anxiety, or panic. Also, in some cases a sense of change of identity towards feeling the practitioner was enlightened produced similar emotional responses.
- Somatic and physiological difficulties – intense physical sensations such as uncontrolled movement or increased heat.

Thus, more stories of people who have had not all-positive experiences with mindfulness practice or those who no longer practice it should be studied and validated.

HIGH EXPECTATIONS

Mindfulness school programs are increasingly popular and expectations of their benefits are high (e.g., Britton, Lepp, Niles, Rocha, Fisher, & Gold, 2014). Based on the notion of impartial present-moment focus, mindfulness practice in schools has been reported to have positive implications for diverse aspects of learning. For instance, it is reported that mindfulness practice contributes with the area of affective education, and emotional and cognitive development (Hyland, 2014). Mindfulness practices such as loving-kindness meditation are suggested to be effective in enhancing positive emotions as identified in a systematic review of 24 empirical studies (N = 1759) (Zeng, Chiu, Wang, Oei, & Leung, 2015). Other studies also show that mindfulness has been associated with improvements in moral reasoning and ethical decision making (Shapiro, Jazaieri, & Goldin, 2012). Even promotion of compassion and moral values providing “clarity of vision and equanimous stability of mind and body” are also identified as an outcome of this practice (Powietrzynska, Tobin, & Alexakos, 2015, p. 67). Not surprisingly, it is argued that promotion of mindfulness is “an ethical obligation” of educators as it can contribute to facilitating “well-being” and “reduce suffering” by learning to be “here and now” rather than “planning the next move or ruminating about the past” (Powietrzynska et al., 2015, p. 67). Mindfulness as practiced in the west involves “paying attention in a particular way: on purpose, in the present moment, and non-judgmentally” (Kabat-Zinn, 1994; as cited by Powietrzynska et al., 2015, p. 66). The basic notion of “impartial present-moment attention” has its roots in Buddhist traditions (Hyland, 2014, p. 277). However, as Buddhist scholar Dreyfus (2011) states, mindfulness does not have to be entirely rooted in the present and has an evaluative component as it requires a process of discerning and comparing.

In the west, mindfulness has been increasingly adopted as an independent practice, decontextualized from the much broader understanding of the path (Dalai Lama Interview with Britton, n.d.), ignoring the diverse difficulties and complexities emerging from such a path. As described by Compson (2014, p. 290), mindfulness comes from a cultural tradition that includes several levels of progression and strong foundations including requiring a calm mind as preceding mindfulness practice. It is an aspect of a cultural tradition which acknowledges the complex and difficult path of self-discovery. For instance, in the Buddhist traditions critical studies of the Sanskrit writings by Buddha and other spiritual leaders are necessary to understand this practice and its role within the spiritual path. Mindfulness is preceded by a calm state of mind. It is recognized that difficulties might arise during that process, requiring support.

Across Buddhist historical, textual accounts and personal stories from practitioners, there are reports of difficulties that might develop during mindfulness practices including phenomena such as meditation-induced light phenomena (Lindahl, Kaplan, Winget, & Britton, 2014). The result is analogous to sensory deprivation and perceptual isolation, including sensory, social, and kinesthetic deprivation, or invariance. As these authors have identified:

The practice of meditation tends to be done in social isolation or in groups in which social interactions are minimized. During a formal practice session, practitioners adopt a stable, seated posture. The locations for meditation practice also tend to be quiet environments removed from excessive auditory stimuli. Through dimly lit environments or through practicing with the eyes closed or open with a fixed gaze, visual stimuli are restricted ... the context and function of meditation is similar to both sensory deprivation and perceptual isolation. (p. 9)

Furthermore, such studies recognize that:

While light-related experiences arising in the context of meditation are well documented in traditional contexts, they are largely unknown in clinical settings. In assessing meditators practicing outside of traditional contexts, it is important to carefully attend to the nuances of light-related discourses when evaluating whether lights are signs of positive changes or inconsequential side effects of meditation. In traditional contexts, meditation-induced light experiences are frequently subject to scrutiny before they are attributed either positive or negative value ... Light-related experiences are likely to be benign, but may cause distress to the practitioner if they are unexpected and accompanied by other psychological changes. (p. 12)

Mindfulness is one aspect of a spiritual path involving several possible difficulties that need to be addressed within a context which includes support structures and social connections. This cultural context might be lost in school mindfulness programs, ignoring all the difficulties that these practices might bring if isolated from its cultural roots.

To have more realistic and accurate expectations of mindfulness practice, practitioners and those leading mindfulness programs in the west need to consult traditional sources of contemplative practices and the psychological and physiological experiences that might emerge while undertaking such practice (Lindahl, Kaplan, Winget, & Britton, 2014). Buddhist tradition has acknowledged some characteristics that need to be cultivated as a context and ground for mindfulness practice. First, mindfulness should be embedded in a cultural context and grounded on the understanding of the progression from morality and ethics, moving towards cultivation of attention and then wisdom (Dalai Lama interview with Britton, n.d.). Second, it requires critical analysis and study of the readings and traditional knowledge. As such, practice cannot be taken with conviction before critically analysing the knowledge and context. Thus, this practice does not necessarily bring peace and happiness when isolated from its traditional roots. Its complexities and other elements that accompany mindfulness practice should be considered carefully.

CONSIDERING MINDFULNESS IN LIGHT OF FEMINIST AND ECOJUSTICE THEORIES

In our reflection on mindfulness we also encounter tension surrounding the question of how goals of mindfulness school programs compare with other perspectives (i.e., feminism and ecojustice) that have challenged traditional goals of science education. Across the various forms of feminist and ecojustice theories we are struck by the commonalities in the approaches more so than the differences. In a broad sense, like mindfulness, feminist and ecojustice theories emphasize the relational nature of self. In the Buddhist tradition of mindfulness, for example, individuals reconstruct and relate differently to the self through the process of cultivating self-compassion. In similar ways, many feminist scholars argue that modern knowers have “erased the self, out reasoned their intuitions and inner voices, and ended up with nonspiritual objectivist perceptions of society and education” (Kincheloe, Steinberg, & Tippins, 1999, p. 82). Feminist theories in their various forms speak to empowerment in their analysis of such issues as class structure, oppression of women or subjugated knowledge of indigenous people. Mindfulness, in a similar fashion, speaks to the liberation from suffering for all beings, including humans and other than humans. In much the same way, the dialogue around ecojustice emphasizes the interconnectedness of all beings and compassion for all beings, even the smallest wildflower. After all, children are born already with the capacity for compassion. Like ecojustice theory, mindfulness is a construct grounded in an ethic of non-harm.

In translating theory to practice and vice versa, mindfulness draws on brain research and affect-regulation theories. Various breathing and relaxation techniques are used to regulate teachers’ and students’ responses to stress. Self-regulation is one approach to dealing with emotions and traumatic experiences. However, other theories and frameworks, such as feminist frameworks, provide other approaches and practices which are not necessarily exclusive of mindfulness practices. Feminist practices

could be of particular value to complement mindfulness practices in spaces where people might share personal narratives of oppression. In a school setting, for example, teachers may participate in Theatre of the oppressed, a type of pedagogy where, as a group, they act out various forms of oppression they encounter (i.e., Standards, accountability measures, & high stakes tests) and consider ways to address these. In this high risk context, mindfulness techniques may be a complementary part of the pedagogy. From the standpoint of ecojustice theory, the narratives which create spiritual, social, physical, and emotional connections with all beings may need to start with personal experience, expanding to a deeper sense of agency and connectedness.

We conclude by emphasizing the importance of generating other tensions which can serve as the centrepiece of deliberation as we consider the role of mindfulness in today's educational settings. We have a vision of the role that mindfulness might play in building schools that nurture awareness, compassion, and empathy in children. Within science education we consider mindfulness could complement other theories and frameworks that focus on the well-being of students and contribute to provide a more holistic view of science. We concur with Stephen Batchelor who, in the book "After Mindfulness: New Perspectives on Psychology and Meditation" notes the importance of "attending to every aspect of experience within a framework of ethical values" (p. 38).

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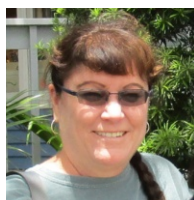
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LINDA NOBLE AND MAŁGORZATA POWIETRZYŃSKA

8. MINDFULNESS IN TEACHER EDUCATION

Trials and Tribulations

ABSTRACT

In this chapter we discuss our collaborative process of infusing mindfulness into a graduate level course in a Teacher Education Program. As two mindful practitioners and educators, we share our emergent understanding of how embracing mindfulness in teacher professional development provides a dialectic for the teacher | researcher and mediates course content and pedagogy.

Keywords: heuristics, mindfulness, relationship, compassion, self-awareness, teacher education, coteaching

*Breathe, breathe in the air.
Don't be afraid to care.
(Gilmour, Waters, & Wright, 1973)*

When I (Linda) saw you (Małgorzata) walking toward me at the Middle College National Consortium (MCNC) Summer Professional Development Institute, I had a sense of, “Here’s someone who knows me.” Your presence allowed me to be seen, giving me a sense of belonging and connection in the context of anonymity. I felt no-judgment. It was the same smile, the same love; the past ten years of not traveling the same path just dissolved away like sugar in water. I remembered our past work together expanding educational horizons for those who have been marginalized by oppressive and inequitable systems. In your presence, I felt curious and excited in anticipation of what you were doing at the conference. I was going to have an opportunity to learn about your research by attending your presentation.

I (Małgorzata) am always paralyzed at the thought of presenting. No matter how well prepared, my mind is ruminating the night before making it impossible to sleep. When I arrived at the conference for my presentation, my worst fears were realized. The large ballroom was filled with what appeared to be hundreds of strangers sitting down for lunch. I was convinced everyone was going to judge me, and the verdict had been decided. I sought out my co-presenters at a lunch table with the familiar knot in my stomach unable to eat. I needed coffee. When I first saw you (Linda) at the coffee station, I was consumed by the fear of my impending session. In hindsight, my default “mindless” state was in stark contrast to the mindful focus of

my presentation. At the same time, I felt great comfort in your supportive presence. I had a fleeting appreciation for the serendipitous encounter that would become a profound moment in both our lives.

When the day's proceedings had drawn to a close, we began to relax over a glass of wine. Feeling there was a purpose to our stumbling into each other, we wanted to unravel the past ten years. Our mindful listening and speaking centered on our passion for transformative education. As we engaged, we felt deeper appreciation for and understanding of the dialectical nature of our relationship: one (Małgorzata) having a firm grip on research and seeking to further her interrupted pedagogical experience; the other (Linda) recognized for excellence in teaching, striving to reenter the research community. When we opened our hearts and minds to what might emerge from our union, we began sensing empathy and compassion and trusting in what was to come.

Two months later, just before the academic year began, I (Małgorzata) received a long-awaited offer to teach a graduate level course in teacher education. I deliberated, fearing that less than one week was insufficient time to engage in what I would consider solid preparation. Thus, with a heavy heart I turned down this opportunity. That very same night while ruminating over my decision, I received a text from you (Linda) asking whether I would be interested in coteaching with you a foundations course in teacher education. Without hesitation, I accepted the offer and our new journey together began.

THE COURSE

Analysis of Classroom Interaction and Curriculum is a 3-credit, 15-week long, graduate level course in a secondary teacher education program at an inner city public university (see below for bulletin description). Each semester, we meet between 20 and 25 students who may be either pre- or in-services teachers preparing to educate youth in English, Social Studies, or Math, as well as in Spanish, French, and Physical or Special Education with few enrolled in Science Teaching majors. While some of our students may be entering teaching as their very first profession, others may be career changers. Each semester, we are inspired by powerful autobiographical reflections our students pour onto paper at our request in the very first class. We learn that regardless of their professional past, these teacher candidates bring into our collective space a wealth of life experiences including those associated with teaching and learning writ large (both in formal and informal environments). Our mutual task becomes to honor and draw on this multitude of respective meanings and understandings (or, what might be referred to as polysemia) while cogenerating new knowledge. As we write this chapter, we are at the beginning of the fourth semester teaching the course.

Bulletin Description: The course offers an introduction to improving teaching methods through techniques of self-analysis and analysis of classroom interactions. Examination of the instructional settings and instructional strategies

with focus on students with special needs and English language learners. Analyzing learning processes and modes of communication in the classroom. Exploring the specialized discourses of the subject disciplines in adolescent, middle, and childhood curricula. Evaluating the use of technology in the classroom. New York State Learning Standards requires a 20-hour supervised field experience that provides further opportunities for reviewing and developing teaching strategies focused on effective classroom interaction and curriculum.

Our Individual Initial Encounters with the Course

When I (Linda) first received a copy of the existing syllabus, I had to understand its form and peel back the thinking that might have led to its shape. This involved weeks of ploughing through and critically analyzing the materials to unearth the core elements of the course while respecting the organic relationships and existing sequence. The next step was to have my philosophy of education seep into the fabric of the course. As I strongly believe that learning is situated in relationships, I felt the need to create openings for student voices to become threads in the initial design. Lev Vygotsky (1978) and Jean Lave (1988) stress the social roots of cognition. Vygotsky introduced “the zone of proximal development” in 1962, and, in her theory of “everyday activity,” Lave (1988) expands upon Vygotsky’s work, arguing that “cognition observed in everyday practice is distributed among mind, body, activity, and culturally organized setting” (p. 1). Seeing beyond the concept of teaching as a technical profession, I felt an ethical responsibility to incorporate elements of teacher self-care through mindfulness that I had benefited from (Noble, 2016). This motivated me to reach out to you (Małgorzata) with your research experience in this area.

I (Małgorzata) reviewed the sequence of course topics you (Linda) shared with me. As I deliberated about familiar mindfulness resources that might prove relevant, I was struck by how easily they appeared to be applicable to virtually every theme in the existing curriculum. I was quite aware that the standard concepts fundamental to teacher education in the United States are rarely embraced within a conceptual framework of contemplative practice. In contrast, nations like Bhutan integrate meditation into teacher preparation, appreciating the potential of the practice to enhance classroom dynamics as well as teacher well-being (Daker, Lhamo, & Rinchen, 2016). Similar considerations are evident among the growing number of American proponents of mindfulness training for teachers. For example, Kimberly Schonert-Reichl and Robert Roeser (2016), advocate mindfulness as a stress reduction tool pointing out that educators “create the ‘weather’ in which the learning and development of children under their care occurs.” Thus, they continue, in order to be effective a teacher needs to be able to “place oxygen mask on self first, then attend to those in [her] care” (p. 7). In this light, similar to your (Linda’s) stance, I resolved that focusing on ways of creating positive classroom climate as well as on teacher self-care needed to come to the forefront of our course.

The benefits of engaging in mindful ways of being (classroom or not) is supported by extensive lived experiences with contemplative traditions of nations like Bhutan as well as by a mounting evidence from western modern science. Indeed, collaborations among practitioners of the two seemingly irreconcilable epistemological systems (i.e., expert Buddhist meditators and scientists.) have afforded in recent years development of new scientific disciplines such as contemplative neuroscience. A team consisting of a Buddhist monk, Mathieu Ricard, and two neuroscientists, Antoine Lutz and Richard Davidson, argues that, through the process of neuroplasticity, “meditation can rewire brain circuits to produce salutary effects not just on the mind and brain but on the entire body” (2014, p. 42). They further argue that the goals of meditation overlap with many of the objectives of, among other disciplines, education. Therefore, I concluded that it made perfect sense to share this knowledge with those who were preparing to enter the profession. Notably, in my thinking about ways of reshaping the course, I was able to draw on theoretical frameworks and practical experience I gained through participation in interpretive studies conducted in teacher education context under the mindful tutelage of a scholarly duo, Kenneth Tobin and Konstantinos Alexakos. One project in particular, the BC Study (which coincidentally was my initiation to conducting research grounded in hermeneutic phenomenology), served as a source of inspiration for making a number of methodological suggestions for incorporation into our course design. Included were mindfulness interventions – breathing meditation and heuristics – which were originally developed and enacted as tools for alleviating strong emotions (and associated stress) that arise in the classroom (Powietrzyńska, 2015). I also felt strongly about inviting our students to engage in coteaching arrangements; an approach Tobin (2014) initiated in his teacher education program at the University of Pennsylvania back in 1998 and which Alexakos (2015) adopted in his classes. Following a coteaching model was an example of adopting a framework grounded in dialectical relationships (represented by a Sheffer stroke) that, in the words of Tobin (2006), “seek to transcend part-whole dichotomies” (p. 16). Thus, Linda and I would later determine that everyone in our class would be encouraged to assume a role of a teacher | student with a right to shape the course while sharing a collective | individual responsibility for its success. Furthermore, driven by my commitment to principles of authentic inquiry (Tobin, 2006), I cared deeply about exploring with our teacher candidates knowledge and practices that promote their own and their future students’ wellness stretching beyond the classroom walls. I was guided by research demonstrating that one of the strongest predictors of well-being (in children and in adults and across cultures) is the quality of an individual’s social relationships and it is altruism and pro-social behavior that contribute to the quality of social bonds (Davidson & Schuyler, 2015). Our course in “classroom interaction,” whose success depends to a large extent on building and maintaining positive relationships with self and with others – a disposition that may be developed and/or enhanced through engaging in mindful practices – was a perfect candidate for testing these findings. My experience working in sociocultural tradition informed me that to further our mutual relationships, we would need to create spaces for all voices

to be heard (polyphonia) and to develop structures affording differing viewpoints and meanings to be respected and learned from.

I felt elated making recommendations on the course design – it was an exciting and reaffirming process. At the same time, while I was fairly confident in my research skills and knowledge, I was aware that by entering into this new collaboration, I would be assuming a new identity. Having been disconnected from the classroom for more than a decade and having no prior experience teaching graduate level courses, I felt quite vulnerable and humble. In addition, my familiarity with public schools was limited to what I gleaned from scholarly literature and to my dealings with the system as a mother of one of its students. Thus, I wondered: Would what I had to offer be viewed as of value by our future students? Would they be receptive to content and practices that were not part of mainstream educational theory? As many similar questions were swirling in my head, I took comfort in knowing that I would not be alone; I would have you (Linda) to lean on. I was also motivated by the trajectories of others like Davidson or, closer to home, Tobin and Alexakos as well as you (Linda) who took great risks by following what they believed in. It was time for me to muster courage and join the ranks in educating for improved quality of lives driven by a conviction that, in the words of one of our students, “the powerfulness of mindfulness is it goes beyond benefiting just teachers and students, it has the potential to transform society” (Sue, pre-service Social Studies teacher, Spring, 2017).

Merging Our Philosophies

Our mutual objective became to present the course content through the lens of mindfulness and in so doing to clearly articulate our philosophical approach in our syllabus (see below).

Our Teaching Philosophy: Consistent with the contingent nature of social life, our syllabus is a living document; it will respond to the needs, capacities, and interests of the class. There may be occasions where readings or assignments change over the course of the semester. Should this occur, students will be notified in advance. We are open to including reading suggestions from students. Since teaching and learning are in a dialectical relationship (i.e., one presupposing the other), all course participants are considered both teachers and learners. Therefore, we all have individual responsibility to contribute to the success of this collective endeavor. Engagement in cogenerative dialogues (cogens) and heuristic methodology will provide one space to reflect on and shape what happens in our class. Key attributes of our work will be collaboration, process focus, and mindful practice. We subscribe to what Ellen Langer (1989) calls *mindful learning* described as (a) continually creating new categories of experience as one progressively masters new tasks, skills, and domains of knowing, (b) being open to new information and experience, (c) being open to

perspectives other than one's own, and (d) exercising choiceful attention to the process, rather than the outcome, of learning.

At the same time, we wanted to preserve the integrity of the course foundational topics (e.g., motivate & engage, differentiate & assess, (co)plan & (co)teach lessons & units). Our method was to connect mindfulness to these elements. For example, in week 8 (*Coteaching Mindfully*), which focused on the essential question: How can we facilitate effective teaching | learning, the agenda was balanced to include the following sequence of activities:

- Engagement in opening mindful protocol
- Reshaping and adapting coteaching heuristic, i.e., identifying characteristics salient to our context
- Co-facilitation of readings on both coteaching and mindfulness in education
- Watching and reflecting on a video clip illustrating the use of oximeters to capture physiological expression of emotions of teacher candidate
- Sharing fieldwork reflection research paper highlights

INFUSING MINDFULNESS INTO THE COURSE

Where Do We Begin?

The email exchange below documents our initial thinking about how to introduce mindfulness to our students in the very first class. The discussion culminated in our deciding to feature Amy Burke's Ted Talk *Mindfulness in Education, Learning from the Inside Out* and to follow it with a breathing practice.

Linda: Lesson 1 needs introduction activity that is mindful.

Małgorzata: I suggest we show a 12:49 minute TEDx talk titled *Mindfulness in Education, Learning from the Inside Out* by Amy Burke <https://www.youtube.com/watch?v=2i2B44sLVCM>. Rationale: Amy is a teacher and starts her presentation by describing her emotional and stressful experience as a beginning teacher – something the students will be able to identify with. Amy speaks about the transformative power of mindfulness as experienced in her practice including the role of emotions. She discusses advantages of mindfulness for students not just from an instrumental perspective (e.g., improving academic performance) but more globally. She proposes reframing the goals of education and addresses some policy implications. She also engages the audience in a mini-breathing practice. Class activity: Before playing the video we might ask how much students know about mindfulness (optional). Alternatively, we could have writing prompt – similar to that at the MCNC w-shop in June (e.g., what does it feel like to be a teacher or something like that). We should then ask students that while they are watching the clip,

they note themes/ideas that resonate with them and their utility in their role as teachers – mindfulness is a multidimensional construct and it is natural for different people to like/relate to its different facets. Students will share out their reflections in whole class discussion. Finally, we will propose to the class that breathing meditation will be enacted in each session throughout the semester.

Amy Burke (2013) provided us with a springboard to launch into our initial discussions of mindfulness in education. Unsurprisingly, the video generated a diverse response. While some students with prior teaching experience were able to relate to Burke’s traumatic experience as a novice teacher, others were unable to connect to the emotional responses she described. For example, one of our students had a difficult time understanding why Burke claimed she cried a lot. Furthermore, Burke, a white, middle class female who is like us (Linda & Małgorzata), was not representative of all our students, which in itself may have interfered with their ability to identify with her. We learned that when selecting material we need to be cognizant of, and accountable for, our own bias while being sensitive to power structures in the classroom and beyond. Even though we continue to use the video with a follow-up discussion as mindfulness introductory activities, we realize that we need to seek an alternative. It has necessarily taken us some time to get to this point.



Figure 8.1. Students watch Amy Burke's Ted Talk

Taking First Collective Breaths

After the conceptual introduction through the video, we felt it important for the students to experience mindfulness through engaging in breathing practice. Informed by encouraging results of prior research (Powietrzyńska, 2015), we decided that the initial unguided practice be 3 minutes. In part, we anticipated that sitting in total silence would be a radical experience for the majority of our students in the context of an academic setting. What we were not quite prepared for were the dismissive, resistant, and skeptical responses expressed by some of our students. In hindsight, we were naive in our tunnel vision that was built on

having spent extended time studying and practicing meditative theories and their applications. Our experience with mindfulness could have been characterized as elitist since we were academics interfacing with like-minded individuals with a high level of acceptance of contemplative practices. In our classroom, for the first time, our axiology was being challenged; it was a test of our mindfulness, i.e., our ability to embrace difference and be compassionate in honoring the teacher | student dialectic. In this context, our students became our teachers. They were showing us that there was a gap between our respective understandings. We realized that we thought about the content without considering our students' level of preparedness for the topic and possibly violating one of the fundamental principles of education (e.g., Vygotsky, 1978). In turn, we weren't ready for their intellectual and emotional discomfort with the practice we perceived as very valuable. At the same time, we needed to appreciate that some pre-service teachers lacked the breadth of experience to perceive mindfulness as a tool for self-care and student well-being both essential to mediating classroom interactions. Nevertheless, we were sensitive to positioning mindfulness (just like any other strategy taught in the course) as one of the tools in a teacher's toolbox that she could draw on when and as necessary in different fields of her social life.



Figure 8.2. Malgorzata and Linda engaged in mindful breathing

Even though the reception to the breathing practice was not uniformly positive, we insisted that each class began with a mindful practice to quiet our minds and increase attention and focus. Our rationale for this practice was to develop continuity and to share in a ritual. From the perspective of sociology of emotions, including that of Randall Collins (2004), such collective practice might be framed as an example of interaction ritual with a potential of contributing to the development of group solidarity and a sense of belonging among its participants. Even though we did not mandate participation, we asked that everyone respect the event.

Driven by the teacher | student dialectic, we began to encourage our students to experiment with facilitation of the mindful practice. The reaction to our invitation varied from semester to semester. Often, our call for volunteers met with tepid response. Yet, there were times, students surprised us with creative approaches. For example, in our first semester a student placed an object in the center of our circle and asked the class to mindfully focus on it in silence for a few minutes. The turning point was in the second semester when two student coteachers made mindfulness practice part of their lesson plan. It was then that our collective breathing had stopped being merely a protocol at the beginning of each class. Indeed, the ripple effects were taking hold as in teaching their mini lesson the coteachers were making the mindful practice part of their craft. Not only were the coteachers aware of mindfulness, but also they demonstrated how they might use it as a tool in their future practice. Their decision was affirming for us. It raised our expectation that mindfulness practice be included in each coteachers' lesson plan. As a result, responsive to the contingent and emergent nature of curriculum development implementation, we modified the coteachers' lesson plan template for our course. Thus, the curriculum was evolving as students took ownership of the content, method, and duration of the mindfulness practice. Indeed, we found it most helpful to have an array of mindful breathing resources/activities to differentiate the experience for engagement (see Appendix A).

Mindfulness Readings

In order to give legitimacy to mindfulness as a scientific concept, we decided to incorporate a number of readings, particularly those from the field of neuroscience. We soon discovered that we were unrealistic in our assessment of how many mindfulness-focused readings we would be able to assign in addition to the existing materials. Thus, in order to strike a proper balance (after all, this was not a course in mindfulness), several articles needed to become supplemental rather than mandatory. At the same time, it was important that students be informed about the current research findings on the benefits of mindfulness to teaching and learning and how the research related to the themes of the course. For example, when speaking about teacher evaluation that may be one of the sources of teacher stress, we studied manuscripts discussing resilience and teacher burnout by Lisa Flook and colleagues (2013) as well as Robert Roeser and his associates (2013). Other important work came from mindfulness giants including Richard Davidson, Jon Kabat Zinn, Dan Siegel, as well as our own (see Appendix A). We implemented the reading assignments in a fairly traditional way. Students were asked to read the articles, and reflect in writing in an online discussion blog. Oftentimes we were blown away by the depth of analytical thinking in students' reflections and their ability to make meaningful connections between different threads within the course. Below is a blog entry by one of our in-service teachers in response to week 8 readings in which the author thoughtfully and explicitly links mindfulness and coteaching:

I found that though the articles on coteaching did not necessarily mention “mindfulness” as a buzzword, successful coteaching cannot happen without it. The particular connection I would like to draw attention to is when Noble (2016) explains that to be mindful, “and learn new ways of the world, I needed to be highly tolerant of ambiguity, uncertainty and uniqueness (difference)” and that mindfulness allowed her to be “liberated from judgment of my students and myself.” Where I see this being useful in coteaching is in being able to have honest conversations (with or without mediation) to understand the strengths of teaching teams, if we are not to merely have two “clones” in a classroom (Beninghof, 2015) and best take advantage of having two professionals of different subject areas working together. To say it more simply, and quote Queen Elsa, from Disney’s *Frozen*: perhaps we just need to “Let it go.”

Sometimes I wonder how much of what gets in our way as educators (I say educators, but this phenomenon is not specific to teaching, by any stretch of the imagination) is rooted in ego. One of the things that mindfulness helps its practitioners accomplish is a greater sense of compassion, empathy and self-awareness (Noble, 2016). I would imagine that this would help our ability to accept feedback (or criticism) as things that would make us better educators. Not only that, but I imagine that practiced meditation/mindfulness would make these kinds of difficult conversations easier, as the kinds of things that might have once triggered us to go on the defensive or cause offense, we would be able to take in, contemplate and then navigate the comments in a different way. (Kelly, in-service English teacher, Spring, 2017)

During the first semester we taught the course, we discussed assigned readings in a teacher-led whole class arrangement. We often drew on excerpts from the online blog to guide our discussions so that our conversations could revolve around themes identified as important by our students rather than by us. In the following semesters we moved to having two or three students cofacilitate collective conversations about the readings (cofacilitation became yet another opportunity to coteach). Similar to the evolution of the experiential (breathing) practice, as the conceptual understanding developed, some students took initiative to identify and share mindfulness resources. In response, we created a depository space in our Blackboard online discussion forum.

MAKING THE INVISIBLE VISIBLE

Reflexivity

Grounded in the work of Pierre Bourdieu (Bourdieu & Wacquant, 1992), reflexivity (or, the process which allows an individual to become aware of what s/he may be unaware) was one of the focal ideas we promoted in our course. In the following excerpt from our course syllabus we briefly explain the purpose of reflexivity.

From Course Syllabus: What is the role of the teacher | researcher in a socio-cultural contexts of teaching | learning? This course explores the development of the reflective teacher's capacity to develop deep understandings of relationships; specifically interactions among self, coteacher(s), students and the curriculum. We engage in the practice of, what Zeichner and Liston (2014) refer to as, *reflective teaching* "by asking broader questions such as: 'Are the results good?' 'For whom?' and 'In what ways?' not merely, 'Have my objectives been met?'" (p. 12)

One of our major objectives was to help our students develop a capacity for self-reflection and enhanced interdependence. As noted above, being reflective is important for a teacher's professional development and, as pointed by Alberto Bellocchi and his Australian team (2014), it is critical for nurturing positive classroom climate. Patricia Jennings and Mark Greenberg (2009) found that mindfulness can be a resource for educators to be more aware of the emotional climate in their classrooms. Similarly, in a recent article, Jasna Schwind and her colleagues (2017) point to research that suggests, "through the practice of mindfulness students have the potential to develop reflexivity, as well as skills to help them manage stress and subsequently support their engagement in highly demanding professional practice following graduation" (p. 92). Thus, we wanted to model the use of reflexivity as a tool for learning. To that end, we engaged our students in exploration of heuristics and in free writes.

Heuristics

Used as tools to mediate reflection, heuristics help heighten awareness of critical traits of a concept such as mindfulness. Therefore, they become yet another way of exploring complex ideas. Heuristics are reflexive as they allow for individual, deep and nonjudgmental interaction with characteristics of a construct. For example, below are two characteristics extracted from a heuristic focused on the construct of mindfulness.

1. When I produce strong emotions, I can let them go.
Very often or always · Often · Sometimes · Rarely · Hardly ever or never
2. I am aware of others' emotions from the tone of their voices.
Very often or always · Often · Sometimes · Rarely · Hardly ever or never

In earlier studies Powietrzyńska and Tobin (2015) theorized that, when a student reads a characteristic he/she assesses the extent to which it relates to his/her enactments. This self-reflection provides an embodied sense of a construct. For example, characteristic #1 allows one to consider throwing away one's attachments to past events that produce strong emotions in order to be fully present. In the dynamic context of a classroom, where strong emotions can rise instantaneously and frequently, being able to "let go" of one's emotions is significant for

maintaining well-being. As demonstrated by Jambay Lhamo and her colleagues in this volume (2017), such ability of affective detachment provides an opportunity for teachers to become responsive rather than reactive. In our course, we ask our students to complete individually a 17 characteristic mindfulness heuristic using a SurveyMonkey® platform (see Appendix B). Subsequently, in class we present the responses for collective reflection which becomes a reiterative activity allowing us to further immerse and grow in individual | collective understanding of the construct. We also experimented with the use of heuristics for mindful listening, mindful speaking, and coteaching. The latter was intended to inform students in co-planning and implementing their lessons, as well as engaging in reflection on the process. Heuristics gave us a shared language to cogenerate meanings associated with key constructs in creating a mindful classroom culture. The notes below document Małgorzata's initial justification for using heuristics in our course.

Heuristics: I would like us to expose students to heuristics as interventions and awareness-boosting tools. Heuristics may be used as a way to unveil a construct. So, in week #2 (Engagement), we could have them complete a cogenerative dialogue heuristic (this is also relevant to week #12 – Creating Effective Learning Environment); we could also use the mindfully listening and speaking heuristic. To get familiar with the heuristic concept, students would need to read a short entry in Encyclopedia of Science Education I co-authored with Ken Tobin. Available is also Ken's [Tobin] article that speaks about cogenerative dialogue as a classroom practice that contributes to improvements arrived at through collective decision-making (what you referred to as a democratic process). Hopefully some students will see heuristics as a useful tool and will develop their own. Finally, we might consider assigning my 2015 book chapter to further familiarize students with what I expect will be for them a number of new concepts.

Reflecting through Free Writes and the Coteaching Dynamics

Throughout the course we created spaces for students to engage in occasional free writes. The activity was often emergent in response to what was unfolding in the classroom. For example, when a free write followed mindful breathing practice, it gave all students an opportunity to openly express themselves while giving voice to students who might not have otherwise felt the agency to articulate their perspective. Free writes also gave us a holistic view of how the students were experiencing the course. We gave prompts and highlighted quotes from student weekly responses to the course readings as a way to stimulate free writes. They functioned as reflective tools for the students, and as we reviewed them, we reflected on our practice. In other words, student reflections mediated our reflections.

We were very aware that not everyone thinks or feels the way we do. The coteaching model we enacted further enhanced the ways in which we attempted



Figure 8.3. Students freewrite

to make sense of the individual | collective experience. Our classroom spilled over to our shared ride to and from the college. En route we always spoke about communications with students and risks that we wanted to take in making last minute changes to the upcoming agenda. After class, we either commiserated about how poorly we felt the class went or were elated about what happened. The planning and reflecting over the course was hardly limited to the 40-minute car ride. Indeed, we routinely met each weekend for long hours to mindfully reflect on and to meticulously plan content, activities, groupings, communications and our individual roles in Linda's apartment. Being together and having each other's back was important in planning. But, we also grew to allow ourselves to become more emotionally vulnerable with each other, sharing perceptions of failure or inadequacy. It was in these moments that we realized the heartfelt nature of coteaching, which we also wanted to nurture in our student coteachers. We drew on each other's strengths, Linda (protocol queen) and Małgorzata (detail-oriented princess). We were the source of strength by reminding each other of the need to be non-judgmental of weakness. Our experience was not unique as evidenced in one of the assigned classroom texts authored by a coteaching pair of high school teachers, Kenneth Mandel and Terry Eiserman (2015):

We've discovered that working closely with a colleague has energized and strengthened us as professionals. It's provided us with the opportunity to learn with and from each other and to take risks. Together, we've supported each other emotionally and grown as professionals. (p. 75)

The Power of the Not-So-Hidden Curriculum

We came to realize that what might have made our course unique was our consistency in enacting a tapestry of approaches that focused on creating a positive

and safe classroom environment. From the very first class session we insisted on everyone being seated in a circle so that we could be physically orientated for mindful speaking and listening. Appreciating that whole group discussions may result in inequitable distribution of voices, we frequently broke our circle for “turn and talk” or small group activities in which students addressed one other by using their respective first names. Jigsaw protocol with students rotating from group to group further facilitated interactions in which mindful listening and speaking (or what some educators may refer to as accountable talk) was encouraged. We also emphasized the need to incorporate wait time (Tobin, 1987) into our oral exchanges and to honor characteristics we learned through mindful speaking | listening heuristic (Tobin, 2015). The above methods were a reflection of our theoretical commitment to polyphonia.



Figure 8.4. Students “turn and talk”

Over time, as students developed competence in mindful communication, we as teachers were able to remove ourselves from being the driving force of the unfolding interactions. Indeed, when our class was observed by the department chair that was notable feedback we received about our pedagogy. At the same time, some of our students questioned our classroom practice as us “not doing our job” (i.e., by not following the traditional way of teaching, we were not meeting our students’ expectations). Some students demonstrated a level of discomfort with not being able to have all the answers and sitting in uncertainty. Undoing graduate students’ fixed mindset (Dweck, 2006) of valuing product over process, which was manifest with students’ obsession with grades, emerged as a challenging task. In addition, deeply rooted individualistic approaches to learning inevitably interfered with collaborations. A prime example was in the coteaching assignments that may have felt by some of our students as if they were being forced into “an unarranged arranged marriage” (Blair, 2017). Furthermore, striving for perfection stifled the ability of some to be open to the ideas of others. The challenge for us was to build trust in our relationships so that students would take those risks, perhaps for the first time in their lives, and as a result to grow. Our approach to the course might have initially been a source of anxiety and stress for some. What we were trying

to teach through mindfulness was the ability to be present (i.e., not being goal driven), self | other aware, non-judgmental, and compassionate. In the context of a teaching | learning dialectic, this expectation was a two way street because we needed to be understanding of our students who came in with preconceived ideas of what it meant to educate and be educated. At the same time, we had to have trust and confidence in the process despite setbacks. What we needed to learn was to let go, as some students did not quite embrace what appeared a radical approach.

A big idea in our classroom was valuing difference. This meant being open to learning from others, as well as being respectful of one another. The respect was being built by breaking down the traditional power structures and equalizing voice (i.e., student voice equal to that of teachers) and making it a collective responsibility to create spaces for everyone to be heard. We insisted on building on the ideas of others rather than focusing on one's own. Learning these principles proved difficult for some students who were used to dominating classroom conversations. Thus, it was always extremely rewarding when we either observed shifts in our students' conduct and when, in some cases, they explicitly communicated their gratitude for what we were teaching them as in the email excerpt below:

PS. I'm glad you partnered me with Liu ... this will be an interesting learning experience, and I look forward to finding out how we will interact and if I can coax him out of his shell and he can teach me to talk less ... (Sarah, in-service English teacher, Spring, 2017)

LESSONS TAUGHT AND LEARNED

Ultimately, we believe that engagement in a coteaching model was a source of strength that allowed us to persevere in our conviction to go on. Unfortunately, at this point the universities do not have a useful and sustainable framework that would promote such supportive arrangements. As Adjunct Assistant Professors working full-time in other capacities (Linda a high school teacher; Małgorzata an academic administrator) our engagement in planning and implementing this course was an act of love as we certainly were not motivated by the meager compensation (each earning half the hourly rate). Thus, there is a need for change in the educational system which continues to view teaching (and learning for that matter) as an individual endeavor to allow for coteaching arrangements. Secondly, mindfulness needs to be infused into the content and methodology of teaching and learning. Despite current evidence pointing to the potential benefits of mindfulness practices, they “have yet to be fully integrated within the undergraduate and graduate curricula at most higher education institutions” (Schwind et al., 2017, p. 92). Furthermore, as noted by Deborah Schussler and colleagues (2016), while the number of mindfulness-based interventions for elementary, middle, and high school students has grown, there is still a paucity of programs geared toward promoting the well-being of teachers.

Guided by the principles of authenticity criteria (Tobin, 2006), throughout our course we attempted to model what we consider a beneficial approach to teaching | learning. We wanted our teacher candidates to experience how they may interact with their future students and how this mindful approach may prove useful to their future practice, which includes their and their students' well-being. Chin Reyes and her colleagues (2012) note,

Authentic instruction cannot take place unless teachers attend to the social and emotional aspects of learning. (...) [W]hen a classroom climate is characterized by warm, respectful, and emotionally supportive relationships, students perform better academically in part because they are more emotionally engaged in the learning process. (p. 11)

Thus, we emphasized that the enacted practices were part of a teacher's toolbox. We are confident that, even though some of our students were not quite ready for some of the concepts we experienced together, the sheer awareness of them was an important first step to increasing the probability of their being happier and healthier teachers. Indeed, it is impossible to predict which elements of what we learned together would become a resource, or even to tell if, or when, the practice might be of value. In one case, a crumpled piece of paper stuffed at the bottom of a school bag with words "stay together" was what resonated weeks after the course was over. As illustrated by the email below, for one of our high performing students (whose identity includes being a Muslim-American woman), the emerging political climate was a cue to share her appreciation of what we coexperienced in our course and to turn to mindfulness.

Dear Professors,

I want to cut straight into this. I want to thank you.

I remember sitting in the lab reading Margaret Wheatley's poem "Turning to One Another," and thinking "yeah ... I like this." But when class ended, and life went on, that piece of paper was shoved into my folder and forgotten about until two days ago when I decided it was time to clean a few things.

With recent news coverage on our current political climate, this poem seems as true today as it did while reading it in class and as true as this weekend and many more days to come. While I can't give either of you credit for writing the poem (wink, wink), it was your decision to read it in class and to share it with us, and for that ... I sincerely thank you.

In my other classes last semester, classmates were not as active in talking to each other before or after class. They were silent, and sat in their seats as if everything was set in stone and nothing could be learned or gained from their peers. That environment felt so detached, and cold, in comparison to your classroom. You created a respectful environment, and for once in all of my

school years I felt comfortable participating – which, I promise you, has never happened before. I was able to participate because I felt safe, I felt comfortable, and I felt heard. Those are three amazing things to feel in a classroom – and the both of you created that.

I think when class ends, you have a long journey home, and you are worried about your grades and you are experiencing a lot in just one day, it is hard to remember to “talk to people you know,” “be intrigued by the differences you hear,” to “remember, you don’t fear people whose story you know,” or that “meaningful conversations can change the world,” as Wheatley writes. This poem touched me during that class period, and it touches me even now. Thank you so much for sharing it.

“Stay together,”

Fatima

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APPENDIX A

Class Mindfulness Resources (Readings, Videos, and Audio Files)

- Burke, A. (2013, October 15). *Mindfulness in education, learning from the inside out* [Video file]. Retrieved from <https://www.youtube.com/watch?v=2i2B44sLVCM>
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*Readings featured in week 8 of the course

APPENDIX B

Mindfulness in Education Heuristic

Your name _____ Date _____

For each characteristic circle the numeral that best reflects your current state of mindfulness in this class. As necessary, provide contextual information that applies to your rating.

*5 = Very often or always; 4 = Often; 3 = Sometimes; 2 = Rarely;
1 = Hardly ever or never*

During this class:

1. I notice my emotions without reacting to them.
2. I am kind to myself when things go wrong for me.
3. I recover quickly when things go wrong for me.
4. Even when I am focused I use my senses to remain aware.
5. When I am emotional, I notice my breathing.
6. When I am emotional, I notice my heart beat.
7. I maintain a positive outlook.
8. The way in which I express my emotions depends on what is happening.
9. The way in which I express my emotions depends on who is present.
10. When I produce strong emotions, I can let them go.
11. When my emotions change I notice changes in my body temperature.
12. The way I position and move my body changes my emotions.
13. I use breathing to manage my emotions.
14. I am kind to others when they are unsuccessful.
15. I can tell when something is bothering another person.
16. I am aware of others' emotions from the tone of their voices.
17. I recognize others' emotions by looking at their faces.

ABOUT THE AUTHORS



Linda Noble has been teaching for twenty-five years. She is an adjunct assistant professor in the School of Education at Brooklyn College. She teaches social studies in a New York City public high school and is certified by the Irish Teaching Council as a post-primary business studies teacher. Linda's teaching philosophy reflects the social constructivist framework she applies to her research. She received the Butler Cooley Excellence in Teaching Award and Long Island

University Teacher of the Year Award for her enriched classroom environment where social engagement is rooted in mindfulness, empathy, and appreciation of multiple perspectives. Linda has a Bachelor's degree in business studies from the University of Limerick, Ireland, Master degrees from New York University and Brooklyn College, and a doctorate in education from New York University. Her current research interests focus on mindfulness practice in education.



Malgorzata Powietrzyńska earned her Ph.D. in Urban Education at the Graduate Center of the City University of New York (CUNY). As an Academic Affairs Manager, she works with faculty and students and coordinates grant writing and grant administration activities at the Brooklyn Educational Opportunity Center of the State University of New York. In addition, an Adjunct Assistant Professor,

she teaches at Secondary Teacher Education Program at Brooklyn College, CUNY as she continues to be involved in research focusing on emotions and mindfulness in education.

In addition to coteaching the course described in this chapter, Linda and Małgorzata collaborate on providing professional development workshops in self-care and mindfulness to in-service public school teachers. Currently, the authors are working on setting up a Mindfulness Center to serve students and teachers at Linda's high school as part of the Mental Health by Design (MHxD) pilot project supported by a grant awarded by Fund for Public Health in New York City (a nonprofit arm of the New York City Department of Health and Mental Hygiene).

EWA DEBSKA

9. IN SEARCH OF MINDFULNESS

Polish Context of “Being Attentive”

ABSTRACT

In this chapter I share my own experiences in the search for information on “mindfulness” in Poland. I analyze the available literature from three perspectives: (1) pedagogical, (2) human management focused, and (3) psychological. The latter devotes attention to mindfulness to the greatest extent. Consequently, I come to the conclusion that in recent years mindfulness has become a popular term and an increasing number of books on this subject are being translated into Polish and published in Poland. However, mindfulness is treated primarily as a practical category and as such is presented largely in the self-help publications.

Keywords: mindfulness, uważność, mindful, Polish context

Dorota: Hey, are you listening to me?

Ewa: Yes, you are telling me about your daughter.

Dorota: Not precisely. Do you know what it means to listen mindfully?

Ewa: I know what it means to listen actively, but mindfully.... What do you mean exactly?

I remember the dialogue, which I had with Dorota Koczevska. Dorota was then a student of doctoral studies at the Graduate Center of CUNY and was conducting research on mindfulness. She was dealing with mindfulness in relationship to parenting. As a close person, Dorota was talking to me about various topics. In time, mindfulness has become one of the leading topics in all our conversations. Intrigued, I decided to examine whether mindfulness was becoming as important a term in Poland as it was in the United States. I was wondering then if mindfulness as a cognitive category was in any way being taken up by Polish researchers. A sketchy analysis of the literature showed that at the time, this term was rarely used in science. However, eleven translated books on mindfulness (Table 9.1), brought mindfulness into the consciousness of Polish scholars in two particular contexts: (1) psychological and (2) the context of reflection upon meditation or yoga, which are treated as types

E. DEBSKA

of mental activity directed at a particular group of people. While I was familiar with these books, I still felt cognitive anxiety.

Table 9.1. Examples of books on mindfulness that have been translated into Polish through 2014

2004	Paweł Listwan (Translator); Allan-Hunt Badiner (Ed.).	<i>Mindfulness in the marketplace: compassionate responses to consumerism</i>
2007	Grażyna Draheim (Translator); Thich Nhat Hanh (Author)	<i>The miracle of mindfulness: a manual on meditation</i>
2008	Marek Czakański (Translator); Myla & Jon Kabat-Zinn (Authors)	<i>Everyday blessings: the inner work of mindful parenting</i>
2009	Dariusz Ćwiklak (Translator); Jon Kabat-Zinn (Author)	<i>Full catastrophe living. Using the wisdom of your body and mind to face stress, pain, and illness</i>
2009	Paweł Listwan (Translator); Zindel Segal, Mark Williams, and John Teasdale (Authors)	<i>Mindfulness-based cognitive therapy for depression: a new approach to preventing relapse</i>
2009	Robert Andruszko (Translator); Zindel Segal, Mark Williams, John Teasdale, and Jon Kabat-Zinn (Authors)	<i>The mindful way through depression: freeing yourself from chronic unhappiness</i>
2009	Małgorzata Trzebiatowska (Translator); John R. McQuaid, Paula E. Carmona (Authors)	<i>Peaceful Mind: Using Mindfulness and Cognitive Behavioral Psychology to Overcome Depression</i>
2009	Paweł Listwan (Translator); Thich Nhat Hanh (Author)	<i>Sun my heart: from mindfulness to insight contemplation</i>
2011	Gładyssek Joanna (Translator), Ronald D. Siegel (Author)	<i>The mindfulness solution: Everyday practices for everyday problems.</i>
2013	Michał Lipa (Translator) Goldie Hawn, Wendy Holden (Authors)	<i>10 mindful minutes: giving our children and ourselves the social and emotional skills to reduce stress and anxiety for healthier, happier lives</i>
2014	Paweł Listwan (Translator); Jon Kabat-Zinn (Author)	<i>Mindfulness for beginners: reclaiming the present moment and Your life</i>
2014	Henryk Smagacz (Translator); Jon Kabat-Zinn (Author)	<i>Wherever you go, there you are. Mindfulness meditation in everyday life</i>

Driven by growing curiosity about the subject, I gladly accepted the invitation to participate in research conducted by Małgorzata Powietrzyńska, who at the time

was Dorota's fellow doctoral student. My role in the study was to translate, and culturally adapt a research tool (mindfulness heuristic) that Małgorzata used in her project and to administer the heuristic to Polish teachers (Powietrzyńska, Tobin, & Alexakos, 2015). Soon after, thanks to Dorota's invitation and Małgorzata's support, I visited the Graduate Center of CUNY where I met Kenneth Tobin, Dorota's and Małgorzata's doctoral advisor and the initiator of the mindfulness studies. When participating in a doctoral course conducted by Ken, I was quite perplexed by his opening routine that consisted of a few moments of collective meditation followed by a freewrite in which students were asked to reflect on a particular topic. I remember that it was in that moment that I began to wonder: Do I want to get involved in mindfulness? Am I mindful? Do I want to be mindful? Do I need to be mindful.

After returning home, I decided to engage in my own (re)search on mindfulness. I wanted to uncover the extent to which the topic of my interest is taken up by Polish authors. I remembered a comment by Jack Santorski, one of the Polish psychologists and book publishers. In the foreword to the book by Thich Nhat Hanh (1992), Santorski shares his concern about the difficulty to correctly translate the term. According to Santorski and with consideration to Sanskrit sources, the word *sattipathan*, from which *mindfulness* is derived, should be translated as *full consciousness*. Santorski admits that if attention is the essence of mindfulness, the term *uwaga* should be used. In his opinion, this term signifies directing one's senses and mind towards a specific object and is different from the colloquial word *uwaga* which means focusing on an object or phenomenon. It can therefore be assumed that in mindfulness, the attention is focused on external phenomena and the mind of a mindful person, whereas attention means focus on factors external in relation to an individual only.

I discovered that occasionally, in various publications, there were attempts to use alternative terms such as *aktywna obecność* (*active presence*) or *świadoma obecność* (*conscious presence*). However, guided by the criterion of usage frequency, I decided to focus on the term *uwaga* as the most suitable expression of the idea of mindfulness. I began my search by analyzing dictionaries of the Polish language. In Polish language there is no single unambiguous word that might be equivalent to the English meaning of the term *mindfulness*. Simply put, this concept does not appear to be present in modern dictionaries of the Polish language. However, this word can be treated as a potential derivative; that is, it is possible to create it. This word belongs to the productive type of word formation that is used as a template for creating new derivatives. Thus, the word *uwaga* (mindfulness) is the result of addition of the suffix *-ość* to the adjective *uwagi* (mindful) which means having the ability to pay attention or to act with attention (Doroszewski, n.d.). The word *uwagi* (mindful) is derived from the verb *uwagać* (i.e., to be focused on something). Thus, I concluded that two terms, which are somewhat related to mindfulness, may be found in present-day Polish dictionaries (e.g., in Dunaj, 2007; in Drabik & Sobol, 2007). One of them is the adjectival (*uwagi*) and the other is the verbal

(*uważać*). The first meaning refers to a person who is *able to focus attention*. The second meaning refers to an activity performed with attention, care, and alertness. To sum up, I resolved that mindfulness is associated with an attentive observer, who performs something with care and/or carefully examines the object of his/her action or an accompanying situation or generally performs different activities with care and attention (Markowski, 2012).

These findings provoked me to conduct further research. Can mindfulness be treated as an innate feature or is it a competence, a skill that can be learned and can be treated instrumentally? Before I could pass any verdict, I decided to analyze the available literature. I adopted two search strategies: one was to use online resources including electronic data bases of the University of Warsaw and the Polish National Library; the other was to visit several bookstores and libraries. Once convinced that I had all possible sources at my disposal, equipped with notes and a number of checked-out manuscripts, I immersed myself in reading. First, I focused on the usage of the words *uważny* (mindful; careful) and *uważnie* (mindfully; with care). With fascination I looked through political leaflets which were widely distributed in 1920 (the period of Polish-Soviet War of 1919–1921) and which called for *mindful* (i.e., *uważny*) reading of the information about the activities of the Bolshevik government. I also examined a 1989 election brochure instructing electorate to read it *uważnie* (mindfully; with care and attention) in order to cast informed votes for candidates for the Provincial Committee of Citizens ‘Solidarity’ in Krosno. Looking through these old documents, I could not resist the impression that the word *uważnie* in its documented colloquial form was used in Poland for much longer than a century.

The word *uważność* is very functional in everyday use. It is short, operational, unambiguous and, therefore, useful and ideal for short proclamations or commands. I realized that when I teach my students, I sometimes ask them to read the text and I underscore that they should do it *uważnie* (with care and attention). But I was also aware that this word got inscribed in my personal vocabulary. I decided, therefore, to check whether teachers at schools formulate requests in a similar way. Brief telephone conversations with ten of my colleagues confirmed my suspicions. The word *uważność* (mindfulness) is used in educational situations. This is also evidenced in the publications prepared for people working with children and young people. In one of the most popular periodicals *Psychologia w Szkole* [Psychology at School], a psychological quarterly for teachers, psychologists, and pedagogues, I found a series of articles devoted to mindfulness. A particular interest in mindfulness appears to begin in 2014, with the entire issue entitled: “Szkola, Czyli Życie Tu i Teraz” [“School, or Living Here and Now”] (Żak, 2014). In this special issue, mindfulness is portrayed as experiencing fully what is happening in the moment without changing or adding anything. As argued by the issue’s contributors, such state of mind aids the formation of many innovative ideas. It is also assumed that not only adults are able to develop self-awareness and mindfulness; children are also perfectly capable of cultivating these states. The same authors further maintain that thanks to mindfulness training students are less prone to missing school and

are healthier and calmer in the classroom. They also understand their own emotions and needs and express themselves with greater awareness. Thus, it is argued that there are benefits of teaching children to observe their own thoughts and emotions as they learn how to name and express them and are able to develop a healthy distance to them. The articles suggest how to work with students to assist them in cultivating mindfulness. They emphasize that creating a sense of security and trust as well as using proper practices will mediate improved quality of students' work and life. Furthermore, the articles point to how teachers can cope with emotions/states including sadness, grief, loss, loneliness, longing, in such a way that it will not negatively affect the condition of the body. Beneficial effects of mindfulness on physical well-being are discussed. Similar themes appear occasionally in other journals. For example, *Remedium*, a journal addressing issues of problem prevention and health promotion, featured articles on mindfulness at least twice since 2005 (e.g., Komorowska, 2013). In my next move, I tried to look for *uwaga* in more scientific texts designed for pedagogues. Indeed there, the word is used in many contexts, but mainly to emphasize that a particular issue requires *careful* reading; I did not find any text which would suggest theoretical or scientific approach to mindfulness. Accordingly, in my further search, I resolved to remain in the circle of psychological thinking. I decided to examine what psychologists actually write about mindfulness. Do they construct any research tools? Here, I came across sources of knowledge that resonated with me.

In one Polish study on mindfulness Tomasz Jankowski and Paweł Holas (2009) present a model of mindfulness and they review foreign studies of mindfulness with particular emphasis on relationships between mindfulness and other variables associated with mental wellbeing. The authors identify factors associated with mindfulness and mechanisms responsible for changes in mindfulness. The main focus of the manuscript is on the manner in which metaconscious and hidden processes relate to consciousness in the state of mindfulness. According to Jankowski and Holas, it is important to trigger metaconscious processes in the state of mindfulness, that is conscious and purposeful observation of one's own experience. These psychologists draw attention to processes which shape the state of mindfulness: that is the relationship between consciousness, metaconsciousness, and unconsciousness, and point to the role of the central executive system as well as personal and situational factors that take part in triggering the state of mindfulness. They attempt to account for changes in the way of perceiving self-experiences and the reduction of consciousness. For Jankowski and Holas, the state of mindfulness is marked by a reduced number of dissociations between consciousness and metaconsciousness. This means that mindful individuals more often than non-mindful ones experience dissociation such as mind wandering or delving into fantasies (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). Mindful individuals can more appropriately experience, name, and describe their own experiences in comparison to non-mindful ones (Brown & Ryan, 2003). Furthermore, mindful individuals experience sensory sensations and emotions more clearly (Feldman, Hayes, Kumar, Greeson, &

Laurenceau, 2007). The awareness of what is happening to them and around them helps to perceive not only the central figure, but also secondary content. Hidden processes, the aim of which is the assessment of an experience in terms of what is “pleasurable” and what is “unpleasurable,” safe or threatening, are deactivated in the state of mindfulness. Jankowski and Holas believe that the state of mindfulness depends on personal factors, situational factors and the relationships between the two. Their model is built by referring to personal factors. They make reference to Trait Theory, especially the Big Five personality traits (McCrae & Costa, 2005), attachment theory (Bowlby, 2007) and the concept of temporal orientation (Nosal, 2000). Jankowski and Holas emphasize, however, that their model is tentative and has not been verified or falsified.

A lot of models of psychotherapy that explore mindfulness have been developed nowadays. Theoretical works sometimes refer to mindfulness as the Third Wave of Cognitive Behavioural Therapies. Mindfulness is most frequently utilized by those Polish psychologists/therapists with a humanistic-existential approach. It assumes that human behaviour is motivated by a need for development and self-actualization. This approach also embraces Gestalt therapy, which is based on an assumption that an individual organizes his or her experiences in certain figures, wholes, or forms (from German *Gestalt – shape*). Experiences (external, sensory, visual perception, smell, sound or internal experiences such as desires, feelings, somatic experiences) become shapes at a given time, i.e., the moment an individual focuses his or her attention on them. In Gestalt therapy, certain conditions are created for a client to fully experience oneself and extend one’s consciousness. During therapy, the client performs exercises that facilitate self-observation of her own thoughts, feelings, and sensory sensations. A full experience of oneself is a necessary condition for making responsible choices in line with one’s genuine desires. Therefore, mindfulness facilitates the development of self-awareness, an ability to perceive oneself as one really is.

Undoubtedly, mindfulness carries a potential of being able to help to examine such concepts as self-knowledge, self-consciousness, self-discovery, reflection, autobiographical memory, (self-) attribution of permanent values, having one’s own experiences and mental states (Tessler, Felson, & Suls, 2004) and also self-observation or focus. Those concepts fit nicely in both psychological and philosophical research. Polish psychologists, both in their theoretical work and professional practice, use research tools that make it possible to aptly and reliably assess the specificity, structure, and effectiveness of various meditation techniques. These tools include Freiburg Mindfulness Inventory (Walach et al., 2006), Kentucky Inventory of Mindfulness Skills (Baer, Smith, & Allen, 2004), and Cognitive and Affective Mindfulness Scale (Feldman et al., 2007). Indeed, Stanisław Radoń validated a Polish adaptation of The Five Facet Mindfulness Questionnaire (Baer et al., 2006) as well as Mindful Attention Awareness Scale (Brown & Ryan, 2003), which are used to measure the characteristics of mindfulness (Radoń, 2014a, 2014b). Polish psychologists additionally implement different meditation aspects in their

therapy work, adjusting them to the specific therapy used for a particular personality disorder or mental illness. They also draw upon formal mindfulness training and treat it as basic therapy. They employ Mindfulness Based Cognitive Therapy, Acceptance and Commitment Therapy, Dialectical-Behaviour Therapy, and Mindfulness-Based Relapse Prevention. The abovementioned mindfulness-based approaches are rooted in Mindfulness Based Stress Reduction program, the first form of therapy based on Eastern, Buddhist techniques that have been employed in the Western world. Jon Kabat-Zinn of the University of Massachusetts Medical School developed this approach in the late 1970s.

In light of the literature on mindfulness, the benefits resulting from its knowledge and application appear obvious. Psychologists claim that practising mindfulness has a wide range of therapeutic applications both in clinical (i.e., the illnesses affecting psyche such as depression as well as somatic conditions such as neoplastic diseases, eating disorders, addictions, and etc.), and non-clinical situations (i.e., awareness of some early warning signs heralding a relapse of depression, anxiety, or other disorders connected with mood swings). Applying a mindful approach on an everyday basis makes one more aware of his or her own body, helps to regulate emotions and focus attention, increases the ability to cope with stress, and reduces mental and somatic symptoms of stress. Provoked by the abovementioned thinking by psychologists I wondered: If mindfulness can serve as compensation in difficult everyday situations, perhaps it may be considered a category within human development. The trail seemed to me to be reasonable especially because of intensive research on self-improvement, self-awareness, and self-reflection that has been published in Poland since the 1970s. The most remarkable was the work of Zbigniew Pietrasiński (1977) and Józef Koziński (1996). Assuming that human development could be placed within the category of self- and other-management, I decided to deal with the literature in the field of management.

Literature on management features mindfulness mainly in the context of professional improvement. In the offers of management training courses, trainers claim that mindfulness is relevant to business and is expressed by readiness for immediate action. They point to benefits resulting from using mindfulness such as being able to see the essence of a problem as well as not looking into the past but concentrating on the here and now. Looking at things from the here-and-now perspective enables one to take action exactly when it is necessary, thus resulting in increased effectiveness. Another benefit is distancing oneself from a problem; looking at a general picture and not focusing on detail. Such an approach helps identify the problems of a company in the market environment rather than focusing on issues in isolation. Consequently, mindfulness facilitates generation of various solutions as it enables a person to operate from a wider perspective. In management, mindfulness boosts effectiveness, improves communication, problem solving and has positive impact on team relations. Human resources literature concludes that mindfulness is significant in personnel management, improves communication in a workplace both among employees and between employees and clients. Mindfulness

is also becoming a trend in corporate development programs. To sum up, it is safe to say that many an institution or company, especially those with foreign capital, use mindfulness practices.

Mindfulness is also present in coaching, which is a development process aiming to correct what is considered inappropriate behaviour and increase activity in certain professional areas. Two approaches to coaching can be distinguished in the Polish professional literature. One treats coaching as a training method intended for lower- and mid-level employees; the other considers it a professional development method for managers. In the first approach mindfulness is treated as an element of human functioning that helps to assimilate new knowledge, gain new skills and competences essential to effective performance at work, and helps to analyse one's own behaviour at work. In the second approach, mindfulness is a trained skill, whose application boosts effectiveness in personnel management.

Mindfulness is also gaining more and more popularity in Polish higher education. Many psychology departments in state and private universities form science clubs as well as postgraduate programs dealing with mindfulness. Among their goals is learning about, practicing, and developing expertise in conscious, ethical, and safe application of mindfulness methods in treatment of various psychological and self-developmental problems. They also aim at exploring therapies based in and referencing mindfulness and compassion while familiarizing participants with the body of scientific knowledge on mindfulness and associated concepts as well as their contemplative roots, with a focus on fundamentals of Buddhist psychology. Through participation in the mindfulness training and their own meditation practice, students are able to personally experience mindfulness and its effects. Worth noting is also the fact that several associations dealing with promoting mindfulness have been established. These include Polish Mindfulness Association, Polish Mindfulness Institute, and Institute of Mindfulness and Psychotherapy.

On the basis of my analysis of available literature I have come to the conclusion that mindfulness is indeed becoming more and more popular in Poland. Just to mention that since 2015 several works connected with this subject have been published with the vast majority of volumes being translations (refer to [Table 9.2](#)). For the most part, Polish authors tend to write about mindfulness in a guidebook way and very rarely does the topic appear to be undertaken by Polish scientists other than psychologists who are interested in using mindfulness in therapy. It seems that mindfulness is being situated in the context of everyday colloquial situations and is addressed to wide range of recipients. Therefore, I decided to investigate what kinds of books are read by Poles. What are the trends in reading? I came across a 2015 report of a nationwide study "Książki w życiu codziennym Polaków" ("Books in Everyday Life of Polish People") conducted by Polska Izba Książki (Polish Chamber of Books). According to the report while the majority of Polish people read novels and romances (42.9%), guidebooks are most popular in the category of non-fiction books (21.4%). Even though an earlier study by Centrum Badania Opinii

Spolecznej (Polish Public Opinion Center, 2011) showed that guidebook readership is decreasing, a lot of people continue to reach for them.

Table 9.2. Select mindfulness-related publications issued in Poland in 2015 and 2016

<i>Polish Translation Data</i>	<i>The Original Title and Publication Year</i>
Bays, J. C. (2015). <i>Uważność w jedzeniu: odkryj zdrowy i radosny związek z jedzeniem!</i> (A. Kowalska, Trans.). Warszawa: Wydawnictwo Amber	<i>Mindful eating: a guide to rediscovering a healthy and joyful relationship with food</i> (2009)
Bays, J. C. (2015). <i>Mindfulness: jak wytrenować dzikiego słonia i inne przygody w praktyce uważności</i> (A. Wojtasik, Trans.). Warszawa: Wydawnictwo Amber	<i>How to train a wild elephant and other adventures in mindfulness</i> (2011)
Germer, C. K., Siegel, R. D., & Fulton, P. R. (Eds.). (2015). <i>Uważność i psychoterapia</i> (M. Cierpisz, Trans.). Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego	<i>Mindfulness and psychotherapy</i> (2005)
Hall, L. (2015). <i>Uważny coaching: jak uważność może zmienić twoją praktykę coacha</i> (A. Niedzieska, & P. Niedzieski, Trans.). Warszawa: Co&Me Publishing	<i>Mindful coaching: how mindfulness can transform coaching practice</i> (2013)
Hasson, G. (2015). <i>Mindfulness: krótkie ćwiczenia uważności dla spokojnego życia (bez medytacji)</i> (A. Wojtasik, Trans.). Warszawa: Wydawnictwo Amber	<i>Mindfulness pocketbook: little exercises for a calmer life</i> (2015)
McKay, M., Wood, J. C., & Brantley J. (2015). <i>Terapia dialektyczno-behawioralna (DBT): praktyczne ćwiczenia rozwijające uważność, efektywność interpersonalną, regulację emocji i odporność na stres</i> (J. Gołąb, Trans.). Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego	<i>The dialectical behavior therapy skills workbook: practical DBT exercises for learning mindfulness, interpersonal effectiveness, emotion regulation & distress tolerance</i> (2007)
Roberts, T. (2015). <i>Mindfulness: o sztuce uważności</i> (S. Pikiel, Trans.). Sopot: Gdańskie Wydawnictwo Psychologiczne	<i>Mindfulness workbook: a beginner's guide to overcoming fear & embracing compassion</i> (2009)
Snel, E. (2015). <i>Uważność i spokój żabki: ćwiczenia uważności dla dzieci i ich rodziców</i> (M. Falkiewicz, Trans.). Warszawa: Wydawnictwo CoJaNaTo	<i>Stilzitten als een kikker: mindfulness voor kinderen (5–12 jaar) en hun ouders</i> (2010)
Stahl, B., & Goldstein, E. (2015). <i>Uważność: trening redukcji stresu metodą mindfulness</i> (A. Sawicka-Chrapkiewicz, Trans.). Sopot: Gdańskie Wydawnictwo Psychologiczne	<i>Mindfulness-based stress reduction workbook</i> (2010)

(Continued)

Table 9.2. (Continued)

<i>Polish Translation Data</i>	<i>The Original Title and Publication Year</i>
Frey, A., & Totton, A. (2016). <i>Jestem tu i teraz: jak stać się uważnym we wszystkim, co się robi</i> (K. Lipnicka-Kołtuniak, Trans.). Warszawa: Muza	<i>I am here now: a creative mindfulness guide and journal (2015)</i>
Carrol, M. (2016). <i>Mindfulness w pracy: 35 praktycznych buddyjskich zasad osiągnięcia harmonii i jasności umysłu</i> (A. Gąsowska, Trans.). Białystok: Wydawnictwo Samsara	<i>Awake at work: 35 practical Buddhist principles for discovering clarity and balance in the midst of work's chaos (2006)</i>
Chybicki, J. (2016). <i>Metakompetencja lidera: uważność w biznesie</i> . Kraków: Wydawnictwo Ridero	
Chybicki, J. (2016). <i>Uważność dla niecierpliwych</i> . Kraków: Wydawnictwo Ridero	
Parke, S. (2016). <i>Minuta uważności: 60-sekundowe ćwiczenia mindfulness dla świadomego życia</i> (M. Borkowska, Trans.). Białystok: Wydawnictwo Samsara	<i>One-minute mindfulness: how to live in the moment (2015)</i>
Sweet, C., & Mihotich, O. (2016). <i>Dziennik uważności: ćwiczenia, które pomagają ci odnaleźć spokój i harmonię w każdej sytuacji</i> (Olga Siara, Trans.). Kraków: Insignis Media	<i>Mindfulness journal: exercises to help you find peace and calm wherever you are (2014)</i>
Trungpa, C., Gimian, C. R., & Kohn, S. C. (Eds.). (2015). <i>Praca, seks i pieniądze: prawdziwe życie na ścieżce uważności</i> (A. Zdziemborska, Trans.). Poznań: Wydawnictwo ManiBooks	<i>Work, sex, money: real life on the path of mindfulness (2011)</i>
Teasdale, J., Williams, M., & Segal, Z. (2016). <i>Praktyka uważności: ośmiotygodniowy program ćwiczeń pozwalający uwolnić się od depresji i napięcia emocjonalnego</i> (J. Bilmin, Trans.). Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego	<i>Mindful way workbook: an 8-week program to free yourself from depression and emotional distress (2014)</i>

Assuming the guidebook perspective mindfulness may be treated as a skill which can be developed through training. Such an approach to mindfulness may be stripping the construct of its theoretical foundation. Accordingly, there is a risk of meditation methods and training of mindfulness being applied without the knowledge of the relevant context, historical background, or scientific findings. Thus, the relatively low level of interest in mindfulness by Polish theorists/scientists

may be partly attributable to the fact that the term *uważność* is associated with its everyday meaning which does not reflect the true essence of the construct. In addition, the Polish term *uważność* does not reflect the various meanings associated with mindfulness in foreign literature. This may further explain why the construct is rarely explored in Polish scientific publications that tend to reject terms that do not carry precise meanings. Furthermore, although mindfulness does not assume any religious doctrine or other theoretical frameworks that do not easily translate into empirical language (cf. Hagen, 2003), it often is presented through the Buddhist lens despite the authors' declarations to the contrary. This apparent spiritual nature of mindfulness is what's frequently objected to. Other objections to mindfulness may include the danger of what may be interpreted as its focus on the individualistic happiness and wellbeing and thus promoting neoliberal way of functioning in consumer society (cf. Forbes, 2017).

It should be noted, however, that mindfulness is becoming an attractive way to deal with reality. With an ever-growing pace of everyday life, an increasing level of enforceability of the occurring events, sporadicity and a mosaicity of human life mark present times. A threat of constant change is becoming a basis of our existence. The pressure to make fast decisions, the end results of which we cannot foresee, has become an indispensable part of an individual's life. All these characteristics of contemporary times bring about anxiety and confusion experienced individually by almost every human being. According to Ulrich Beck (2004), the whole society has undergone changes that impose an individualized lifestyle upon each of its members. A "risk society," as Beck refers to it, creates a necessity to make risky choices on a daily basis and choose from a wide range of value propositions, lifestyles, ways of spending one's pastime or making error-prone decisions. Postmodernity often assumes certain values at the same time allowing for some relativism which forces individuals into self-centred practices, leading people to concentrate on themselves. As a result, the importance of human relations decreases in favour of impersonal, superficial, short-term relationships, and atomism of social life. Thus, it might be assumed that the changing character of human relations and all-encompassing ideas of individualism contribute to a sense of solitude. This, in turn, influences one's mental condition. More and more often, individuals fulfilling their social and mental needs actively seek or become responsive recipients of suggestions or advice. They become more or less conscious recipients of different counselling or therapeutic services, which are conducted in a variety of ways. Perhaps in response to this situation mindfulness gives one a chance to not being lost in this world.

I close with yet another personal remark. Did my search for literature influence me? Have I changed something in myself? Undoubtedly, I began to look more positively and carefully at the world with appreciation for the moments: I pause in them and I am just happy with them. Mindfulness becomes a source of my wellbeing. In dealing with others, I try to pay more attention not only to expressing myself precisely, but also watching myself as I carefully and "actively" listen to other people. It seems to me that the more I make conscious choices, the more I become an independent

E. DEBBSKA

individual, who knows myself as striving to meet not only my own needs, but also who is open to other people's (and not merely those who are closest to me) needs. Such altruistic interest in the world contributes to the continuous effort in striving towards the fullness of humanity. Today, here and now the words of Henry David Thoreau have a special meaning to me:

I went to the woods because I wished to live deliberately, to front only the essential facts of life, and see if I could not learn what it had to teach, and not, when I came to die, discover that I had not lived. I did not wish to live what was not life, living is so dear; nor did I wish to practise resignation, unless it was quite necessary. I wanted to live deep and suck out all the marrow of life, to live so sturdily and Spartan-like as to put to rout all that was not life, to cut a broad swath and shave close, to drive life into a corner, and reduce it to its lowest terms. (Thoreau, 1995, p. 59)

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DAVID FORBES

10. MINDFULNESS AND NEOLIBERAL EDUCATION

Accommodation or Transformation?

ABSTRACT

While mindfulness in education aims to promote positive qualities for individual students and teachers, many proponents appear to be unaware of how mindfulness unwittingly contributes to the neoliberal agenda in education. I describe the values of neoliberalism which center on the notion of individual responsibility for attaining one's own wellbeing through the market and a de-emphasis on quality public education and social and cultural contexts. Without a critical awareness of the broader neoliberal context in which education operates, the emphasis on individual consciousness and behavior of mindfulness practices can obscure the social and cultural issues that are significant factors in teachers' and students' stress and difficulties in teaching and learning. In some cases, mindfulness programs function as forms of social control that maintain the existing structural inequities without challenging them from a critical, more encompassing perspective. I propose a critical Integral approach that embeds mindfulness and that includes and transcends progressive educational practices in the areas of self-development, interpersonal and cultural relationships, and structural analysis and social action and that can bring us toward more socially just and equitable forms of education.

Keywords: mindfulness, neoliberalism, education, critique, Integral

From inner city classrooms to wealthy boarding schools the mindfulness juggernaut has hit education. Proponents want to show that mindfulness is real, practical, and can benefit everyone. They want students and teachers to de-stress, be compassionate, better regulate their own thoughts, feelings, and actions, and perform better in school. Well-intentioned mindfulness proponents are motivated by the belief that they provide students skills to gain academic and personal success. Some even believe they are infusing Buddhist values like compassion and self-awareness into secular settings. An *Atlantic* article showed that despite its "inherent nebulosity" as a concept and little evidence that mindfulness impacts academic success, educators and researchers are doubling down selling mindfulness to schools, students, and teachers (Davis, 2015). Why is this occurring and why now? In raising these questions the point is not to dismiss mindfulness per se but to critically question how and why it

is being used within a neoliberal climate of education reform – what does “success” even mean and who defines it? – and to suggest more progressive ways to employ it.

As part of a critical progressive backlash a number of mindfulness educators raise these and other questions about why and how mindfulness is being practiced in schools (Purser, Forbes, & Burke, 2016). First, we are concerned that many proponents do not seem interested in critically reflecting on the social context of the schools in which they operate and some of the goals and purposes of those schools toward which mindfulness is applied. This is in part because mindfulness was severed from its ethical and ontological Buddhist worldview and has become a neutral technique or method of nonjudgmental attention; it is now freely adapted and applied to a number of secular purposes that are often not critically examined. In this case the argument is that mindfulness has become a technology that serves questionable goals and values of public education that need to be made explicit, discussed, and transformed.

To take it further, we specifically question many of the problematic social, cultural, and political aspects of the US education system and its goals and purposes. We argue that mindfulness educators need to attend to and challenge the implicit values and aims of the dominant corporatized education system that many mindfulness programs unwittingly reinforce. In particular, these are the individualism of neoliberalism, the promotion of consumer capitalism, and the regard of education as a means to enhance competition in the global economy, for example, by defining education and academic success by results on high-stakes tests. This context can occur behind the backs of well-intentioned mindfulness educators. Practicing mindfulness without this awareness, however, obscures social conditions and relationships that need to be questioned and keeps the focus on the individual student or teacher; he or she becomes responsible for adjusting to often unjust or exploitative situations and attitudes in the classroom, school, and community that mindfulness per se does not address.

The key concern is that more mindfulness educators need to consider the surrounding cultural, social, and moral battle over neoliberal educational reform that corporatists are waging and winning and to attend to how they are being used as part of the fight. This blind spot may be built in to the way many mindfulness educators see mindfulness in the first place. A leading mindfulness educator called it a mindful revolution and said that it begins within each of us and can then “transform the entire world” (Rechtschaffen, 2014, p. 10). The widespread myth that social and institutional change occurs just by each individual paying more attention to one’s experience in the moment, devoid of social context, underlies a number of school-based mindfulness programs. It makes them a strong fit for individualistic neoliberal market values and goals: each person is responsible for his/her success or failure to succeed in a competitive, market-based society that is taken for granted and unquestioned.

Instead, an unreflective practice and the problematic context it reinforces need to be challenged. We need to consciously employ mindfulness as part of an explicit,

progressive approach that questions, resists, and transforms the troublesome aspects of neoliberal education. James Reveley similarly argues that mindfulness has the potential to also “support resistance to neoliberalism, rather than just functioning as neoliberalism’s educational handmaiden” (2015, p. 80).

Socially engaged mindfulness practitioners have forged a critique of the popular use of mindfulness in the corporate sector, whose bottom line interest is corporate profits. Ronald Purser and Edwin Ng point out that when mindfulness is employed in the workplace it often becomes a way to blame individuals for their own stress, ignoring the social and economic conditions that contribute to it; this critique centers on how corporate mindfulness programs assume “the self-governing logic of neoliberal individual autonomy,” the myth that individuals can just choose stress or wellness, misery or happiness (2015, September 27). Neoliberal ideology demands that each private person be entirely responsible for his/her life and free of any dependency on public institutions, which are to be phased out. Each of us should meet all our needs for wellbeing and health through self-help products and marketing strategies for success that involve self-discipline and competitiveness.

The critique of mindfulness as an unreflective practice is centered on Foucault’s (1991) notion of governmentality that takes a particular form within neoliberal societies. Governmentality is not simply a coercive practice by the state but includes various types of knowledge, expertise, and practices that arise to guide people’s voluntary conduct: “Under the conditions of neoliberal capitalism, the logics of governmentality are imbued with the moral rhetoric of ‘free choice’ and are geared towards self-optimizing, consumerist and entrepreneurial ends” (Ng & Purser, 2016). An aspect of governmentality that Foucault (1988) considered was the use of technologies of the self. Through technologies of the self, in accord with the principles of neoliberalism, individuals rather than the state become more responsible for their own wellbeing through self-care and through meeting needs purchased in the market place.

A desirable feature of a corporatized society is the neoliberal self (Honey, 2014). The neoliberal self employs self-help practices or technologies that yield new subjects who see themselves as responsible for their own social welfare and wellbeing. Without a critical perspective on neoliberal values and aims, mindfulness in the sense of governmentality can serve as a neoliberal technology of the self (Reveley, 2015).

Schools operate within a neoliberal society in which the market and market values dominate and are governed by policies that serve these interests. Neoliberal education policies conflate education and economic success and regard students as human capital. For example, the No Child Left Behind (NCLB) and Race to the Top policies were intended to build up schools in order for the US to compete in the global economy. According to the Obama White House website, “In today’s global economy, a high-quality education is no longer just a pathway to opportunity – it is a prerequisite for success. Because economic progress and educational achievement are inextricably linked, educating every American student to graduate

from high school prepared for college and for a career is a national imperative” (K-12 Education, n.d.). The market mentality has led to the privatization of education and a de-emphasis on public education. Henry Giroux points out that as part of the neoliberal assault on public education schools are being defunded and privatized, teachers are being stripped of job protections and collective bargaining rights as their unions are dismantled and weakened, high stakes test scores become the stressful criteria by which schools are determined to succeed or close, and some schools in low-income areas tend to act like prisons that treat students as objects of surveillance and control (Giroux, 2014).

In education then we need to look at how this context frames the way mindfulness is employed from the broader standpoint of neoliberal education policy and ask why this is happening now on such a large scale and who stands to gain. Reveley notes that, “The capacity for personal prevention and self-surveillance that school-based mindfulness training inculcates in the young . . . is central to the self-managing figure that neoliberalism prizes. When institutionalized as a form of therapeutic education, therefore, mindfulness meditation is not ideologically neutral but rather morphs into a neoliberal self-technology” (2016, p. 497). This is not to argue that neoliberalism is a totalizing system that leaves no room for subjective experience and growth to which mindfulness practices could contribute. Nevertheless, we need to acknowledge and resist the dominant social conditions under which mindfulness in schools operate and instead together ask what the most genuine purpose of education should be; we should insist on a meaning in which mindfulness enhances both self and social development for the highest good.

Within a neoliberal structure of corporate work mindfulness in part becomes a means to increase both productivity and compliance (The Conversation, 2015). In similar terms mindfulness can become a way to amp up an education system that will create compliant students who can manage their own behavior, focus on their assignments, and calm themselves when angry or frustrated with school. Rather than questioning, discussing, analyzing, resisting, and changing troublesome education policies and cultures such as high stakes testing, poor quality schools, and unjust disciplinary policies, such students learn to look to their own feelings and skills as the source of their stress, despair, or anger. They may then turn into passive, unquestioning consumers and cooperative workers who will help their corporate employers better compete in the global economy. Within neoliberal culture stress becomes decontextualized and interpreted as personal failure of the individual to successfully adapt to the demands of productivity or of being a team player. Mindfulness proponents train individual students and teachers to be present-focused, to self-regulate difficult emotions such as anger, to improve concentration, get along with others, and decrease stress. At the individual level these are personal skills that may be helpful to students’ self-development and experience. However, without a critical take on the context in which they are promoted, teaching individualistic skills such as mindfulness can mask the actual conditions of schooling, including adverse ones that give rise to stress, and divert any critical analysis of the cultural, social, and

moral factors that contribute to one's wellbeing or lack of it. Children learn to see stressful experiences and how they respond to them as their responsibility – there is something inside of me; I alone must change instead of looking at how my problems arise within unjust societal relationships and systems.

Mindfulness is often intended as benign and helpful to teachers and students at a personal level. Yet without critical awareness of the broader social and cultural context mindfulness can become a disguised pedagogy of social control. It plays into the hidden neoliberal agenda: internal regulation, compliance, individualist responsibility to adjust to high stakes tests and the overall degradation of public education. Funie Hsu discusses the example of mindfulness used in schools to extend students' capacity to focus and pay attention and to increase executive function: "While focus and self-regulatory skills are important in academic success, they are being developed in an educational context where measures for achievement have become decidedly incentivized and consequential (e.g., the former policy of NCLB). Training students to enhance their attention, therefore, translates easily into neoliberal applications" (2016).

As possible consequences, then, students can calmly take high-stakes tests and raise their (and their schools') scores. Alienated inner city children can accept their inadequate learning conditions and not act out their anger. Demoralized, burnt-out teachers can adjust to and comply with being audited and micro-managed, follow scripted Common Core classroom lessons, and teach to the test to raise test scores on which their jobs now depend. These are the kinds of outcome metrics borrowed from the corporate sector and imported into education as part of the aim to privatize and gain profit from public education. Before turning to a more critical and progressive approach to mindfulness in education we can examine some ways in which some mindfulness practices unwittingly reinforce the neoliberal status quo.

The constant pressure in schools on children to achieve, compete, and produce – and at a younger age – leads to stressful feelings and negative consequences for children and teachers. Some educators serve up mindfulness as the lubricant that make the gears run more smoothly. In the video, "Healthy Habits of Mind," by Mindful Schools in Oakland, CA, a teacher says she accepts that reading and writing are now taught in kindergarten; "the reality is, that's what's expected right now" (Mindful Schools, n.d.). The teacher sees that her children cannot do the tasks because they "cannot focus long enough;" that is, the tasks are beyond their level of development. Nevertheless, she says that since we are going to ask them to do these things, we need to give them the tools to do it. She offers them mindfulness to help them focus and de-stress in order to adapt to the academic pressure. The teacher does not question the premise promoted by neoliberal proponents that young children must forgo play and other life-enhancing activities in order to read – and achieve – at an earlier age.

Nor do many mindfulness educators challenge other injustices and pressures that also start early, such as the higher rate of suspension of African American students that begins in pre-school and kindergarten and that leads many down the school-to-prison pipeline (Lee, 2014). Few mindfulness educators have brought awareness of

this systemic pattern of social injustice into their work (Hsu, 2013). Even with some more benign alternative restorative justice programs that use mindfulness, the aim is to promote a more orderly school environment by having students regulate themselves through self-discipline and accountability (Mindful Teachers, 2014). Mindful restorative justice programs still favor orderly school environments and self-discipline, leaving things as they are, rather than call out and challenge the structural and institutional inequities that lead to certain students being offenders more than others.

It is not accidental that mindfulness is employed in impoverished inner-city schools that hold numbers of disaffected, indignant, and at times disruptive students of color (Schwartz, 2014). Mindfulness programs such as those offered by Mindful Schools in Oakland, CA, the Mindful Life Project in Richmond, CA, and the Holistic Life Foundation in Baltimore are motivated to support these youths' social and emotional wellbeing and improve their academic success. Yet, without a critical understanding and challenging of the neoliberal education agenda, mindfulness practices geared toward stress-reduction, conflict resolution, emotion regulation, anger management, and focus and concentration unintentionally slip into functions of social control and reinforce individualistic responsibility. In one participating high school teachers can send distressed or disruptive students – from the halls or those getting into physical or even just verbal altercations – to the Mindful Moment Room for individual assistance with “emotional self-regulation” (Mindful Moment Program, n.d.). Suspensions went down and attendance and promotions went up. However, not addressed are issues of why in the first place there are increases in stress, suspensions, and angry behavior, and what needs to better occur in the school and community. Instead, there is an emphasis on conforming to school expectations. There is legitimate anger and frustration over many social injustices that many students of color experience, as evidenced in the movement, Black Lives Matter. Students who witness or who are prey to violence, among others, also suffer from trauma and it is not evident that educators, mindful or not, challenge the sources of pain and trauma and support students who question the goals and culture of the school.

In analyzing one Mindful Schools program in an inner city school, video taped as a success story, Jennifer Cannon (2016) argues that the story is a racialized discourse and employs a deficit framework: out-of-control, troubled, youth of color are rescued by the intervention of a White mindfulness teacher. The teacher functions as an authority figure and disciplinarian and teaches them that hard work, effort, and self-discipline through mindfulness leads to success – how that is defined and by whom are not considered. Cannon points out that the mindfulness instructor reforms the individual student, not the educational system, and offers no structural critique or critical exploration of the students' lives and social conditions and nothing that builds on the students' and community's own cultural capital or agency.

Some neoliberal policy proponents, including those whom are well-off, mandate that public school students take high-stakes tests; their own children, however, many of whom are sent to private schools, need not. The irony is that privileged students feel intense pressure to succeed and compete to get into prestigious colleges; they

accept the myth that they alone are responsible for their success. Some find that mindfulness meditation relieves some of the performance pressures and helps them sleep better, diminish stress, and re-focus on schoolwork so they can stay competitive within a pressurized system (Davis, 2015).

To help teachers who are stressed out by their jobs an accomplished mindfulness educator and researcher provides mindfulness training (Jennings, 2015). The subtitle of the book, *Simple Skills for Peace and Productivity in the Classroom*, could serve as a neoliberal classroom mantra. Teachers learn how to calm themselves, pay better attention to their own thoughts and feelings and to their students, and create a better-managed (peaceful) classroom. This approach is typical in that it omits taking on the external stressors endemic to current education that contribute to teacher stress, demoralization, and attrition. These include the blame on public sector teachers and the attacks on their unions, the de-funding and closing of public schools in favor of funding charter schools and publishing corporations, and the de-professionalization and micro-management of teaching. Yet through mindfulness training such as this the message to teachers is that they should take it upon themselves to be present and adjust to demands for “productivity” and outcomes, rather than practice mindfulness as part of a critical pedagogy that questions and challenges the policies and conditions that create their stress and unhappiness.

Another factor that further obscures the social and cultural context of mindfulness education programs is the turn to neuroscience research to justify its use. Of course, there are personal testimonies of people such as teachers and students who say they have benefitted from mindfulness – although such anecdotal evidence by itself is not sufficient to counter arguments about unjust social structures and cultural contexts. In US culture, however, much of the justification for almost any activity such as mindfulness relies on the need to prove its efficacy, indeed its existence, with measurable scientific data, and neuroscience appears to have supplied the gold standard. Steven Poole is critical of the misuse of neuroscience and points out that the “real achievements of brain research are routinely pressed into service for questions they were never designed to answer,” and argues that there is a tendency when looking at brain activity to “misleadingly assume we always know how to interpret such ‘hidden’ information, and that it is always more reliably meaningful than what lies in plain view” (2012). A related problem with neuroscientific data on mindfulness is that the evidence is not clearly conclusive, in part because there is confusion over what constitutes meditation itself. Willoughby Britton, a neuroscientist at Brown University who researches meditation, acknowledges this and further says, “I think there’s a deeper cultural phenomenon going on which I’m going to try to illustrate with what I call the Blobology effect. The Blobology effect very simply said is that when you show people ... when people see colorful blobs on a brain scan, they can be convinced of anything. They can be convinced of anything even if what you’re saying makes no sense or if it’s absolutely preposterous. And even further people will believe brain scans over their own experience” (Britton, 2012). While of course good neuroscientific evidence is valuable, what is needed is

D. FORBES

good research, not neuroscientism or an over-reliance on data itself, that enhances and contributes to healthy social, moral, cognitive, and self-development as part of education. The point of mindfulness in education is not to increase functions or parts of the brain; it is to help generate people who are intellectually curious and can engage in deep, critical inquiry, who can fully experience themselves and develop and enact their highest expressive capacities and talents, and who are moral, caring, socially just, and socially competent world citizens.

TOWARD A CRITICAL INTEGRAL MINDFULNESS IN EDUCATION

While some students benefit from individual mindfulness practice, they are just as likely to benefit from any good education or counseling program – still sorely lacking in many schools – that provide them respectful, caring attention, social support, critical analysis, and useful skills for self-awareness and self-understanding. Can we enhance this vision of quality education, of what good education should be, by consciously and critically practicing mindfulness in schools?

Public education can gain from a critical, Integral mindfulness that embeds the practice of mindfulness within personal, developmental, cultural, and social contexts that promote optimal, healthy capacities in all of these areas. This enables mindfulness itself to be mindful, or critically conscious, of its own position within education and society (Forbes, 2016). Instead of unwittingly employing mindfulness as a neoliberal technology of the self, educators can practice mindfulness in the service of a critical Integral education (Forbes, 2016, June 29). An Integral education includes and transcends a progressive education in that it can step back from identifying with its own belief systems (e.g., a belief in particular values and methods, including progressive education and mindfulness itself) and regard them dispassionately from a more encompassing perspective (Murray, 2009). We can briefly highlight some areas that a critical Integral approach points to and provide some examples. These have to do with the self and self-development, cultural or relational concerns, and, as has been emphasized here with respect to neoliberalism, the social structure and political context of education.

Self and Self-Development

Mindfulness arose out of a Buddhist moral and wisdom tradition that invites one to investigate the nature of the self and explore how the mind is conditioned. Instead of employing mindfulness in neoliberal, individualist terms, Buddhism “deconstructs rather than bolsters the notion of ego and its self-mastery” (Saari & Pulkki, 2012, p. 18). While the point is not to bring Buddhism per se into the schools mindfulness as taught in schools can encourage students and teachers to critically examine the nature of the self, to cultivate the inner life, and critically examine and develop feelings not as free-floating objects but to see how the ego is conditioned by specific problematic social and cultural beliefs and conditions.

Student can link up thoughts, beliefs, and feelings with broader concerns about personal and moral agency. Focusing on the “here and now” also requires seeing that any moment is always socially constructed and interpreted and should include critical thought, moral evaluation, historical analysis, and a critique of broader socio-economic relations. Without this perspective the sole focus on the present moment can reinforce the privatized, individuated self and troublesome emotional states that are isolated and severed from one’s actual everyday social relations and context (Purser, 2014). In the absence of linking one’s experience with social conditions, anxiety, anger, frustration, and despair become personal failures.

Mindfulness in public schools can employ contemplative education in its time-honored practice of engaging students in deep, reflective inquiry into the nature of subjects and of themselves. Instead of serving as a technology for furthering or adjusting students and teachers to the dominant social order mindfulness practice can link inner awareness to ethical relationships and the social world. Instead of the neoliberal preference to avoid critical reflection and self-awareness mindfulness proponents can stand for a critical mode of subjectivity. Mindfulness education can encourage students to value exploration, reflection, and creativity as part of an alternative meaning of success in education rather than one based on competition and measured in narrow standardized outcomes. For example, within the context of class or counseling group discussions about values students can notice and label thoughts, feelings, and sensations in terms of which ones are unhealthy and questionable and conditioned by the messages of the dominant society. These could include ones that reflect individualism, bullying, materialism, patriarchy, homophobia, White privilege, and racism.

The goal of a critical, Integral mindfulness should be to enable all students and educators to develop our respective, unique intellectual, personal, social, and moral capacities to the fullest extent. An integral part of this practice is to understand and apply models of stages or orders of self-development (Kegan, 1994). A comprehensive mindfulness practice requires knowledge of models of developmental structures. Models of self-development show that orders or stages of growth increasingly include and transcend earlier ones and become more encompassing perspectives (Cook-Greuter, 2005). A crucial distinction in an Integral approach is between states and developmental stages. By meditating one can reach various states of awareness, even advanced ones in which dualities dissolve. Stages of self-development, however, are not discovered or attained through meditation per se and are significant frameworks or contexts for educators to understand and promote mindful experience (Wilber, 2016). Stages of self-development filter mindful states as interpretive frameworks; that is, a person can meditate and reach an advanced state of awareness but still remain at an earlier stage of self-development through which the person interprets his/her state. For example, a student might be mindful and experience a state of calmness, yet still be at an early stage of self-development – egocentric (it’s all about me), or even sociocentric (I want to go along with what my teachers and school tell me to believe

D. FORBES

in). Mindfulness per se does not guarantee more developed perspectives, although it can contribute to attaining them within a conscious program that includes knowledge of developmental perspectives. School community members can observe the habits and patterns of one's mind that frame things from our own worldviews and to which we remain attached, in particular, ones that are conditioned from the dominant culture and society, and commit to responding from a more evolved perspective. A later developmental perspective also enables mindfulness educators to step outside and examine any of their own beliefs in or attachments to mindfulness itself and to view mindfulness critically as one particular system within a broader program of education (Murray, 2009).

Culture and Relationships

A critical Integral education interrogates and challenges individualism, the myth of an unchanging, separate self, and points up the evidence for our interdependence with all beings and with the earth itself. This approach to mindfulness connects unreflective personal experience with an informed awareness of one's actual social relations; it connects private troubles with public issues. Schools can investigate its own culture and become mindful of unaddressed cultural norms and practices that operate in ways that are not contributing to the wellbeing of everyone. In intersubjective terms a progressive mindfulness agenda seeks to form inclusive "we-spaces" (Gunnlaugson, 2009). These make use of mindful group and dialogical practices that attend to the quality of the culture of the school community itself. Within these cultures people can then create safe, caring, respectful, healing relationships that address racism, privilege, competitiveness, sexism, and other thorny issues that often remain unacknowledged. Instead of ignoring or minimizing them, a mindful school culture welcomes, includes, and employs the cultural capital and contributions of all school community members (Cannon, 2016).

Social Structure

The society we live in is marked by, among other things, racism, sexism, and homophobia, competition for housing, healthcare, education, and income, a lack of safety nets for children and the aging, and an imposed austerity that benefits the wealthy few. Instead of educational practices that reinforce market individualism and that foster self-promotion and self-blame, a critical Integral mindfulness furthers conscious agency in which people develop themselves as social beings and global citizens, part of a democratic, civic mindfulness that creates a shared sense of common good.

By civic mindfulness Ed Ng refers to "the use of mindfulness to help people cultivate the ethical and political sensibilities for more robust civic participation, alongside the cultivation of mental health and personal wellbeing" (2015). Kevin Healey says that "Systemic issues cannot be addressed through stress-reduction

programs that assume the beneficence of unregulated markets ... While everyday mindfulness addresses personal stress, civic mindfulness addresses stress in the body politic, including abuses of power and breaches of the public trust” (2013). A critical Integral mindfulness aligns with the movement to create more equitable schools and end poverty, wealth and income inequity, racism, White privilege, homophobia, and anti-immigration. Giroux sees the struggle for democracy and for public and higher education as linked with “the broader struggle for reclaiming a democracy that fulfills both its most radical ideals and its commitment to the common good, public values and a capacious notion of justice” (2014). A critical Integral mindfulness endorses the principles of the Manifesto for a Revolution in Public Education, written by community activists and educators, that offers a clear critique of neoliberal education, a vision of equality of opportunity, and schools that, among other necessities, include “quiet places for contemplation” (Change.org, n.d.). In this way members of a school community engage in mindful social action in which they work with others on local, national, and global levels to challenge unjust education policies and create equitable and developmentally healthy systems and structures for all.

A critical integral mindfulness is informed by a mindful anti-oppression pedagogy within a broad agenda for a contemplative-based social justice in education. Beth Berila (2015) provides a mindful anti-oppression pedagogy for university and college classrooms that can also be applied to K-12 schools. It promotes a mindful and compassionate way for students to explore their experiences and practice a critical inquiry into their own beliefs and value systems. Berila also has a website that offers practical approaches to mindful anti-oppression pedagogy. Text on the website says: “Anti-Oppression Pedagogy teaches how to structurally analyze systems of oppression, while contemplative practices cultivate an embodied self-awareness. Mindful anti-oppression pedagogy merges the two to cultivate an embodied social justice” (Berila, n.d.). Rhonda Magee, a mindful social justice educator, developed an approach she calls ColorInsight Practices. These “... combine mindfulness-based practices with teaching and learning about race and color to increase awareness of how race and color impact us all, and give rise to insight and greater understanding” (2015). Magee expanded her description of this approach and has applied it to teaching law (Magee, 2016).

Through mindfulness practice students and teachers can personally question, decolonize, and heal from thoughts, beliefs, and worldviews absorbed from society that contribute to self-hatred, bullying, selfishness, and lack of compassion for oneself and others. They can interrogate the nature of the self and gain insight into developmental stages that lead to universal connectedness and compassion.

CONCLUSION

For all of us mindfulness should be a fiercely compassionate practice in which we uncover, challenge, and transcend how our thoughts, feelings, and actions are

conditioned and colonized by unhealthy and unjust cultural practices and social institutions that (re)produce greed, meanness, and delusion. Bodhi suggests the term “conscientious compassion,” one that not just includes feelings of empathy with those who suffer but that “... gives birth to a fierce determination to uplift others, to tackle the causes of their suffering, and to establish the social, economic, and political conditions that will enable everyone to flourish and live in harmony” (Lam, 2015). Beyond the morally empty dictate of secular mindfulness, defined as, “paying attention on purpose, in the present moment, and nonjudgmentally, to the unfolding of experience moment to moment” (Kabat-Zinn, 2003, p. 145), mindfulness should involve our working together to acknowledge and let go of unwholesome thoughts and behaviors, and help us create conscious, democratic, socially just, and loving lives far richer than anything neoliberalism and its unwitting allies have to offer.

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D. FORBES

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ROJJANA KLECHAYA AND GEORGE GLASSON

11. MINDFULNESS AND PLACE-BASED EDUCATION IN BUDDHIST-ORIENTED SCHOOLS IN THAILAND

ABSTRACT

The Ministry of Education in Thailand has approved over 20,000 Buddhist-Oriented Schools to promote the integration of the three-fold Buddhist philosophy of *Trisikkha* (morality, mentality, and wisdom) and mindfulness into the teaching-learning process, students' behavior, school management, and the school environment. In this chapter, we describe how place-based education and the tenets of Buddhist-oriented schools promote Thai citizenship and the moral development of students in rural schools with high populations of transient Thai families and migrant students from neighboring countries in Southeast Asia.

Keywords: mindfulness, place-based education, Buddhism

HISTORY OF BUDDHISM IN THAILAND EDUCATION

Buddhism has strongly influenced much of the social organization of Thailand including its educational legacy since the time of Buddha, 2,500 years ago. For hundreds of years temples were the centers of education and learning for the Thai people and monks were the teachers (Dhammapitaka, 1986). Although monasteries and monastery schools for the public were widespread, advanced education was only accessible to males who entered the Buddhist monastic system. Nevertheless, many of the everyday values of right and wrong, family social structure, and ways of life were practiced by Thai citizens in their home communities as a direct reflection of Buddhist principles passed on by the Monks over thousands of years. As secular and coeducational nationwide education replaced this kind of monastic male dominated education of the general population in the last century, Buddhism voluntarily assumed a supportive, yet influential role in providing societal guidance.

An example of how Buddhism pervades national conduct and local community culture may be seen in the use of the “*wai*,” which originated in and is an important part of Buddhist practice (Kingdom-of-Thailand.com, 2011). The *wai* is a gesture in which the palms are placed together as if to pray and held at chest level or higher as a sign of respect. All Thais, Buddhist or not, use the *wai* in greeting and as a sign of gratitude, acceptance, and respect. The *wai* is also a way of expressing and promoting harmony. Indeed, *wai* is part of the very basis of Thai culture and the functioning of

civil society. A foreigner who masters the proper use of the *wai* greatly enhances the way she/he is received by and viewed by Thai people.

Thai culture shares similar values with many other Asian cultures including a high degree of respect for ancestors, gracious hospitality, generosity, maintenance of a social hierarchy, and respect for seniority. In recent decades, however, these fundamental Buddhist values and practices of Thai life have been changing. Under the influence of Western ways, schools are more separated from teaching the principles of Buddhism. While this has helped to create generations of Thai people who are, in general, better adapted to living in the modern world, there may also have been a loss of a moral support that has been fundamental to the sustainability of Thai culture. Further, as Thai schools become more modernized and adopt Western science curriculum and technologies, teaching and learning become more disconnected from Buddhist teachings and a sense of place in Thai culture.

Perhaps sensing the impact upon the Thai soul of separating Buddhism from education, the Ministry of Education revised the Basic Education Core Curriculum in 2008 to include learning standards for the moral values of Buddhism (Office of the Basic Education Commission, 2008). The first of five goals of the core curriculum connects Buddhist teachings with the achievement for completing a basic education in Thailand and preparing students to participate in a sufficiency economy:

Morality, ethics, desirable values, self-esteem, self-discipline, observance of Buddhist teachings or those of one's faith, and guiding principles of Sufficiency Economy. (2008, p. 5)

The learning area of social studies, religion, and culture focuses on Buddhist values in preparing students to "become good, responsible citizens, who are endowed with knowledge, skills, morality and desirable values" (2008, p. 151). The strand is described as follows:

Religion, Morality and Ethics: fundamental concepts about religion, morality, ethics and principles of Buddhism or those of learners' religions; application of religions, principles and teachings for self-development and peaceful and harmonious coexistence; ability to do good deeds; acquisition of desirable values; continuous self-development as well as provision of services for social and common interests and concerns. (2008, p. 151)

Interestingly, although Buddhism is the dominant religion in Thailand with over 93.6% of Thais being of the Buddhist faith (CIA, 2016), the Basic Core Curriculum acknowledges the contributions of students' other religions to students' moral and ethical development in education. For example, the inclusion of Muslim populations in southern Thailand has encouraged the development of the Curriculum of Islamic education corresponding to the Basic Education Core Curriculum 2008 (Singsuriya, Aungsumalin, & Worapong, 2014). However, this chapter focuses only on the inclusion of mindfulness and Buddhist moral values in the teaching and learning Thai curriculum standards.

MINDFULNESS AND PLACE-BASED EDUCATION IN BUDDHIST-ORIENTED SCHOOLS

According to the Basic Education Core Curriculum, standards for including the moral principles of Buddhism, or one's faith, were specified in each grade level. For example, in grade 5:

1. Analyse the importance of Buddhism or that of students' own religions as cultural heritage and a pivot for developing the Thai nation.
2. Summarise the life of the Buddha from arrival at the town of Kapilavastu to his important deeds or the lives of the Masters of students' own religions as prescribed.
3. Appreciate and conduct themselves in accord with the models of living and the insights from the lives of the disciples, the stories of the Buddha's previous lives, other tales and exemplary believers as prescribed.
4. Explain the components and importance of the Tipitaka (the Three divisions of the Buddhist Canon) or the scriptures of students' own religions.
5. Pay respect to the Triple Gem and observe the principles of the Threefold Learning and the Three Admonitions of the Buddha in Buddhism, or the moral principles of students' own religions as prescribed.
6. Appreciate and pray for the spreading of loving kindness; have mindfulness as the basis for concentration in Buddhism or spiritual development in accord with the guidelines of students' own religions as prescribed.
7. Observe the principles of students' own religions for developing themselves and the environment. (2008, pp. 155–163)

These curriculum standards clearly specify the importance of the tenets for Buddhism in the development of the students' moral and ethical values in the context of Thai education. The concept of mindfulness is introduced as a practice that connects students with their personal growth and the environment. These tenets are central to the education of citizens in the continued development of the Thai nation.

CONNECTING BUDDHISM TO PLACE-BASED EDUCATION

According to Janice Woodhouse and Clifford Knapp (2000), place-based education is founded on the concept that “education should prepare people to live and work to sustain the cultural and ecological integrity of the places they inhabit” (p. 4). Gregory Smith and David Sobel (2010) expanded the purpose of place-based education as “a way for teachers and communities to prepare children to become participants in local problem-solving” (p. vii). Buddhist philosophy is one of the standards from the Thai National Curriculum that supports a place-based science curriculum in Thailand.

In a study of place-based science education in rural Thailand, Rojjana Klechaya (in press) designed and investigated a professional development program for elementary teachers from a rural province in northern Thailand. The program was designed to prepare teachers to engage students in learning about science through solving problems in local communities. The project embraced Buddhist values of

mindfulness and caring for animals and the environment in the curriculum. The population of students was from the Hill Tribe communities, known as *Tailea*, a minority group in Thailand. Over half the population of 500,000 Hill Tribe people lacks citizenship (CIA, 2016). The schools in the Hill Tribe communities also lacked the resources and teaching expertise necessary for students to successfully achieve and meet many of the standards of the Thai National Curriculum while helping students to connect science learning to local life.

As part of the study, students learned about the importance of a healthy environment and undertaking activities such as sorting recyclables and stopping the use of plastic bags and bottles in the school. Every morning when the students arrived at school, it was part of their responsibility to take care of their environment. The children began the day by meditating to practice the concept of mindfulness. In class, students developed science projects that supported the environment such as reusing candles, recycling paper, and using waste liquid remaining after rice had been rinsed with water. This place-based project was further enhanced on the Buddhist religious day when students carried the recycled candles to the temple and everyone brought a flower from home to offer to the monks.

In another project, a group of students went out to observe the water sources in the village and tested water samples from rice fields, streams, and irrigation canals. Students learned how to measure temperature, turbidity, nitrates, phosphates, biological oxygen demand, and bacteria in the water samples. They analyzed the data and demonstrated responsibility by reporting the results door-to-door to all people in the community. Visitors to the school noted that students were able to understand and show how and why it is important to protect the community's water resources. Further discussion in the classroom focused on describing and understanding the science of food chain dynamics in animals and humans and how it ultimately leads to impacts upon families and students. At the conclusion of the project, the school sponsored a Buddhist day in which one of the five precepts of Buddhism (i.e., not harming living beings) was inserted into the lesson. The important role of guiding Buddhist values in protecting the environment was also included in class discussions. By working with teachers, students, and the community, the researcher became aware of how place-based education could make learning more effective by looking carefully at the structure of the place, school, and community within the context of Buddhist culture (Klechaya & Chinn, 2009).

BUDDHIST-ORIENTED SCHOOLS

In 2003 the Thai Ministry of Education undertook a project designed to focus on the teaching and learning of Buddhist values in primary and secondary schools (Office of the Basic Education Commission, 2003). The National Ministry of Education encouraged schools to apply as "Buddhist-oriented Schools" in which Buddhism fits harmoniously into the national curriculum. Over fifty schools throughout the country originally participated in the program that has now been expanded to over

20,000 schools (Thai The Buddhist Channel, 2008). The goal of the program was to promote the integration of the three-fold Buddhist philosophy of Trisikkha (morality, mentality, and wisdom) and mindfulness into the teaching-learning process, students' behavior, school management, and the school environment (Thailand Education System & Policy Handbook, 2011). The establishment of Buddhist-oriented schools provides a means for the inclusion of moral education in the core curriculum (Singsuriya, Aungsumalin, & Worapong, 2014). The following discussion is a description of the tenets of Buddhist-oriented schools. The tenets include attention to the physical environment, activities on Buddha day, teaching and learning activities, and the behavior of teachers, school administrators, and students.

Physical Environment

The school environment is clean, peaceful and should have as much designated green space as possible and a space to practice meditation. All Buddhist-oriented schools should not have any junk food, alcohol, cigarettes, drugs, or violence on the premises. Every Buddhist-oriented school includes a statue of Buddha in front of the school and a nearby national flag. Every classroom has pictures of Buddha in front of the classroom.

Around the school, there are photos and signs with quotes from King Bhumibol Adulyadej Rama9. (The beloved King Phra Bat Somdet Phra Poramintharamaha Bhumibol Adulyadej Mahitalathibet Ramathibodi Chakkrinaruebodin Sayammintharithat Borommanatbophit passed away on 13 October, 2016. For seven decades, His Majesty was the longest reigning monarch in Thai history. He is succeeded by his son, King Maha Vajiralongkorn Bodindradebayavarangkun Rama10.) King Bhumibol's royal virtues come from the Buddhist Dharma tradition of 2500 years that he gave to the Thai people to use in everyday life. The royal virtues of the King include (Attajaree, 2010):

- Tarn (charity)
- Sil (self-discipline)
- Parigaka (self-sacrifice)
- Ar-chawa (honesty)
- Matthawa (gentleness)
- Tapa (self-austerity)
- Ak-Go Ta (non-anger)
- Awihingsa (non-violence)
- Khanti (tolerance)
- Awirotdhana (non-opposition)

These virtues remind Thai students of how King Rama9 lived humbly while he did good deeds for Thai citizens. These virtues apply to the King's philosophy of a "sufficiency economy" which applies to everyday life and includes living sustainably and in moderation (The Chaipattana Foundation, 2016). For example, in the sufficiency economy, Thai people learn how to carefully use natural resources,

how to attend to agricultural cycles with space management, and how to prevent water flooding and protect the forest and environment. As a role model for Thai citizens, the King was able to clearly bring the royal virtues to action. The Thai people and students learned from the King and were reminded to live mindfully and apply the ten virtues to their lives.

Buddha Day

Every Buddhist-oriented School has about four days every month designated as Buddha Days that are connected to a three-month lunar cycle known as Buddhist Lent. Buddhist lent is a time during heavy rains and planting of crops where monks devote more time to meditation. During Buddha days, all the teachers, administrators, and students wear white clothes. Every Friday food is offered to the monks and students listen to a monk give a sermon. Students eat vegetarian meals at lunchtime and offer prayers in Balinese Sanskrit and Thai.

Teaching and Learning Activities

At the beginning of the school day, all the students in the school meditate together as a group with the purpose of practicing mindfulness, being peaceful, and spreading loving kindness. Students also may meditate before each class so that they learn with a positive mind and so that Buddhist philosophy may be integrated with the core subjects being taught. Teachers and students also volunteer once a week to help communities, schools, or school administrators. Teachers, administrators, and students are required to participate in religious activity at temple once a month. The temple is used as a resource and place for learning. Every year, teachers, administrators, and students organize and participate in Buddhism practice camp.

Behavior of Teachers, School Administrators, and Students

Teachers, school administrators, and students should follow the five precepts of Buddhism by not harming living things, avoid taking what is not given, avoid sexual misconduct, refrain from false speech, and abstain from intoxication (BuddhaNe: Buddhist Ethics, 2016). When greeting each other, everyone should practice *wai* by placing palms together as a means of showing respect and gracefulness. Before meals, it is important for students to analyze whether the food they eat is good for their health. During eating, everyone should be mindful of good manners, eating slowly, and not leaving food on the plate. Teachers, administrators, and students should all be cognizant of saving money and conserving resources. While learning something new may be difficult, persistence is highly valued.

To promote Buddhist ways of life, teachers, administrators, and students should never yell, show negativity, or display violence in the schools. The teacher should be positive and show good will at the morning session of the national anthem.

MINDFULNESS AND PLACE-BASED EDUCATION IN BUDDHIST-ORIENTED SCHOOLS

In homeroom class, the teacher should let the students reflect on and discuss their true feelings, especially when they do good to other people. Teachers, administrators, and students also keep a notebook or diary that serves as a record of good deeds.

Before meetings or classes, teachers, administrators, and students practice mindfulness for the purpose of preparing their minds to be receptive before starting activities. Mindfulness involves releasing and putting negative ideas or thoughts behind. This may be accomplished through quiet meditation, walking meditation, listening to music, introduction greetings, crossing hands as a symbol of love, or opening arms as a symbol of happiness. To promote Buddhist ways of life, the monk also teaches regularly at the school.

In Buddhist-oriented schools the teachers, administrators, and students should focus on respecting elders, being positive, and establishing strong and supportive friendships. All students in Buddhist-oriented schools must pass a paper and pencil examination on the subject of Dharma that embraces the three-fold Buddhist philosophy of Trisikkha (i.e., morality, mentality, and wisdom). The goal of Buddhist-oriented schools is to promote moral development and mindfulness into the teaching-learning process, students' behavior, school management, and the school environment.

KLONGLOOMLUEK SCHOOL: EXAMPLE OF BUDDHIST-ORIENTED SCHOOL

As one of the over 20,000 official Buddhist-oriented Schools in Thailand, Klongloomluek School embraces the integration of the three-fold Buddhist philosophy of Trisikkha and mindfulness into the teaching-learning process, students' behavior, school management, and the school environment. The school has currently 108 students in grades K-6, 6 teachers, and a principal. The student population at this school is characteristically diverse, with approximately 10% of students from migrant families from Myanmar, Laos, and Cambodia while 78% are Thai students that move from place to place with their families. Only 10% are from local Thai families. The school is an example of how Buddhist-philosophy of mindfulness and meditation provides the moral fabric for promoting social and cultural stability and harmony in the school and community. The school teaching and learning activities are supported by student teachers from Srinakharinwirot University in Bangkok.

Following the strand for teaching Buddhism in the Basic Core Curriculum, the standards address good behavior and mindfulness in the context of learning in the core subjects. Students begin the day with a five-minute meditation to prepare their mind for the day.

If the students have problems at home, then meditation helps them become mindful, calm, and peaceful so they can focus on solving the problem with good reason and not being angry or yelling. By practicing mindfulness, the students can focus more on learning in the classroom while learning to respect other people. Students may also practice walking meditation by walking slowly in a circle. Also,



Figure 11.1. Students at Klonglomluek school begin the day with a five-minute meditation to prepare their mind for the day

students can practice *wai* together before meals. On Buddhist day when students wear white clothes, they may meditate more throughout the day.

The teacher's job is to help students to apply integrated knowledge to real life connections. For example, when learning about Science-Technology-Engineering-Mathematics (STEM), students constructed toys out of recycled materials. Because the student's families lacked the funds to buy expensive toys, using recycled items helped students learn about the importance of reducing waste and being resourceful. In the process of making toys, students learn to share ideas and make rules when playing, thus building character by learning to listen to and reflect on other students' ideas and giving opinions without harsh judgment. This process on supportive learning in Buddhism is referred to as *kullayanamitra* and is viewed by Thai educators as essential for helping people understand and support each other.

Through STEM education activities, integrated knowledge can apply to real life. Even though students lack the funds to buy expensive toys, they are able to apply scientific knowledge and their own creativity to design toys using recycled materials. Students are proud they are able to reduce garbage and bring knowledge and awareness of recycling to their communities. This mindful activity is supported in the Basic Core Education Curriculum by the strand in the area of social studies,



Figure 11.2. Students practice wai together before meals

religion and culture that focuses on Buddhist values “in preparing students to become good, responsible citizens, are endowed with knowledge, skills, morality and desirable values” (2008, p. 151). For this standard of learning to be reached, students have to meet standards of good behavior and mindfulness that are connected to the place-based STEM activities.

Toyota Corporation provides support to the Buddhist-oriented Klonglue School by providing funding for students’ lunches. Other activities involve students volunteering to clean the temple and playing instruments for the monks. Teachers are required to visit the homes of the students to learning about the parents and difficulties that the families might be enduring. The Buddhist values of Trisikkha



Figure 11.3. Students at Klonglomluek school building toys out of recycled material

are essential to providing social cohesion and supporting communities with students from migrant families and diverse cultures.

MINDFUL REFLECTIONS: CONNECTING LOCAL TO GLOBAL

As modern schools in Thailand adopted systems of education from developed countries such as America, England, and Australia, education has become more separate from the Temple and Buddhist ways of life. As a result, Thai education now focuses more on the subject matter, test scores, and learning performance, thus increasing competition among students. Science education has become more modernized as Thai students are learning and practicing Western science and technologies in their everyday lives. However, the Ministry of Education in Thailand was concerned about separating the educational system from Buddhism, moral development, and a sense of place that is embedded in Thai culture. By focusing on academic performance rather than good citizenship, royal virtues, and happiness, Thai students have become more stressed and unhappy. The establishment of Buddhist-oriented schools is an effort to reconnect the ethical and moral values of Buddhism with the modern school curriculum. These values of Buddhism are thought to be essential to developing students who are productive and happy Thai citizens able to function in modern society.

Although not officially recognized in Thailand, place-based education fits well in bridging the gap between local Thai culture and globalized society. The establishment of Buddhist-oriented schools is in effect an attempt to reconnect Thai students with

the unique sense of place and Thai Buddhist culture. As King Bhumibol Adulyadej's philosophy of a "sufficiency economy" applies to everyday life and includes living sustainably and in moderation, his legacy will continue to be of great importance to Thai people. The benefits of place-based education in Buddhist-oriented schools are evident as students are caring for their communities through mindful activities that benefit the local economy. For example, students learn how to grow organic vegetables using the local food base. Using Western vacuum packaging technologies, local foods and sauces are now being sold on-line all over Thailand and exported to other countries, thus establishing the connections between localization and globalization. Further, by providing more economic opportunities through a place-based approach, students are returning to home villages to share technologies for growing rice.

The model of Buddhist-oriented schools is adaptable to both urban and rural schools in Thailand. All Thais live in a society in which the Buddhist philosophy and moral tenets underlie the moral and social structure of the nation, whether or not Thais embrace Buddhism as a religion. Indigenous and local knowledge exist harmoniously within this cultural context and actually have grown out of it. Accordingly, global or Western knowledge is not accepted in Thailand if not related to *wai*, the basic culture of the people of the Thai community. That being said, Buddhism can help facilitate the connection between global knowledge and Thai culture by acting as a lens through which non-indigenous (e.g., Western) knowledge is viewed as a bridge over which global knowledge can be integrated into the Thai environment. This external knowledge encounters local and traditional knowledge with which it must ultimately harmonize in order to find acceptance. Given the Thai context, it is expected that a place-based education program that allows for integrated cooperation between the local teaching staff, national curriculum administrators, students and community may be harmoniously accepted. And if this can occur, then the Buddhist philosophy of education within the National Curriculum can function to support the effectiveness of place-based education as a teaching and learning strategy for connecting local community knowledge and values within the context of Thai society.

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R. KLECHAYA & G. GLASSON

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CRISTINA A. TROWBRIDGE

12. DRAWING ATTENTION

Notes from the Field

ABSTRACT

For teachers, contemplation and silence are in short supply in school environments. Natural history museum dioramas lend themselves for looking and contemplating. This article investigates the use of silent sketching as a contemplative practice with new science teachers involved in the new teacher induction program at the American Museum of Natural History.

Keywords: informal learning environments, mindfulness, science teacher induction, museum education, sketching

I am drenched in sweat as I take the subway to the last stop in the Bronx – 242nd street – to participate in a drawing and nature hike in Van Cortlandt Park. It is one of the hottest nights of the summer of 2016. The weather conditions are far from ideal, but I feel compelled to go, to be a participant and an observer in a nature and meditation drawing event.

At the park, the group is small (nine people) but diverse: a mix of parents with children ages 7 to 9 years old, a mom and her teenage daughter, and a few women together. After walking into the woods, we end up at a section of Tibbets Brook that opens to a pond. We gather on a bridge over a marshy area and are told to draw what we want for 15 minutes or so. It is liberating to have the freedom to draw what I want and at the same time scary to try and figure out where to focus my attention. I notice the tall green weeds (phragmites) gently moving in the distance against the soup green pond; the light is quickly changing; the sounds of nature come into focus; and in the far distance a Snowy Egret stands still on a branch and a Blue Heron stands close by on the shoreline. I take the pencil and tell my hand to relax and I let the pencil make a long stretched out S shape to capture the curve in the head and the neck of the shore birds. I am starting to enjoy being in the moment.

For the past several years, as a manager for science teacher professional development, I have engaged science teachers in sketching, thinking, and talking in front of dioramas at the American Museum of Natural History. Initially, I facilitated professional development activities using Visual Thinking Strategy (Housen, 1999), a structured discussion protocol originally developed for use in art museums.

I noticed teachers were reserved about sharing their observations. I modified the protocol, adding an interval of silent sketching before asking participants to share what they had observed. This addition of silent sketching contributed to a shift in my thinking about the dioramas and their generative potential for contemplation. I started to see the dioramas as places for meditation, and for supporting mindfulness practices.

In education, there has been burgeoning interest in applications of mindfulness since the turn of the 21st century (Schonert-Reichl & Roeser, 2016). It is increasingly common for educators in school settings to engage both students and teachers in mindfulness exercises (Impedovo & Malik, 2015). One example of this, the New York City Department of Education's Move to Improve program, has trained 8,000 elementary teachers in mindfulness and stretching activities (Harris, 2015). This represents approximately 1 out of 11 teachers in the Department of Education. In addition, many middle and high schools are using breathing meditation as a mindfulness exercise throughout the school day.

A common refrain from my work with new teachers is the need to maximize learning and minimize stress in the classroom. Research suggests that teachers' engagement in mindfulness practices and contemplative interventions support effective classroom environments (Bernay, 2014). The research on the emotional environment of classrooms (Richie et al., 2011) makes a strong case for preparing teachers to use mindfulness interventions. The benefits of mindfulness strategies, such as an increased attention, self-regulation of emotions and creativity (Azarin, 2016) are well suited to supporting school communities. It is not surprising that contemplative practices and mindfulness programs are being considered for teacher education curriculum programs (Impedovo & Malik, 2015).

My work using the museum as a site for contemplation with first year science teachers took shape in the context of my exposure to ideas about mindfulness. My doctoral courses at the Graduate Center of the City University of New York, (in particular, courses with Professors Kenneth Tobin, Gillian Bayne, and David Forbes) influenced me to incorporate mindfulness in my professional development work with science teachers. On the first day of the course with Professor Tobin, I was pleasantly surprised to engage in five minutes of breathing meditation. It was liberating and inspiring to do this in a doctoral course. In addition, Graduate Center colleagues introduced breathing meditation and heuristics as interventions for raising one's awareness of degrees of mindfulness when speaking and listening (Powietrzynska et al., 2015). I started to see the diorama as an intervention or a heuristic to focus attention for contemplation, reflection, and meditation. I began to notice teachers' experience in the museum with dioramas at a macro and meso level and applied different sociocultural theories and my own framework – illuminating some aspects of what I am seeing while obscuring others (Tobin, 2008).

My research stance is guided by the authenticity criterion developed by Egon Guba and Yvonna Lincoln (1989) and elaborated by Kenneth Tobin (2015). This

work with the dioramas has been guided to understand what is happening for new teachers engaging with the phenomenon of sketching as a mindfulness exercise. For me, the value of engaging in this work is to support first year teachers' reflections on teaching and learning. Along the way, my ontology is changing in relation to how I value contemplation in my work and seek to increase opportunities for teachers to engage, and finally, to strengthen my ability to do this in other environments outside of the museum.

The activity of sketching and looking at dioramas is a way to examine reality and say what is happening in a complex scene. It is a close proximate of reality and when this activity is done with other people (sketching and looking and talking) participants' plural realities and experiences can be shared and the group can create together knowledge of sensory perception and its interpreted meanings. These notes from the field are an attempt to describe what I am seeing and how teacher contemplative experiences in the museum can alleviate some of the tensions and contractions new teachers face in the classroom.

Mindfulness has its origins in Eastern religious Buddhist traditions and, starting in the 1970s, began to appear in psychology literature (Renshaw et al., 2015). There are varying ways mindfulness is conceptualized (Bishop et al., 2004). For the purposes of my work, I draw primarily on definitions of mindfulness proposed by Jon Kabat-Zin (2009) and Marsha Linehan (1993). Kabat-Zin provides a succinct description: "mindfulness is awareness that arises through paying attention, on purpose, in the present moment, non-judgmentally" (p. 107). Linehan's definition emphasizes paying attention in the moment; observing thoughts, facts and feelings non-judgmentally; and participating with awareness. Contemplation, is closely related to mindfulness, but is not the same. In his work on contemplation in schools, Tobin Hart refers to contemplation as: "the act to shift the habitual chatter of the mind to cultivate a capacity for deepened awareness, concentration and insight" (2004, p. 29). For teachers, contemplation and silence are in short supply in school environments. Natural history museum environments lend themselves for looking and contemplating.

DRAWING WITH DIORAMAS IN THE AMERICAN MUSEUM OF NATURAL HISTORY

Dioramas recreate visual phenomena of the natural world and provide vistas for looking. Natural history dioramas, termed "windows on nature," by Steve Quinn at the American Museum of Natural History (2006) are scientifically accurate three-dimensional displays of animals in their habitats that include fabricated real or artificial elements (Kamcke & Hutterer, 2015). The dioramas hold in them rich science content and concepts, which could support learning for teachers and students. In his book *Ways of Seeing*, John Berger (1972) comments that seeing comes before words. The dioramas are a rich backdrop for seeing and sketching before talking.

C. A. TROWBRIDGE

As mentioned, my work with sketching and mindfulness with science teachers began with a modification of Visual Thinking Strategy (Housen, 1999) – a well-known facilitated protocol for observation and discussion, originally developed for use in art museums. The protocol poses three questions: “What is going on in this picture?” “What do you see that makes you say that?” and “What more can we find?” My initial intent, in modifying the protocol to include sketching, was to give participants time to look before verbalizing observations and inferences. Over time these activities with first year science teachers have evolved to become a mindfulness exercise and provide a space for contemplation.

TEACHERS’ RESPONSES TO DRAWING DREW MY ATTENTION

One of my first experiences facilitating group discussion occurred after silent sketching took place with science teachers in front of the mountain lion diorama in the iconic hall of North American Mammals. What impressed me was that the hall roared with teachers’ voices. Teachers shared what they had noticed and where they had focused their attention. To illuminate this experience, Randall Collins’ (2004) theory of interaction ritual chains describes the characteristics of how a group functions. First, there was proximity of individuals to one another, which was evident in the intimacy of participants gathering in front of the diorama. Second, the shared focus of looking at the diorama and the full engagement of looking attentively with the group. Synchrony was visible in the group’s shared focus looking intently and sketching the diorama; the teachers displayed positive emotions; laughter, engaging and listening to each other and a feeling of generosity to share their sketches. Over the years, I have done this activity with hundreds of science teachers and the response is generally similar. Teachers appreciate the silence followed by the engagement of having a shared experience of discussing where they put their focus in the diorama. The drawing is about focusing attention to detail and not about the actual sketch. I wondered if the diorama is a catalyst for group cohesion.

What was clear from the beginning was that it did not matter if the activity occurred during a one-day or weeklong workshop; this relatively brief activity of looking, sketching and talking for 15 minutes was consistently noticed and commented on in evaluations. When asked about their impressions of the day, teachers commented how much they appreciated it. “Using visual learning, drawing allowed me to focus attention,” commented a high school science teacher. This was a common refrain in evaluations. Shannon Murphy (2016), in her work with children and art and meditation in a NYC art museum, also saw a similar pattern – the meditation or focused attention of looking resonated strongly with participants.

Below are examples of science teachers’ four-minute sketches of the Cougar (mountain lion) diorama at the American Museum of Natural History which highlight the multiple perspectives and plurality of attention to detail evoked by silent sketching in a group.

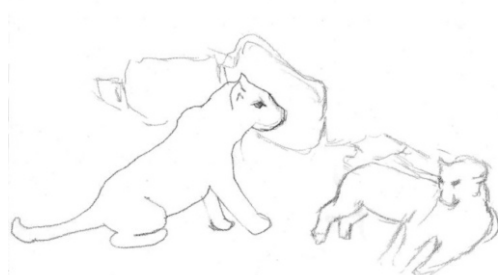


Figure 12.1. Perspective with two Mountain lions



Figure 12.2. A perspective of one of the Mountain lions in the diorama



Figure 12.3. A perspective of one of the Mountain lions with details of carcass and rock

C. A. TROWBRIDGE



Figure 12.4. Perspective of foreground and details of the overhang

I include a photograph of the Mountain Lion diorama so the reader can see where four different teachers put their attention.



Figure 12.5. Photo of the Mountain lion diorama in the Hall of North American Mammals

I chose these sketches because they demonstrate commonalities and differences of how teachers view the diorama and where they put their attention. The two mountain lions are prominent in the foreground with a detailed landscape of the

Grand Canyon in the background. In [Figure 12.1](#), the teacher kept his attention on sketching the outline of the two lions with detail on a boulder behind them. In [Figure 12.2](#), the teacher focused on one mountain lion with detail to fur texture and the head region – whiskers, eyes and nose. In [Figure 12.3](#), the sketch captures the mountain lion’s focus and stance as well as noticing an often-missed detail – vertebrae bones on the ground. In [Figure 12.4](#), the teacher focuses her attention on the rock overhang, the plants, and the horizon. These sketches are examples of polyphonia. A core principle of authentic inquiry is that there are many truths, perspectives, and multiple interpretations and learning from difference is valued (Tobin, 2015). This also parallels a characteristic of mindfulness, which is the ability to identify several perspectives of a situation. The images are four different views and together they create another perspective, which highlights the aspects of the diorama.

DRAWING ATTENTION: SKETCHING AS A MINDFULNESS EXERCISE WITH SCIENCE TEACHERS

In looking at the diorama, with its focus on phenomena of the natural world, the viewer is looking and thinking, and is in the position of a discoverer, rather than a passive recipient of knowledge transmitted by others. This was evident with the level of engagement, the questions, the ideas generated and the curiosity for wanting to learn more among the teachers with whom I worked. The natural history dioramas are complex environments that generated observation, multiple perspectives, and reflection.

The museum presents affordance for contemplative practices. The idea of affordances described by James Gibson (1977) is that objects in the environment present possibilities for taking action. The natural history diorama is an object that is complex, layered with science concepts and history, ideas about representation, and values about nature (Haraway, 1984). The diorama offers visitors possibilities to take actions of learning and contemplation. In addition, the diorama is generative. The idea that objects and words can be generative is prominently situated in the work of Paulo Freire (1993). For Freire, generative themes or words elicit – or generate – new thoughts, ideas and observations.

The natural history diorama is a facsimile for nature. Research suggests that people’s cortisol levels lower with exposure to nature. For many teachers, the museum setting is a refuge from the realities of public schools. The museum is also a vehicle for developing teacher identity and agency (Adams & Gupta, 2015). The context, the atmosphere, and exhibits make it an ideal environment for reflective learning. A contemplative space, the museum can engage new science teachers in reflection and dialogue about classroom practices and culture.

Contemplative practice provides an immersion in reflection with a focus and an awareness of the present moment (Impedovo & Malik, 2015).

As a new teacher, it was great to run a successful activity that was not strenuous
... VTS allows you to take some of the stress away from planning the trips,

C. A. TROWBRIDGE

since the goal is to have students think and construct their own understanding, as opposed to looking for a correct answer. It is beautiful to see students thinking and constructing for themselves! ... (Maryann, a first year middle school teacher)

Here a first-year teacher reflects on using a sketching and visual thinking strategy and how her students construct their understanding by first quiet sketching and looking and talking with others. The teacher's comment of various student perspectives in the quote above highlights what Ellen Langer (2016) refers to as mindful learning. In earlier work done in the seventies, Langer defines mindful learning as "the continuous creation of new categories, openness to new information, and an implicit awareness of more than one perspective" (Langer, 2016, p. 4). This teacher also acknowledges that the activity lowered her stress levels, which in turn contributed to her students' engagement in a mindful learning experience.

Like meditation, it required focus, but was enjoyable. It was meaningful to pay attention to small details that would normally go overlooked. (Maryann, a first-year middle school teacher)

My work with first-year science teachers in new teacher induction is part of the Master of Arts in Teaching program at the American Museum of Natural History. During monthly induction meetings and other professional development activities, I use the Museum's dioramas to engage new science teachers. The teachers value this time of silence and reflection in front of dioramas. These unforeseen observations, drawn from lived experience, shaped my practice. I can't overstate teachers' appreciation for silence and reflection. The quotes from first and second year teachers encapsulate many teachers' responses to sketching and observing in the Museum. In this context, the sketching activity is a mindfulness exercise that can be used with teachers to reflect on the realities of their classroom. It also has the potential to foster teachers' effectiveness in the classroom.

It created an allotment of time that was reserved for silence and peace. It forced us to have a break from the busy schedule of teaching to relax and focus on detail ... specifically since induction had a lot of discussion on the challenges of teaching, and was the ending of a stressful workweek. (Lani, a second-year high school science teacher)

While most of the science teachers with whom I worked seemed to appreciate silence, not everyone appreciated sketching. For teachers who did not wish to sketch, I provided writing prompts on topics that are specific to new teachers' lives: "What gets in the way with lesson planning?" or, "Write about a student that challenges you" or, "Reflect on how you are making lessons culturally relevant to students," or "Write about what you are learning about yourself in your new role as a teacher." Teachers were asked to find silence (i.e., quieted their minds) and reflect on their teaching while sitting in front of a representation of a natural setting. A few teachers who shared their writing noted that it was cathartic to put their emotions on paper and describe their

struggles in the classroom. The group was sitting in front of the American Bison and Pronghorn diorama and teachers were given a choice of sketching or writing. The teachers who wrote were given a prompt to “Write about where you would put yourself on a graph of the Attitudinal Phases of New Teachers Toward Teaching” (Moir, 1990). Here a second-year teacher’s comments in her third month of teaching:

I feel like I live in survival mode and I am very disillusioned about teaching. I am just trying to make it through the week ... I constantly think that there is no hope for humanity. I feel like I’ve been asked to do more than I should and that my students have been asked to learn more than they realistically can in one year, especially from a first-year teacher, who doesn’t really know what she is doing ... (Diane, a first-year middle school science teacher)

The comment highlights many teachers’ experiences with their daily environment as disquieting and stressful. Mindfulness exercises such as sketching in front of a diorama can be used as an intervention to support reflection and have the potential for supporting teacher wellness.

OUT OF THE DIORAMA AND INTO THE CLASSROOM: EXPLICIT APPLICATION OF MINDFULNESS TO TEACHING

Like the diorama, the classroom is a complex environment that invites observation and multiple perspectives, but – unlike the diorama – the classroom includes people’s emotions, and teachers need to have the capacity to make many choices and take action in an environment that can be over stimulating emotionally. In the first year of teaching, emotions effuse. Many first-year teachers with whom I’ve worked have shared experiences of the smell of their own sweat from being nervous or the salty tears because words could not describe their frustration or not recognizing the sound of their own voice because of anxiety.

Teachers need to navigate through their own and students’ emotions all day. At the end of the day, a new teacher might be able to say, “I did one thing that worked but I was unhappy with 99 percent.” The beginning teachers face an expectation of competence, and as such a high level of public exposure to failure. It is hard for many individuals to take hold of their attention under optimal circumstances, but the classroom, which evokes powerful emotions (Tobin, Ritchie, & Oakley, 2013), presents exceptional challenges, particularly for new teachers. The provision of the museum’s affordances to potentiate teachers’ practice of mindfulness can strengthen their capacity to take hold of their attention in the demanding environment of classroom.

DRAWING WITH THE NON-DOMINANT HAND: FACILITATING NONJUDGMENTAL OBSERVATION AND TEACHING

My work with teachers continues to be emergent and contingent, i.e., to emerge from my lived experience with teachers, and to be contingent on their benefit. In my

mentoring visits to new teachers in their schools, as part of new teacher induction, I have become convinced of the need to support teachers' capacities to focus their attention on what is happening in the classroom, what is happening with their own emotions, what teaching objectives reflect their students' needs, and what behaviors teachers can choose to achieve their objectives.

I am working to use a protocol for helping teachers take hold of attention in order to increase the effectiveness of teaching and learning. Based on work with mindfulness (Linehan, 1993) being conducted with medical residents (Wilkinson & Lobl, 2016), I encourage teachers to: maintain nonjudgmental awareness of what is happening with them and their students (distinguishing among thoughts, facts, and feelings); identify their objective(s) in the moment and for the lesson; and choose behaviors to stay on course with achieving those objectives. The protocol's acronym, HOB (Happening, Objective, and Behaviors), prompts teachers to engage in a reflective cycle repeatedly during the course of the lesson (and especially when things in the lesson are going off course). The prompts have the potential of supporting teacher efficacy and student learning.

- What is happening with my students and me right now? (Identify facts, thoughts and feelings, without judging.)
- What is my objective? (Consider that one may have multiple objectives, competing objectives, short and long-term objectives.)
- What could I say and do (behaviors) to achieve my objective? (And how could I say or do it?)

I decided to introduce this protocol to new science teachers with a sketching exercise to illustrate the non-judgmental qualities of mindfulness. Drawing with the non-dominant hand liberates the sketcher from judgment and attachment to a product. The activity of drawing with the non-dominant hand refocuses attention on the experience of seeing. In her chapter in this book, Kiat Hui Khng (2017) comments that there is a tendency to being on autopilot or doing something without awareness, which prevents a full engagement. The use of the non-dominant hand reduces expectation to get it right or be "perfect." The possibility of failure is eliminated. The protocol for the activity supports noticing without judging. Teachers were given 4 minutes to focus attention on noticing and sketching an object using their non-dominant hand.

The fear of failure reduces participation and receptivity to an experience. It is prevalent in classrooms, in both teachers and students. Fear of failure can cause avoidance and withdrawal, which interfere with the focus and attention on experience. Eliminating the possibility of failure can free attention for learning. It promotes a core component of mindfulness, which is awareness without judgment.

Drawing with my non-dominant hand, I knew I didn't stand a chance of creating a satisfactory drawing ... I did not judge myself because I had low expectations that I probably would not be good and this felt good ... (Kristen, a first-year high school science teacher)

By drawing with my non-dominant hand, I was forced to draw more slowly if I wanted to keep the proportions. So, it forced me to practice being patient, which helps in keeping focus. (Simon, a first-year high school science teacher)

How is it that just asking someone to do something for which she has no evaluative standard or expectations – sketching with a non-dominant hand for 4 minutes could elicit strong responses? The experience left me wondering how to incorporate non-dominant ways of doing things to focus attention and remove judgment. This could be a potential intervention to support a deeper understanding of what it means to do something without judgment. In an early study on peoples’ perception of drawing and mindfulness, by Adam Grant and colleagues (2004), the authors concluded that drawing is a way to increase mindfulness. In a letter to his brother in 1883, van Gogh wrote, “Drawing is at the root of everything” (Kulkarni, 2015). And maybe this is what we need to support others to do – to create spaces in parks, museums and schools to support environments that minimize judgment and help individuals draw attention.

NEXT STEPS: OUT OF THE CLASSROOM AND INTO THE CITY

I have highlighted how the environment of a museum provides affordances for teachers to practice contemplation and sketching. There is no single way to take hold of attention with awareness, and notice without judgment. The museum’s dioramas provide a contemplative site for teachers to engage in sketching. The act of putting pencil to paper in this setting can be a meditative experience, inviting the participant to be present in the moment, notice different views and recognize that there is always more to see and understand.

Over the past three years, I have grown in my conviction of how important it is to support teacher wellness by developing ways to hold attention. Although the sketching activity has been my primary method, I am beginning to take opportunities to use breathing meditation and mindfulness heuristics (Tobin, Alexakos, & Powietrzynska, 2015). For the teachers, there is a genuine desire to engage and build an appreciation for creating these experiences within new teacher induction. In monthly meetings with the teachers it is becoming a norm to include breathing meditation. Teachers are interested in maintaining their wellness and appreciate that it is woven into their development as a teacher – new teacher induction. I will continue to do this work and hope one day to exhibit the drawings and teachers’ comments and reflections to inspire others to create spaces for silent sketching for drawing attention as well as a way to honor teacher wellness. I am interested in continuing this work with teachers, as well as to work in public informal learning environments beyond the museum. I am interested to engage the public in drawing their attention and working with others to continue to support wellness using urban environments.

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BAL CHANDRA LUITEL

13. A MINDFUL INQUIRY INTO REDUCTIONISM IN MATHEMATICS EDUCATION

ABSTRACT

Subscribing to mindful performativity as a methodology, I have unpacked the problematic nature of reductionism as a key obstacle towards developing mathematics education in Nepal as an inclusive, agentic and meaning-centred enterprise of learning. Oftentimes, reductionism in mathematics education has been conceived as a tendency to reduce whole into parts, thereby studying them in isolation via the assumption that parts represent the whole. In the process, two cultural-intellectual traditions – performativity and mindfulness – have enabled me to explore meanings of reductionism as ideology, methodology, logic and history via narrative, poetic, reflective and narrative genres. More so, the chapter also portrays my inquiry into types of reductionism – systemic, curricular, pedagogic, and evaluative – widespread in Nepali mathematics education, thereby embodying different forms of research logics, such as dialectical and metaphorical.

Keywords: reductionism, mindful inquiry, conventional logics, holism

How has reductionism become a key feature of culturally decontextualised mathematics education that has persistently challenged the meaningfulness of mathematics education in Nepal, a country that hosts more than 130 languages spoken by its 30 million populations?

Elsewhere (Luitel, 2013), I have articulated how I have encountered the image of mathematics as a culturally exclusive and foreign-looking subject, thereby developing a feeling of frustration about its narrowly conceived notion of usefulness despite being myself a so-called academically bright student. During my higher studies, mathematics constituted a sense of algorithmic mind-game that involved much of my time in rote-memorising, cramming and meaningless reproduction of proven theorems and solving algorithmic problems as forms of stress-prone learning environment. More so, my experiences with the practice of research in mathematics education has often been reduced to the metonym of research as proving pre-designed hypotheses without giving due considerations towards a holistic nature of knowledge production.

Such an approach to reducing mathematics curriculum, pedagogy and assessment to instrumental activities is less likely to address the goal of developing mathematics

education as an inclusive enterprise that can work towards promoting the well-being of diverse cultural and linguistic groups of Nepali people. While reductionism has been the key orienting perspective of Nepali mathematics education, it privileges the uni-dimensional image of *mathematics as a body of pure knowledge*, a view of the nature of mathematics that promotes a singular form (i.e., pure: symbolic, algorithmic, abstract, formal) whilst discarding other equally important forms (i.e., impure: artefactual, embodied, communal, informal).

In this reference, my chapter has been guided by four key aims. First, I intend to explore meanings of reductionism from ideological, epistemological and historical vantage points. Second, I aim to unpack types of reductionism prevalent in the field of mathematics education in Nepal. Third, I seek ways to address the hegemonic impact of reductionism on pedagogic-, and assessment-related practices of mathematics education. My fourth aim is to demonstrate how I can make creative use of performativity and mindfulness to investigate such epistemic and pedagogic issues arising from my everyday professional experiences.

Building on my doctoral research (Luitel, 2009) and extending it as a teacher educator of a graduate school, I have taken two distinct cultural-intellectual traditions of methodology – performativity and mindfulness – into consideration in constructing the chapter, thereby organising it in a hierarchy of sections, themes, paragraphs, sentences, and words. From the perspective of performativity, the chapter can serve as readers’ theatre in which readers consciously ‘perform’ texts in the process of reading it turn-by-turn. Readers’ theatre is an approach to performing research texts with minimal resources and preparation (Donmoyer & Donmoyer, 2008). In this type of performance, contexts research texts are held and read out to the audience, where performers need not memorise scripts. Staging can be simple as available props can be used to represent visuals and scenery. This approach to performance promotes a radical form of drama occurring in each moment of our life.

Taking the cutting-edge metaphor of research as semi-fictive imagining, I have utilised my experience of working with in-service teachers, who are represented by the composite character, Pratap in my narratives.

Similarly, I have used the idea of mindfulness so as to account for my unfolding awareness of the process and product of the inquiry into the disempowering notion of reductionism embedded in my professional context. Historically, the construct of mindfulness is about being aware of anything associated with body(s), mind(s), world(s) and beyond. The Vedic literature and the Saint Traditions of the East suggest that mindfulness is about developing an ability of witnessing, *sakshibhav*, that which can be un|seen (Shivanand, 2013). In this chapter, I hope to have demonstrated my quality of witnessing by (a) speaking otherwise unspoken issues associated with reductionism in mathematics education, (b) demonstrating contingent nature of categories woven in the language of reductionism, and (c) using perspectival genres and logics as a basis for developing unfolding awareness towards inclusive and empowering mathematics education. Additionally, I have upheld mindful performativity by employing genres such as perhaps, could be, may be, “rather than

the more traditional, absolute way (“is,” “can only be”), which could be defined as the mindless condition” (Langer & Moldoveanu, 2000, p. 3). Given this, I have used four key logics and genres that enable me to address otherwise unaddressed issues embedded in reductionist practices in mathematics education.

Subscribing to the notion of elastic correspondence, I have employed metaphorical logic and genre as a means for representing the polysemous nature of the world around us (Winchell, Kress, & Tobin, 2016). Of particular interest, I have used metaphors and similes grounded in the cultural context of this research, thereby enabling readers with textual spaces for possible connections between my texts and their contexts. With the notion that storyteller brings past into present, I have used narrative logic and genre to exemplify the extent to which reductionism in mathematics education operates in a mindless fashion to represent mathematics teaching, learning and assessment practices through a bunch of technical-mechanistic tasks. In my endeavour to enrich my ability to witness subtleties, I have also used poetic logic and genre as a basis for articulating ineffability embedded in the issue of investigation. Unlike the conventional practice of writing linear, clean and dispassionate texts via propositional, deductive and analytical logics and genres, I, as a poet-researcher, have used somewhat non-linear, messy and passionate texts to demonstrate my awareness of the possibility of envisioning and empowering (e.g., agentic, inclusive and meaning-centred) mathematics education (Luitel & Taylor, 2011).

Although I have critiqued reductionism for being an obstacle towards developing a meaning-centred mathematics education in Nepal, I have equally acknowledged its importance as an epistemic approach. This logical line of necessary but insufficient has offered me a space for using dialectical logic and genre to demonstrate my awareness of complexities enshrined in the phenomenon of inquiry. This logical line goes well with the Upanishadic dictum of synthesising material and spiritual (despite them appearing contrary) for healthy and prosperous life. As a matter of symbolism, I have used slash (/) to refer to the dialectical nature (interactive, synthetic, seemingly oppositional, mutual dependence) of notions embedded in my textual performance.

In demonstrating mindfulness, I have used reflective logic and genre as a basis for sharing my unfolding awareness of the impact of reductionism. Out of many forms of reflective thinking and representation, I have drawn from soulful and magical, both of which have connections with the notion of mindful inquiry. The soulful reflection takes me towards the inner core of my experiences as a practitioner, thereby unpacking its subtleties (cf. gross). The magical thinking and writing as a craft enables me to excavate my memory through many un|seen characters, events and eventualities (Valentine, 2011).

Beginning with the signature story, *Precise Curriculum, Short-Cut Method and Correct Answer*, the first section explores meanings of reductionism via narrative, reflective and poetic genres. In this performative context, an ensemble of voices (storyteller, magical writer, researcher, poet) explores disempowering implications of a reductionist worldview for mathematics education in Nepal as a means for

B. C. LUITEL

unpacking my awareness as a practitioner-researcher. In the second section, the signature story, *Finally The Monotonous Class Is Over*, constructed on the basis of my experience of observing a number of mathematics classes, gives a sneak preview of reductionist pedagogy in a Nepali mathematics classroom, thereby exploring different types of reductionism embedded in mathematics education in Nepal.

EXPLORING MEANINGS OF REDUCTIONISM

I would like to start this section with the notion of “the *deliteralization* of knowledge” (Eisner, 2008, p. 5) as a means for challenging the reductionist view of knowledge as warranted assertions arising exclusively from evidences collected from an ‘out there’ field. The story, *Precise Curriculum, Short-Cut Method and Standard Examination*, constructed on the basis of my experience of working with (or tutoring) in-service teachers, is a basis for creating an extended ‘plot’ to unpack deliteralized meanings of reductionism and its implications for mathematics education in Nepal.

In reference to the notion of deliteralization of knowledge, the section progresses through a number of themes immediately after the signature story, *Precise Curriculum, Short-Cut Method and Standard Evaluation*. Whilst detouring to reductionism as ideology, I encounter its ‘victim-blaming attitude’ and uni-dimensional view of mathematics education. Next, I elaborate the notion of methodological reductionism as an approach to reducing complex paradigmatic (and epistemic) issues to fixed instrumental procedures. Furthermore, in my quest for understanding the notion of reductionism as methodology, I employ a bricolage of narrative and reflective genres to unpack multiple (e.g., literal, metaphorical, lived, felt, and sensed) meanings of reductionist methodology. Subsequently, the notion of reductionism as logic becomes a major theme, thereby providing readers with an opportunity to experience my voices through reflective, poetic and reflective genres. In so doing, I try to depict, literal, lived and felt meanings of reductionist logic. Toward the final presentation of this section, I recapitulate the historical route of reductionism via reflective and poetic genres.

Precise Curriculum, Short-Cut Method and Standard Evaluation

It can be a Saturday in the second half of September 2004. I am about to attend presentations by students who have recently started a one-year teacher education program for secondary school teachers. The students and I have agreed that each presenter uses a maximum of 30 minutes of time to share their views of teaching and learning mathematics, which they are likely to develop after being engaged to learning materials and reflecting upon their own practices as teachers. After watching eight presentations in the last three weeks, I am feeling happy to hear presenters making strong commitments for incorporating an inclusive and meaningful approach to mathematics teaching.

My classroom becomes a politically, culturally, sociologically and epistemologically charged space. “The ‘ical ideas sound quite revolutionary. I heard your students uttering terms like power, inclusion, and equity in mathematics education,” some of my colleagues share their realist impressions. Initially, all students resist my multi-perspectival view: all they want is a math-centric perspective, where they try to over privilege a reductionist view of mathematics education. However, I try to break this interlocking and conforming discourse of their pedagogical practices. Gradually, they begin to comment critically on their colleagues’ presentations. Some of them start using new words (although they appear to be misused) such as construction, cooperative, empower, hegemony and participation so as to represent their ideas. I admit that I have been using my ‘teacherly discursive power’ to shape and facilitate their pedagogical practices. Is this a bad strategy, after all? I don’t really know whether it is totally good or totally bad; rather I know that this approach is making sense to them, and persistently helping me know what I am doing for my class, and where I am leading it to.

Sitting at the back of the classroom as the tutor of Mathematics Education, I eagerly wait for today’s presenter to take over the vacant space in front of the classroom. “The presenter seems to have forgotten his task today. Maybe he is busy having a wonderful Saturday picnic,” a student makes fun of his delay. “We still have ten minutes to start. So he may be busy photocopying the slides,” I make a positive remark although I am also doubtful because of his apparent passivity toward the discourse that has been taking place in this class. Although the students seem to buy into my ideas, I begin to worry about his possible absence which requires me to develop an instant plan of action that *should* engage these eight experienced teachers for the next three hours. Thus, I start sketching a contingency plan as though I am on a rescue mission. In a moment, however, I hear a knock on the door and the presenter enters the room.

Pratap, with the support of a technology assistant from the university, sets up his presentation. Not knowing the detail of Pratap’s presentation, I open my notebook to remind me of his topic. It appears that he is going to share his (renewed?) views of mathematics curriculum, pedagogy and assessment – a fairly open theme left to the last presenters. Observing his total engagement in the task, I put off my recently held belief about him as potentially a less motivated student. In the meantime, getting hold of the assigned reading materials, Pratap starts showing his slides with a written explanation, which he reads out during the presentation of each slide. Pratap’s first bullet point – that a precise curriculum helps make teachers’ task trouble-free – gives an indication of his notion of curriculum. My ear receives an (un)expected perspective that Pratap understands precise curriculum as meant to be a list of subject matters to be taught. He then explains briefly how different mathematical concepts *should* be sequenced according to the hierarchy of grades. He unwittingly critiques our ongoing discourse on socio-cultural and political aspects of mathematics curriculum, thereby promoting a reductionist view of curriculum as exclusively a list of subject matters. I feel like I have had a stone in my food. Pratap

continues, “Mathematics curriculum *should* state one thing very explicitly: what to teach. It should not distort the pure nature of mathematics because our students need to understand the purity of mathematical knowledge. It is okay to mention about the ‘how aspect’ if there are some mathematically correct teaching methods designed for particular topics. In general, the how aspect is not that important as it is embedded in each mathematical idea and concept.” Pratap reminds me of one of my university professors who referred mathematics education units as ‘mathematical blasphemies.’ I tighten my mouth knowing that I have to facilitate a follow-up discussion on the basis of what is coming out of Pratap’s such ignorant verbal shooting display.

Pratap’s slides on mathematics pedagogy gradually smash against our recently accumulated collective consciousness that students’ meaningful participation in mathematics learning is central to a meaningful mathematics education. Pratap explains why he thinks that his short-cut method of doing mathematics (teaching mathematics?) *should* be followed by all teachers. In reference to it, he further continues, “First, the short-cut method helps clarify mathematical facts, formulae and theorems to the students. Second, the short-cut method is easy to remember by students, thereby developing correct understanding of mathematical subject matter which is essential for their higher studies. Third, the short-cut method is appropriate to Nepali classrooms where a single teacher has to teach classes with more than fifty students.” In so doing, Pratap appears to counter all the previous presenters who have begun to subscribe to a progressive and multi-perspectival and inclusive view of mathematics pedagogy. Despite hearing his regressive posture on inclusive mathematics curriculum and pedagogy, I try not to change my facial appearance so as to (at least) encourage one of the most passive students to put forth his perspective in front of the classroom. Have I been able to maintain a smiling face in such a ridiculous presentation? I doubt it.

It is nearly twenty minutes since Pratap started his presentation. Without any surprise, Pratap articulates his view of assessment as an activity detached from day-to-day teaching learning activities. He goes on to say that student achievement in mathematics should be decided solely on the basis of their performance in written tests. “The existing system of assessment should be enhanced further so as to develop a more reliable and valid testing system in mathematics education. I think the idea of task-based, authentic, and portfolio assessment does not assess mathematical knowledge that we need to develop in our students. In the end, each student should be able to find the correct answer of each mathematical problem.” Pratap speaks as if he is an Avatar of an exclusive reductionist thinker who treats students as objects of mathematical instruction.

As Pratap is about to conclude his presentation, I begin to imagine yet another Everest to climb in the near future, that is, facilitating Pratap to become mindful of his narrow view of mathematics curriculum, pedagogy and assessment. If he recognises disempowering limitations of his viewpoints, he may begin to think about other perspectives. Perhaps I need some strategic and pragmatic discourses that may challenge the prevailing status quo in Pratap’s reductionist worldview of

mathematics education, helping him to embrace an inclusive view of mathematics education. Will this really happen in the near future or is it likely to remain my unfulfilled aspiration?

Reductionism as Ideology

After pausing my performative journey of storyteller, I am portraying my encounters with the metaphor of *reductionism as ideology*. I choose the term ‘encounter’ so as to depict the emergent nature of my inquiry. When do I encounter reductionism then? I am encountering reductionism right now as my intellectual mind-body appears to be unwittingly colonised by the prosaic-analytical text as a sole means for representing the entirety of my experience and imagination. I encounter the hegemony of reductionist ideology embedded in educational research whenever I open my ‘inbox’ to read emails from my colleagues filled with questions like these: *Are you going to use specific software that helps reduce your texts to themes? If not, how do you analyse them? What are your key hypotheses?* Even in the process of constructing this chapter, I have postponed the writing task on several occasions as a result of my wariness that I might be practising reductionism whilst critiquing it. Soon I realise that I am embracing multi-textualities and a bricolage of multiple genres and logics as alternative tools to stay away from such a form of reductionism. So, why should I be so suspicious of my performative texts? Consequently, my fingers make movements over the keyboard with a view to gaining some insights into meanings and natures of *reductionism as ideology* and its possible disempowering posture in developing a holistic and inclusive mathematics education in Nepal.

Reflecting upon Pratap’s ideas about curriculum, pedagogy and assessment embedded in the signature story – *Precise Curriculum, Short-Cut Method, and Standard Curriculum* – of this section, my writerly characters try to visualise the meaning of reductionist ideology embedded in Pratap’s thinking as an in-service student teacher. Perhaps, the signature story conveys the message that mathematics education *should* privilege infallible symbols and equations, thereby discarding lively mathematics arising from people’s cultural practices.

Arriving at this stage of my inquiry, I would like to draw your attention to Steven Rose’s (2003) book, *Lifelines: Life beyond the gene*, which offers a definition of *reductionist ideology* as the view that higher order complex phenomena are explained exclusively in terms of their lower level properties. Here, Rose being a biologist, and me being a mathematics educator, our concern appears to be the same – *the healthy biosphere*. In my solidarity with holistic biologist, I hold the view that mathematics education is a discourse and system of inquiry about and within the biosphere. Perhaps, Rose’s enunciation of reductionism as ideology, together with stories of my experiences give rise to two possible implications for Nepali mathematics education that: (i) it cultivates a mechanistic view of mathematics education that all visions, views and perspectives are necessarily reduced to some fixed technical procedures; and (ii) it is often translated into an extreme form of

victim-blaming ideology that ignores political, social and systemic weaknesses, thereby holding individuals situated at the receiving end of the education system entirely accountable for their failure. Similarly, Brent Davis (2005) argues that the Euclidean model of thinking is a key source of reductionist ideology in mathematics education, as this model reduces all possible mental and visual imagination to a plain geometry – a geometry of zero curvature. Connecting my experience as a teacher educator with Davis' perspective as a researcher, I find that reductionist ideology has been hegemonic to Nepali mathematics education by (i) privileging Euclidean Geometry in school mathematics curriculum, (ii) using Euclidean Geometry as an invisible framework for thinking about mathematics pedagogical models, and (iii) being exclusive to other forms of thinking (geometric) models that can help generate an inclusive mathematics education (Davis & Renert, 2013).

Thus, I come to realise that a reductionist ideology is an obstacle to envisioning fully an inclusive (of participatory and empowering pedagogies) and holistic (of different views of the nature of mathematics) mathematics education in Nepal. I envision that such an obstacle manifests in three possible ways. First, reductionist ideology prevents mathematics education from being an emergent domain of inquiry, thereby reducing it to an unchanging discipline via the image of *curriculum as subject matter*. In my experience, the widespread belief in the field of Nepali mathematics education is that the 'subject matter' of mathematics is considered to be unchanging. This view of the nature of mathematics helps reduce the complexity enshrined in designing and implementing the image of *curriculum as subject matter*. Second, such a reductionist ideology is likely to endorse the existing view of infallible (i.e., pure, formal, algorithmic, and standard) mathematics. Finally, the metaphor of *reductionism as ideology* does not seem to be helpful for me and other Nepali teacher educators in cultivating multiple, interconnected and hybrid identities. If mathematics teachers and teacher educators are not provided with enough space for multiple identities, how can they be prepared for an increasingly hybrid and multiplistic space of an inclusive and holistic mathematics education?

Reductionism as Methodology

Galvanised by the notion of inquiry as magical-mindful writing, I quickly construct the meaning of the metaphor of reductionism as methodology arising from the assumption that parts have ontological and epistemological primacy over wholes (Rose, 2003). Here, the notion of methodology entails processes, protocols and procedures that facilitate ways of knowing. In the field of mathematics education, the aspects of curriculum designing, teaching, assessing and researching can be considered as the domain of methodology. In my mind a reductionist methodology embedded in Nepali mathematics education portrays the process of curriculum development as prescribing a list of subject matter and teaching methods. Speaking from my reflective warrant, I find Ralph Tyler's Objective or Rationalistic Model being considered as the regulative principle for designing the mathematics

curriculum of Nepal. Tyler's model prescribes four major steps for curriculum development. These are: (1) deciding the educational purposes or objectives of schooling, (2) selecting appropriate learning experiences, (3) organizing the learning experiences for effective instruction, and (4) evaluating the effectiveness of learning experiences (Tyler, 1949).

What does the qualifier term 'rational' indicate here? I come to realise that Tyler's model does not espouse a Rortian view of rationality as persuasion, curiosity and acceptance, which are essential for conversations involving different viewpoints (Niznik & Sanders, 1996). Rather Tyler seems to promote rationality as a means for prescribing a 'final truth' about curriculum designing. Perhaps, Tyler's prescriptive model tries to convey the message that being rational is about reducing the entirety of the curriculum process to some measurable objectives, learning experiences and evaluation methods (Chien, Davis, Slattery, Keeney-Kennicutt, & Hammer, 2013). Nevertheless, I am not rejecting the need for measurable objectives, classroom activities and evaluative methods, rather I am critical of the reductive notion of measurement which is not inclusive of complexities enshrined in mathematics learning and assessment-related activities. Unpacking some disempowering meanings of reductionist methodology thus far, I am inviting you to watch Pratap's performance so as to understand how he experienced reductionist methodology as a teacher and department head.

In holding a holistic perspective of education, I argue that reductionist methodology, which is widespread in the field of mathematics education, has played a key role in reducing mathematics to a homogenous, pure and unchanging discipline. Such a reductionist view of mathematics discards an ecological view of knowing as embodiment of mathematical knowledge in cultural practices, thereby promoting pedagogy of 'knowledge imparting' which is akin to the ideology of 'Industrial Trainers' who endorse the authoritarian aim of education as the imparting of decontextualised and academic-interest-serving knowledge (Ernest, 2016). The social group of Industrial Trainers promote dualist/absolutist ideology of mathematics. Their description of mathematics education constitutes hard work, drill and practice, competitiveness, and no consideration for social issues. Thus, an exclusive notion of teaching as knowledge imparting does not provide room for meaningful participation of students in teaching and learning activities. Guided by such a reductionist methodology of conceiving the notion of teaching, Nepali mathematics teachers are likely to exclude mathematical practices arising from students' lived experiences. Therefore, privileging such a disempowering view of pedagogy in designing lessons, Nepali mathematics education unwittingly endorses a narrow view of intelligence as an ability to rote memorise and recall the knowledge imparted by the curriculum and textbooks. Thus, the epistemology from which reductionist methodology arises does not seem to allow an emerging approach to knowing, being, and valuing. Primarily, such a methodology of knowledge claims is potentially guided by a realist ontology which promotes a correspondence theory of truth, that is, truth is the one-to-one correspondence between reality and mental images

B. C. LUITEL

without being infected by the knower's personal, political, and cultural qualities. What can be the epistemology that is guided by such ontology of reductionism? It is the epistemology of positivism (and positivism-inspired paradigms) that reduces knowledge to an exclusively objective, pure and tangible form (Kauffman, 2007). The following poetic reflection gives a glimpse of how a practitioner-researcher is restrained by a reductionist methodology from capturing a whole picture of reality.

How can you use your voice?
How can you go beyond pre-conceived device?
This is research. You are doing science.
Don't ever try to go away from your course.

Research is all about probing variables
A 'handful of them represents the whole system'
This is the mantra. Attach to your database
Be a robot-like person as you play with numbers

Words are fuzzy and sentences are clumsy
Use numbers and equations for clarity
Avoid metaphors, similes and stanzas
Cut and dry should be your language

I am not denying that the image of *reality as nihilism* offered by an extremely deconstructive form of postmodernism is likely to promote yet another form of ontological reductionism that may promote a narcissistic epistemology (Rahmawati & Taylor, 2015). Furthermore, an exclusive postmodern epistemology of *knowing as ironic gazing* is likely to over celebrate the ironic aspect of language, thereby reducing knowledge to an exclusively subjective, fluid and fragmented form. This strong postmodern approach to knowing is likely to reduce my 'self' to a symbol that becomes a subject of narcissistic gaze. Here, my notion of narcissist gaze is an approach to limiting the world to within the realm of the self-image.

Reductionism as Logic

In order to generate meanings of the metaphor of *reductionism as logic*, let me explore some of its salient features. First, the logic of reductionism appears to use an extreme form of analytical thinking (e.g., yes *versus* no, pure *versus* impure mathematics, teacher centred *versus* student centred pedagogy) which gives rise to many unhelpful dualisms. Reflecting upon my practice as a teacher educator and researcher, this feature of reductionism as logic often prevents me from helping teachers realise fully the importance of multiplistic and holistic modes of thinking and actions.

Second, the metaphor of *reductionism as logic* seems to privilege an exclusively linear-casual model facilitated by propositional, deductive and analytical logics that account for a few factors of a system by allocating excessive explanatory weight to

them. Propositional logic is about making a declarative language that can be depicted either yes or no whereas deductive logic is about using ethereal law-like statements to map down particulars. The idea of analytical logic puts emphasis on setting up a definite divisionary line, thereby selecting one out of many categorical options.

In the context of mathematics education, this linear-causal model is less likely to account for hidden and emerging factors and variables that might be significantly impacting the education process (e.g., relationships between knowing, being, and valuing) (Taylor, 2013). After hearing my critique-filled description of the second feature of the metaphor of reductionism as logic, Nepali teachers may raise this question: *Are you suggesting that we replace the causal pedagogical model in Nepali classrooms?* No, my intention is not to replace the linear causal thinking model. Instead, I would like to cultivate emergent pedagogical models so as to embody inclusion and holism in which the causal pedagogical model becomes one of many models.

Therefore, the metaphor of *reductionism as logic* promotes the idea of *control* which plays an important role in generating arguments. Also, the feature has close relationships with the metaphor of *language as non-porous object*, which is a stumbling block for embodying the poetics of inclusion and holism in my inquiry. The metaphor of *language as non-porous object* is an Emersonian critique of the positivistic notion of seamless mono-textual language aimed at controlling representational fluctuations. Furthermore, the idea of ‘control’ can be responsible for promoting a static and essentialist view of mathematical knowledge.

Reductionism as|through History

With the notion that writing about history is not an error-free exercise, I am searching for tentative answers to these emergent questions: Why has reductionism become so hegemonic in mathematics education in Nepal? What are the potential routes of reductionism that makes Nepali teachers (like Pratap) embrace it un|wittingly? Looking at the history of Western philosophy, it appears to me that some of the early Greek thinkers used the notion of reductionism to explain the world through its lower level properties, such as water (Thales of Miletus), apeiron (Anaximander of Miletus) and air (Anaximenes of Miletus) (Guthrie, 2003). After the *logos*-centric idea became central to Greek consciousness, some traces of reductionism appeared in the work of many mathematicians and philosophers, including Pythagoras, Plato, Euclid and Democritus. Indeed, the idea of *logos* itself might have contributed to a reductionist method of knowing about the universe because of the belief that only *logos* could enable humans to know the governing principles of the cosmos. The Enlightenment logic of narrow analytic, a hallmark of Newtonian scientism, can be regarded as an avatar of the Greek approach to reasoning *logos*. Perhaps, I will not be doing justice to my textual weaving of the history of reductionism if I do not mention the Aristotelian syllogism which retains an unparalleled influence on the Western Modern Worldview as a source of reduction (inductive and deductive

B. C. LUITEL

reasoning). However, it is not my claim (if I can make any) that Aristotle can be held responsible for developing reductionist logics. His work of *phronesis* and passion appear to be left out, thereby attributing him as the pioneer of reductive logical approaches (Magee, 1987). Perhaps, Aristotle would respond to the overly reductionist representation of his contribution through the following poem.

The Teacher of Alexander. The student of Plato.
I am Aristotle. But I am different from these two.
I have penned on logic, virtue and phronesis
I have cautioned people for being professionals

Passion, I have requested to cultivate
Practical knowledge, I have asked to promote
I am tired now. People are so blind using my syllogism
That was merely a component of my creation

I tried to depict the cosmic process through causality
But I have also talked about chance and spontaneity
I argued for empiricism not staying away from rationalism
I talked about logic not separated from poetic vision

The Enlightenment project, which began in the middle of the second millennium, appears to harvest a number of reductionist approaches via scientific and mathematical inventions. The works of Copernicus and Galileo, on formulating mathematical equations as the descriptor of their innovations, seem to provide a basis for highlighting reductionism as the uncontested method for the study of the natural (and social) world. However, it is contextual to note that Copernicus used poetic imageries to describe his revolutionary ideas (Hallyn, 1990). Sadly, this portrait of Copernicus appears to be assaulted by the exclusive reductionist image that Copernicus relied solely on numbers, equations and reductive algorithms. Similarly, Galileo's metaphorical and discursive approach, as demonstrated in some of his writings about cosmos (Galilei, 1960), has been stripped away as a means for representing the pure scientist who reduces the natural world to one-line laws and equations.

With the advent of the Newtonian mechanistic worldview, reductionism became a major approach to the study of science. The role of (Europeanised) mathematics appears to have been paramount together with its emphasis on concise (reductive) symbolism and algorithm. The mechanistic approach to looking for minimum sets of laws, according to which the functionality of the universe is explained, continued to grow by ignoring the dynamic emergence|contingence of knowledge. In the passage of time, the reductionist ideology began to shape European education so as to prepare citizens with discrete skills and knowledge required for industrial society. A similar reductionist model of education (especially science and mathematics education) appears to have been transported to their colonies around the world with the view that such an education system could produce students native in colour but European in outlook (Asher, 2017).

Looking at the history of mathematics (e.g., Boyer & Merzbach, 1991), I encounter an interesting perspective about the development (if this is regarded as so) of mathematical representation which, I believe, is based on a reductionist perspective. Rhetorical mathematical representations of pre-Greek traditions (and also non-Greek traditions, such as Indian, Chinese and Japanese) are regarded as primitive forms of mathematics. For me, there can be three reasons for rhetorical representations to be labelled as primitive: (i) these representations do not use European symbolisms; (ii) they do not separate *mathematics* from mundane texts; and (iii) these representations are thought to be communal, holistic and local because they seem to promote non-Eurocentric worldviews. Many historians of (Western) mathematics classify the syncopated form of mathematical representations as being little advanced whilst attributing the symbolic form of representation as being fully developed representation. Through this historical sketch, I (and you) can see a general pattern that reducing mathematical ideas to symbols is the main feature of modernist mathematics. Does this not mean that reductionism is the orienting perspective of modern mathematics?

Although Europeans contributed to the length and breadth of mathematics in developing it to its present form, recent studies have shown that they possibly (mis) appropriated mathematics from non-European traditions and then Europeanised them (Almeida & Joseph, 2009). Possibly, the process of Europeanising mathematics from non-European traditions entailed: (a) collection of mathematical knowledge from around the world, (b) assimilation of them according to the Western Modern Worldview, and (c) dissemination to their colonies of the processed (if it is really an act of processing) mathematical knowledge as the only valid mathematics. It appears to me that the heart of Europeanising mathematical knowledge is, inter alia, symbolisation, an act of reducing differing mathematical knowledge traditions to a set of finite and fixed symbolic (and algorithmic) systems. You can raise a question here: Am I rejecting reductionist Europeanised mathematics? No, my intention here is to unpack the disempowering political past of modern mathematics, thereby consciously exploring possibilities for incorporating mathematics arising from Nepali people's cultural practices in mathematics education so as to create an inclusive synergy of contextual (i.e., impure) and universal (i.e., pure) mathematics. The following poem illustrates my view of the relationship between *modern mathematics* and mathematics embedded in non-Western cultures.

I know it is through the algorithm of modern mathematics
 Aeroplanes take off, fly over and reach their destinations
 Every database works perfectly with minimal errors
 Traffic management becomes smooth with safely running cars.

How can I harness this benefit of modern mathematics?
 Perhaps, decontextualised teaching is a futile act.
 Linking with my cultural contexts makes better sense
 Modern mathematics can be one of 'many mathematics.'

B. C. LUITEL

We also have a share of you, modern mathematics
As many ideas were integrated into you from East and South
Although acknowledgement has not been received
I still think that you are part of me. You cannot be discarded.

Your political past is being critiqued. Accept this.
You are responsible for misappropriating others
Be open yourself about the possibility of heterogeneity
Forget the dictum: Mathematics is all about objectivity.

After finishing this brief description of the history of reductionism, a question comes to the fore of my thinking: Am I not ignoring the fact that some aspects of my own culture harbour reductionism? Yes, perhaps because of my immersion into the dominant discourse of Western intellectual history, I might have forgotten some cultural landscape that also cultivates forms of reductionism. Or being born to a Brahmin family, I might unknowingly wish to avoid the disclosure? Indeed, my intention is not to masquerade the embedding of reductionist ideology in the caste-based (and other forms of) hierarchy that, in its extreme form, uses a feudal-reductive worldview for maintaining the social system. This disempowering social system might have been a support for the ‘hegemonic-globalist’ image of the Western Modern Worldview that promotes elitism and exclusion in mathematics education via one-size-fits-all perspectives of curriculum design. Given this insight into the reductive-disempowering nature of local practice and the Western Modern Worldview, a number of inquiry questions are likely to arise here: Which aspects of globalisation are helpful for developing a socially responsible mathematics education in Nepal? In what ways can the competing views of *contextualism* and *globalism* be reconciled for developing a holistic vision of mathematics education? With such questions in mind, my performative ‘acts’ in the next section endeavour to take you through a journey of sharing different types of reductionism orienting mathematics education in Nepal.

DELVING INTO KEY TYPES OF REDUCTIONISM

‘Do not forget to chant hymns after reading the story’ is a common request to the storyteller by listeners during Vedic rituals. In such a situation, the storyteller needs to be verbally skilled both in storytelling and in chanting hymns. In the process of constructing the composite story, *Finally The Monotonous Class Is Over*, my cultural past as a storyteller inspires me to use poetry as and when necessary so as to unpack ineffable aspects of experiencing reductionist mathematics pedagogy. Nevertheless, I am not prescribing here that you should first listen to the story and then follow the poetic chanting, rather I am trying to establish possible links between the multi-genre culture which has shaped my childhood and early adolescent years and the dialogic nature of knowing as an alternative to reductionist knowing widespread in the field of Nepali mathematics education. In this process of establishing links between ‘cultural’ and ‘epistemological,’ I quickly realise that my role as a performative

researcher can be articulated well via “the being of possibilities” (Sartre & Greene, 1997, p. 191) so as to embody much-needed growth, expansion and transformation for cultivating meaningful alternatives to reductionism.

Moving ahead with these perspectives, I realise that the ghosts of reductionism surround my textual neighbourhood, for the term ‘types’ embedded in the title represents the legacy of reductionism. So, how can I manage this paradox of using a reductionism-aligned term or concept and challenging the prevailing reductionism in the field of mathematics education? Indeed, I am not considering *my* types of reductionism as fixed and final; rather I treat them as contingent constructions. Similarly, my embracing of a non|essentialist view of language can also help alter the reductionist language game so as to embrace a dialogic and narrative mode of representation (Granger, 2006). The notion of non|essentialist view of language is about cultivating the interpretive nature of language via multiple genres and logics. Thus, subscribing to storied and narrative genres, I am going to discuss key features of systemic, curricular, pedagogic and evaluative reductionisms together with their implications for mathematics education in Nepal.

Finally, the Monotonous Class Is Over!

It can be sometime in the first week of October, 2004. Pratap requests me to visit his class. “Well, that’s a good idea, Pratap. When do you want me to visit your class?” I asked to Pratap, hoping to gain insights into his situatedness as a teacher and department head. Despite my enthusiasm in reciprocal learning, Pratap’s purpose of inviting me to his class sounds somewhat bewildering as Pratap repeatedly mentions that he is in a good private school of that area. “Do you know that International Standard Secondary School has been maintaining a high pass rate in the national exam conducted at the end of tenth grade, such as School Leaving Certificate, since 2002?” He seems to be so proud of the school, Pratap’s department headship and his didactic teaching methods. On the contrary, Pratap doesn’t seem to engage in classroom discussion, nor does he go through reading materials. Pratap’s disengaging posture is often reflected in classroom discussions in which he speaks a sentence or two as an uninformed naïveté. In the midst of my pondering, Pratap appears again in my office so as to fix a date for my visit. Finally, I made a visit in October, Tuesday, in 2004 with the pristine goal of engaging Pratap in a critical discourse on his own pedagogical praxis.

As I enter the classroom, I see all students sitting quietly in eight rows of benches with approximately five students in each bench. Pratap starts the topic of mensuration with a problem like this: Find the total area of four walls if the floor’s length and breadth are 14 and 12 feet respectively and the height of the room is 11 feet. Students solve the problem quietly and wait for Pratap to announce the right answer. Pratap announces that he will give them five more minutes for all students to finish off the task. Until now, his continuous command of ‘keep quiet’ appears to be followed by the class.

In the next episode, he invests an important slot of time in solving the algorithmic problem. Pratap explains each step and asks for students' confirmation whether or not they have understood. Pratap appears to be pleased by the response of 'yes sir' or muted silence. And, he does not seem to be in the mood for hearing responses like these: 'No sir, I don't understand,' 'I understand partially,' 'I understand that particular... but cannot get the remaining.' Perhaps, it is their habituated and unconscious response to his frequent question: 'Do you understand?' Equally, I am not sure whether or not he is mindful of what he is asking. In the midst of contemplation, I look around the conceptual mesh of pedagogical reductionism as students anxiously await their teacher to complete the solution of the problem.

Pratap's demonstration of the solution to the problem on mensuration comes to a closure. All students are busy tallying their solution with his solution. Eventually, he commands all students to raise hands if they have solved it correctly and got ten students to do it. I see around other ten unraised hands. Pratap must have noticed some of them because three are sitting in the first row. But to my surprise, Pratap blatantly ignores the unraised hands as if he has already got enough numbers to prove his pedagogical efficiency. Who knows, Pratap might be thinking that he is a successful teacher because he has got a majority of hands raised in his favour.

Pratap makes an announcement that he is going to derive formulae for finding areas of four walls, with the floor and without the floor. "The solution I demonstrated to you does not use a specific formula," Pratap goes on saying. "If you know the formula, you can act and think like a mathematician. ... The power of mathematical formula is unimaginable. And, this topic is very important for the final exam," he declares as if the formulas that he is going to derive can magically solve problems around us. As Pratap's reductionist lenses keeps on making futile assertions, I begin to question my presence in this classroom. At some point, I feel that I need to speak against Pratap's ongoing assault on the potential imaginative power of these ninth graders. However, I tighten my mouth so as to abide by the ethics of being an outside observer.

The formula is derived, but there is no joy in this. Nor is there a sense of ownership of the newly derived formula. It appears to me that this is a dull moment that comes and goes unnoticed every day. By the end of Pratap's derivation, every student looks tired but relieved. Pratap finishes teaching with the declaration that the first exercise related to mensuration is the homework for students. "Finally, the monotonous class is over," I hear a whisper between two students, who are sitting next to me.

Systemic Reductionism

With the notion that systemic reductionism is a tendency to represent a system in terms of its lower level functionalities (Floyd, 2008), I have taken an experiential and metaphorical approach to explore key features of systemic reductionism, and its potential implications for mathematics education. To do so, I have used my experience of working as a teacher educator within the education system of

Nepal together with the visual metaphor of a branchless tree. Here, my notion of system is a set of interacting and interdependent structures that generate meanings performed by its actors (Semetsky, 2008). In this process, I am using three key features of a branchless tree (i.e., shadowy-dark colour, approximately linear posture and impossibility of hosting birds' nest) so as to explore key features of systemic reductionism. Indeed, I have used this metaphor here as a result of my reading of some epics of ancient Vedic traditions, some of which use branchless tree as a metaphor for stagnation, powerlessness, and uselessness. For instance, the epic, Mahabharata, uses the image of branchless tree so as to describe a powerless 'arrow' that was discharged by Kaurabas (Fitzgerald, 2004). Similarly, the seven act play, *Clever Krishna*, has used the image of branchless tree named 'Visakha' for being unable to offer any shade to Krishna when he feels pain as his sweetheart Radha does not listen to his plea (Gosvami, 2006).

As I begin to explore the nature of reductionism via the metaphor of branchless tree, I interpret its shadowy-dark colour (as opposed to the green colour which is regarded as a signifier of liveliness and dynamism) as the signifier of lifelessness embedded in systemic reductionism. This interpretation of colour, however, is not my attempt to reinforce a colour-based hierarchy of people. Such a lifelessness feature of systemic reductionism embedded in the education system of Nepal appears to have oriented mathematics education to exclude the mathematics embedded in the cultural practices of Nepali people. In my mind the notion of culture is a set of activities (as opposed to the exclusive notion of *culture as thing*) performed by people so as to generate meanings (Morgan & Harris, 2015). Here, I am sharing my experience as a student who encountered a reductionist nature of formal mathematics that does not incorporate mathematics arising from my students' cultural practices. I am speaking from the vantage point of a teacher who reduced mathematics to symbols, algorithms and answers as per the guidelines of the curriculum document. I am talking from my experience as a teacher educator (or a tutor for mathematics education units) who has observed a number of mathematics classes – such as *Finally the Monotonous Class is Over* – cultivating the same odd reductionist nature of mathematics. Does this mean that the lifelessness feature of systemic reductionism is not helpful for developing holistic mathematics education?

Next, taking the metaphor of *systemic reductionism as a branchless tree*, I envisage that the linearity embedded in the branchless tree corresponds with the linearity of input-process-output embedded in systemic reductionism. Whilst formulating the preceding sentence, I am challenged by a set of questions: Is it necessary that input, process and output always form a linear model? Cannot they be used to represent holistic systemic models? My experience as a student in primary and secondary schools and universities in Nepal suggests that reducing the entire education system (and subsystem, such as a school education system, a higher education system) exclusively to input-process-output model gives rise to an epistemology of transmission and a deterministic view of human nature (Olszen, 2016). According to this perspective, human cognition and behaviours are results

B. C. LUITEL

of causations. The extreme form of it implies that there is no such thing as human agency. In referring to it, am I saying that the notion of linearity is always unhelpful for me as a teacher and teacher educator? No, my perspective here is that extreme linearity is not helpful for visualising a nonlinear, holistic and multidimensional nature of mathematics education, nor rejecting linearity makes the project of holistic mathematics education complete.

I see the branchless tree being the signifier of the non-dialogic posture embedded in systemic reductionism. Without having leafy long branches, a branchless tree is not able to host doves, cuckoo-shrikes and sparrows. Which feature of systemic reductionism does this state of branchless tree indicate? Metaphorically, it seems to imply a non-interactive and non-dialogic nature of a system that does not encourage interaction between its constituents. In embracing systemic reductionism as an overarching directive, mathematics education in Nepal privileges a singular aspect of mathematics (that is, symbolic, abstract, algorithmic, and pure), which is not inclusive of dialogic epistemologies and pedagogies. Can I claim here that reductive logics embedded in the education system are less likely to encourage mutual dialogues between different dimensions of the nature of mathematics? Can I say that a synergy between *pure* and *impure* mathematics (Luitel, 2013) is difficult to achieve through an education system that harbours reductionism as an orienting perspective?

To put it briefly, systemic reductionism generates monological epistemologies which are less likely to develop an inclusive and holistic mathematics education. Having a deep-rooted linearity (of input-process-output) as a major operational mode (Sharma, 2000), systemic reductionism embedded in Nepali education system is less likely to offer a space in which to conceive a multidimensional and dialogic nature of mathematics to facilitate my journey of conceiving a holistic and inclusive mathematics education. Before starting yet another journey of exploring features of curricular reductionism, I would like to share my poetic rendering of systemic reductionism.

First, I met you in my primary block
Instructing me to follow strictly the textbook
Situating me in a narrow learning course
You taught me to delimit mathematics
To the knowledge of numbers and symbols

Second, I met you in my high school
You were ruthless to the mathematics of people
You commanded me to believe in mathematics
From within pure symbols, algorithms and definitions
Rather than by looking at people's impure practices

Third, I met you in my teacher preparation course
You asked me to follow short-cut methods

‘Confusing’ – You blamed interactive pedagogies

‘Non-mathematical’ – You categorised my extended lesson plans

‘Impure’ – You labeled my project on mathematics of local Temples and Stupas

Curricular Reductionism

I would like to begin this section with a popular truism embedded in Eastern wisdom traditions: *If you want to touch a thing, expand it first* (Crowley, 2005). Guided by the notion of *knowing as mythmaking*, I am bringing the truism to this space to share my approach to cultivating meanings of curricular reductionism prevailing in the field of mathematics education in Nepal. More so, the act of expanding is about developing an ability to witness beyond the gross nature of the thing, thereby looking for many possible subtleties associated with it.

In my experience, the main feature of curricular reductionism embedded in Nepali mathematics education can be expressed via the dictum of *yes to books and no to culturally rich village life*. An implication of this feature is likely to privilege ‘formal mathematics’ as the sole ‘type’ of mathematics whilst designing the curriculum. For me, the idea of formal mathematics is associated with the formalist school of mathematics that promotes the view of mathematics as a manipulation of muted symbols. In this situation, Nepali students are likely to see mathematics as a subject unrelated to their day-to-day lifeworlds, thereby losing interest in mathematics learning. As a result of this, they are unable to harness the important mathematical knowledge and skills which are essential for their present and future life.

Next, curricular reductionism is entrenched in the hegemonic metaphor of *curriculum as subject matter* (He, Schultz, & Schubert, 2015). Here, I have used a metaphorical approach to conceiving the notion of curriculum as a multifaceted field because metaphors give insight into different forms, facets and aspects of curriculum (Lakoff & Johnson, 1999). To my understanding, whilst privileging the image of *curriculum as subject matter* as a major referent for curriculum design, Nepali mathematics education is likely to generate two negative impacts for teaching and learning activities of mathematics: (i) teachers are oriented to promoting the reductionist perspective of teaching to the test and (ii) creative approaches to teaching and learning mathematics are preyed on by the ‘content coverage’ pedagogy. However, here, I am not saying that ‘content’ should be avoided in the mathematics curriculum, rather I am resisting the one-size-fits-all approach embedded in the image of *curriculum as subject matter*.

In order to unpack yet another feature of curricular reductionism, I reflect upon the way in which the mathematics curriculum of my primary education prompted me to conceive *mathematics as a foreign subject* because of unfriendly symbols and algorithms presented in my mathematics textbooks. The image of *mathematics as a foreign subject* is still hegemonic in Nepali classrooms as demonstrated by the pedagogy of the signature story, *Finally, The Monotonous Class Is Over*. From a writerly point of view, this story mirrors how ‘foreignness’ patrols the boundary of

mathematics classroom so as to maintain the purity and certainty of mathematics (Restivo & Bauchspies, 2006). Here, the notion of purity refers to the symbolic, algorithmic and abstract nature of mathematics whereas certainty is associated with the seeming infallibility and completeness of mathematical knowledge (Hersh, 1997). Based on my experiential warrant, I have come to realise that the image of *mathematics as foreign subject* reflects the tendency to separate mathematics from students' lifeworlds, a rendition of curricular reductionism prevailing in the field of mathematics education in Nepal.

Speaking summarily, I have come to realise that curricular reductionism embedded in the image of *curriculum as subject matter* seems to restrict teachers from cultivating agentic curriculum images – *curriculum as currere, experience; an agenda for social reconstruction* – that can be helpful for opening different aspects of knowing and knowledge traditions required for increasingly complex and hybrid Nepali worldviews. According to Schubert, curriculum can be conceived via metaphorical images in a better way than via literal approaches. The image of *curriculum as currere* promotes personal meaning making with the help of autobiographical genre whereas *curriculum as experience* serves an interest in consensual meaning making. The image of *curriculum as an agenda for social reconstruction* promotes a transformative function of education by placing emphasis on social justice, emancipation, and agentic pedagogies. Next, curricular reductionism colonises the minds and hearts of teachers and students, thereby making them oblivious to creative possibilities of the blending of sometimes contrary images of curriculum. Therefore, I argue that curricular reductionism prevailing in the field of Nepali mathematics education hardly incorporates different forms of mathematics arising from people's practices so as to make mathematics learning meaningful, agentic, and holistic.

Pedagogic Reductionism

In order to elaborate the notion of pedagogic reductionism, I would like to introduce two important pedagogic concepts: *logos* and *mythos*. The term, *logos*, is the realm of orderly transfer of knowledge as if there is an ideal pipeline between teacher and students whereas *mythos* is the domain of constructive connections between culture, self, and mathematics (Leonard & Willis, 2008). The maximum portion of my experience as a mathematics student is constitutive of logos-oriented pedagogies that busy teachers in transmitting mathematical definitions, pre-set algorithms and theorems rather than generating contextual understandings of mathematical knowledge. Retrospectively speaking, my role in such a classroom was to receive exactly what came out of the teacher's mouth. Furthermore, my experiences as a teacher and teacher educator resemble the same feature of mathematics pedagogy in which 'emergent' and engaging discourses (Kuhn, 2008) are almost prohibited in the mathematics classes. Considering logos-oriented pedagogies as the characteristic

avatar of pedagogic reductionism, I am going to unpack their features and implication for mathematics education in Nepal.

Reminiscing on mathematics classes that I have observed whilst working as a teacher educator, I realise that logos-oriented pedagogies became an ideal tool for sustaining the exclusive transmissionism in mathematics education. In such classrooms, I have hardly heard the language of lifeworlds; rather I have encountered a set of terms endorsing reductionist language, as embedded in pedagogical practices of my story character, Pratap. Here, the language of lifeworlds refers to the language of empathy and relationships between culture and nature, between people and culture, and between knowledge and world (Walshaw & Anthony, 2008), whereas a reductionist language refers to a linguistic context where a set of limited terms with fixed and reductive meanings patrol the border of mathematics pedagogy. In my experience, the terms used most in mathematics classrooms are *understand*, *problem* and *solution*. For me, the meaning of *understand* is reduced to following the teacher's performance whereas the term, *problem*, is used to represent an algorithmic *sum*. The buzzword of *solution* does not encourage students to make a bridge between bookish mathematics knowledge and the knowledge arising from the world in which they live. Instead, finding the solution of a problem is restricted to the re-production of a prescribed algorithm. In saying so, I am not totally dismissive of (logos-centric) pedagogic reductionism, rather I am unpacking its hegemony as a means for envisioning inclusive pedagogical alternatives.

During my primary and secondary levels of education, I developed the perspective that teaching, learning and assessment are always situated along a straight line. The idea of the linear positioning of teaching, learning and assessment was further strengthened during my university education in Nepal (Luitel & Taylor, 2006). I believe that the hegemony of such a linear pedagogic model is not very much supportive for teachers to embrace self-reflection, critical contemplation, and creative visions of their pedagogies (arising from sociocultural and political renderings (Walshaw, 2004)). Nevertheless, I do not mean to say that *all* mathematics teachers who embrace a linear pedagogic model do not subscribe to reflectivity and criticality in their thinking and actions. Perhaps, such a straight-line model of pedagogy is accomplished by transmissionist pedagogy, a metaphor of which is presented as the 'pipe pedagogy.' It raises a question – Why do I choose to represent the transmissionism arising from pedagogic reductionism as the 'pipe pedagogy'? For me, transmissionist pedagogies are guided by the assumption that knowledge is banked securely in words and sentences (Freire, 1993). An extreme form of this assumption is likely to perceive the linguistic tools (e.g., letters, words, and sounds) as the pipe which seemingly saves knowledge from being diluted and distorted. I am not saying that it is totally wrong to use the metaphor of pipe pedagogy, rather my contention is that the uncritical posture embedded in it does not help search for other creative pedagogical approaches which possibly help mathematics to be an inclusive learning area.

Viewed from the perspective of culture (i.e., culture as about looking at the meaning, pattern of communication and underlying assumptions (Baldwin, 2005)), I come to realise that logos-oriented pedagogies are likely to reproduce the culture of fixity and order. If so, can such a culture be appropriate for reproducing the nature of *mathematics as a body of pure knowledge*? I say yes to this question because the unidimensionality (and perhaps reductionism) entrenched in the nature of *mathematics as a body of pure knowledge* loses its essence, provided that we place this nature of mathematics in the culture of ongoing changes and dynamism. I argue that the culture of order and fixity associated with logos-centric mathematics pedagogy is likely to be guided by three assumptions, that (i) the world of mathematics is more *logical* than the world outside of it; (ii) the knowledge of mathematics is *unchanging*; and (iii) mathematics loses its essence if not used as a *rigorous* algorithm. It is likely that my story character, Pratap says that being 'logical' is about restricting students from delving outside of pure (i.e., symbolic, abstract, formal, and algorithmic) mathematics. Such logicity can be an important instrument for giving the impression that mathematics is an unchanging body of knowledge. In a similar vein, the idea of *rigorous* algorithm often becomes a buzzword for preventing students from learning forms of mathematics that are outside of pure mathematics.

I envisage that the logos-centric feature of pedagogical reductionism does not help fully realise a holistic and inclusive mathematics education in four possible ways. Primarily, logos-centric pedagogies exclude the contextual and emergent nature of knowledge systems and knowing processes because of the fear that they may disrupt the order maintained by logos-centric pedagogies. Here, my notion of order indicates the imposed structure of mathematical knowledge over the emerging nature of contextual knowledge systems. Next, the transmissionist pedagogy embedded in pedagogic reductionism is less likely to encourage teachers to employ agentic pedagogies because the exclusive form of transmissionist pedagogies serves the interest to 'control.' Can an exclusively control-inspiring pedagogy help instil an inclusive and holistic mathematics education? I argue here that the logos-centric feature of pedagogical reductionism is less likely to recognise multidimensional nature of *mathematics as an im|pure knowledge system*, which can be a referent for an inclusive and holistic mathematics education.

Evaluative Reductionism

Performing the acts of writer and reader, I generate a definition of evaluative reductionism as a tendency to privilege a 'value exchange' view of evaluation over the 'value judgement' view of evaluation. Here, a 'value exchange' view of evaluation refers to an approach that regards student assessment as an act of exchanging their performance and achievement with numbers, whereas the idea of value judgement is more inclusive of multiple indicators so as to account for multiple intelligences arising in the process of learning. Given this definition of evaluative reductionism, I am going to explore its key features as an insider of mathematics education in Nepal.

Embedded in my definition of evaluative reductionism, Pratap's performance is a feature of exclusive quantification of student performances. Closed-door written tests are the sole basis for quantifying students' performances in Nepali mathematics education. Such a two-level approach to evaluative reductionism might have been guided by a number of constituents embedded in the Western Modern Worldview that acts within Nepali mathematics education. Primarily, the Platonic myth of numbers as a pure and stable representation of reality appears to have mis|guided the notion of student assessment as a way of reducing students' performance to numbers. Similarly, the formalist myth of mathematics, exclusively a body of algorithmic games of lifeless symbols, may have endorsed closed-door written tests as the only means for assessing demonstrations of students' abilities to play such algorithmic games (Sriraman, 2007).

Thus, such an evaluative reductionism is likely to promote a narrow view of intelligence as an ability to rote memorise definitions, theorems and algorithmic patterns and then to apply these to solve a large number of algorithmic-abstract problems that are less likely to link directly with the lifeworld of students (Sternberg, 2007). In such a situation, intelligences arising from cultural practices of students are unaccounted for, thereby giving the message that to learn mathematics perfectly one has to forget contextualised knowledge and knowing. Does the promotion of decontextualised forms of intelligence in student assessment not strengthen further the hegemony of a singular view of mathematics as infallible knowledge? Can such a view not restrict learners from making creative use of mathematics in their present and future lives?

Another feature of evaluative reductionism embedded in Nepali mathematics education is associated with the treatment of assessment-related activities exclusively as an add-on activity rather than a set of activities integrated in the process of learning. Perhaps, such a reductive practice of assessment reflects the spirit of positivism which promotes the view of knowing as decontextualised knowledge claims. Moreso, a positivist perspective seems to promote the view that to have an 'objective' assessment of students' learning performance one has to make sure that students are separated from learning contexts (Eisner, 2005a). Whose interests are being served by such an add-on notion of assessment practices? I argue here that this approach to assessment is not in the best interest of mathematics education that strives to inculcate contextual, cultural, emergent and meaningful understandings of mathematics in students.

From my own experience as a teacher and teacher educator, the add-on feature of evaluative reductionism often turns students into fatalists as a result of placing the task of assessment apart from the process of learning. Speaking from a retrospective warrant as a high school student, I remember myself and my classmates using some 'magic tricks' for guessing important questions for the end-of-year tests (Eisner, 2005b). I also remember us playing 'guessing games' (perhaps, inspired by numerology) to find out questions for the test.

Which aspect of this feature is responsible for generating fatalism? Whilst raising this question, I am not implying that the add-on feature of evaluative reductionism is solely responsible for the fatalistic attitude of Nepali students. Instead, my view is

B. C. LUITEL

that such a feature bolsters fatalism as a result of: (i) the exclusion of students from planning and designing assessment related activities and (ii) depicting assessment as a tool for segregating learners as capable and incapable in terms of a narrowly conceived notion of knowledge and knowing.

Thus, I have come to realise that under the premise of evaluative reductionism the holistic notion of *evaluation as a portrayal of student performances* is taken away by the uni-dimensional notion of *evaluation as the measurement of student performance*. Perhaps, such a uni-dimensionality has arisen from an excessive emphasis on the ‘control function’ of student assessment. I envision that the control function of student assessment is a tendency to privilege a particular type of assessment method, thereby accounting for very limited aspects of knowledge and skills developed by students during their learning journey. Do you think that I am always fond of generating critical comments?

FINALLY

With the key aim of exploring meanings and types of reductionism, thereby envisioning holistic mathematics education, my inquiry in the first section of this chapter identifies different ways of conceiving reductionism, such as reductionism as ideology, reductionism as methodology and reductionism as logic. In this process, I have developed the view that ideology as reductionism is constitutive of a ‘victim-blaming’ perspective which does not help teachers and curriculum experts to be critical of disempowering thinking and actions embedded in their personal and professional lifeworlds. More so, the section reports that reductionism as methodology can be a stumbling block for realising a much needed multi-paradigmatic (and holistic) epistemic and pedagogic visions for an inclusive mathematics education. In a similar vein, I have further strengthened my heartfelt view that reductionism as logic unwittingly prevents inclusionary thinking (logics) from being included in the curricular and pedagogic frameworks of mathematics education.

Drawing from my experience as a teacher educator, the following section identifies four key types of reductionism, such as systemic, curricular, pedagogic and evaluative. In my narrative exploration, systemic reductionism promotes a pre-designed linear view of education system which does not help account for emergent synergies between structural (i.e., global, overarching) and local (i.e., cultural, communal, personal) aspects of the system, thereby restricting mathematics education within the narrow, input-process-output framework. As curricular reductionism operates through the narrow image of *curriculum as subject matter*, pedagogic and evaluative reductionisms give rise to transmissionist didactic teaching methods and assessment approaches that are not inclusive of students’ various forms of intelligences. With the help of ‘what it could be’ tone of my texts, the chapter embeds my visions of a holistic education system, curriculum, pedagogy and assessment as a way to pacify the ruthless reductionism that otherwise prevents mathematics education from being inclusive of sometimes antagonistic views, ideas and perspectives.

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B. C. LUITEL

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PART II
MINDFULNESS AND WELLNESS

KONSTANTINOS ALEXAKOS

14. MINDFULNESS AND SEXUAL WELLNESS

A (Critical) Personal Narrative

ABSTRACT

In this chapter I present a narrative of my own sex education – catalyzed by my personal lived experience and challenges that came with growing “old.” Rather than accept giving up on my sexual wellness and vitality, I began to explore Eastern frameworks grounded in Taoism and Tantric philosophies and practices for alternatives. These models emphasize mindful breathing, energy flow, attention, harmony, and human emotions and ethics, especially respect, care, and compassion. As many of these understandings and practices are in conflict with mainstream Western socioeconomic, scientific, cultural and political norms of addressing sex and sexuality, a discussion on sexual wellness education also necessitates the need to critically address and contest the systemic prejudices, oppression, and violence against marginalized groups and individuals.

Keywords: sexual wellness, sex education, identity, sexuality, breathing, Tantra

Many health and wellness projects relating to sexuality, such as sexual and urinary difficulties, incontinence, enlarged prostate, sexual trauma, and impotence could be addressed, minimized, treated or possibly prevented through already existing and available knowledge, often without the use of drugs or medical procedures. Yet, in the United States, as in many other parts of the world, education and cultural practices pertaining to human genitalia, wellness and sexuality are not only inadequate, misleading, unhealthy and harmful, but are also used to normalize and cover-up religious, sexual, racial and class oppression, exploitation, and violence.

Though this is an inquiry into sexuality through mindfulness, I do not mean to imply nor do I believe that Eastern cultures and practices are less anti-sex, less oppressive, or more welcoming towards non-normative sexualities than the rest of the world. Just that I am writing about my experience situated in Western society, primarily the United States.

Using a personal narrative, in this chapter I discuss my inquiry into mindful practices and wellness as I sought to address sexual projects and challenges that emerged as I have gotten “old.” I am limiting my experience to myself; this is a

personal narrative after all but there are other reasons for such a choice. Early into this journey, I realized that my own preconceived notions on the topic were enmeshed with what mainstream society thought as “normal,” “healthy,” and “feasible.” In undertaking a journey to go beyond the knowledge considered “real” or “scientific” in Western culture and deconstruct and de-tangle these fallacies and prejudices as I re-conceptualized my own sexuality and masculinity, I felt it was critical to reflect back to the nature of sexuality, how it fits, and how it is used in our social, economic, and political structures.

This chapter is not meant to be a review of sexuality. The limited theoretical background I provide to my story is there to both ground and help me develop my experiential understanding politically and intellectually. My hope is that through writing about this experience, others too can also discover what is part of our biological potential – capacities we have always had, but our culture and upbringing has blocked us from seeing and taking advantage of the possibilities. The excitement of this inquiry is that once we are past these prejudices that confine and restrain our knowledge and harm our wellbeing, our

I use the Sheffer stroke, to denote and emphasize a dialectical interconnectedness between constructs, a unity of opposites, rather than such “opposites” being discrete and disconnected from the other. The body and the mind, for example, are viewed as dialectically interconnected, each codependent on, mediating and transforming the other (i.e., body | mind).

body | mind can be so much better off. In this chapter I invite the reader to explore, reflect, and report back on how they too have grown, learned, and developed new knowledge, new meanings, new ideas, and new practices with regards to sexual and emotional wellness, and the new joys in their being that they celebrate. As I discovered, in this process there is a lot of learning and unlearning to do. Change is the point of learning, and to change it is often necessary to unlearn and let go of fears and prejudices.

With something like sexuality, it is also not enough to read about it; it needs to be experienced. Experiencing what I write about in this chapter has changed who I am. New knowledge and understandings changed my inquiry which in turn created novel understandings that opened up fresh, often unexpected paths and knowledge. My practices too changed with the new knowledge which then also changed the inquiry and what was learned. Like my journey into sexual understanding and wellness, this chapter is developed hermeneutically. In writing it, not only did new questions and knowledge emerge, but the writing took me down paths that were unanticipated – especially political aspects. Mainstream sexual “norms” are not value free; they are imbued with issues of power, privilege, racism, disenfranchisement, pain, suffering, and resistance. Thus, in this inquiry, if it is to be beneficial and educational to others who very possibly are denied such knowledge, rights, or opportunities, I felt it was necessary to critically reflect on these larger systemic power structures, and contest their ideologies and implications on sexuality. I believe this is a necessary and much

needed conversation on sexual knowledge and practices not only concerning sexual pleasure but also sexual trauma and healing. I recommend that readers reflect and make meaning for themselves as they process and when possible experience some of the ideas and practices presented here. Some may feel they are only interested in the personal, while for others the political may be more important. It is the readers' choice as to what value and meanings this chapter has for them.

While this inquiry has been emancipatory and liberatory, it was also fraught with dangers. The emic side is due to inexperience and ignorance in how powerful some of these practices can be. As such this chapter closes with a discussion of some cautions. The etic dangers are that informative discussions on sexuality continue to be taboo and forbidden in schools and in public life. In socially conservative countries such as the United States, periodic witch-hunts and physical violence on not only public but also on private sexual activity or expression are the norm. What supports the "system," especially white, monogamous, heteromale practices and beliefs, are elevated and rewarded. What runs counter or challenges its credibility is condemned, often at great personal and professional cost to those it attacks. In academia writing such a piece can easily call into question someone's reputation. So even if important, why take a risk and publish this? At this point of my life and at this point of where our country is I think it is essential, despite overt and covert threats and intimidation, to voice our solidarity with those under attack by the establishment whether the attacks are focused on immigration status, class, gender, sexuality, religion, and/or race.

SEXUAL DISENFRANCHISEMENT, OPPRESSION, AND EXPLOITATION

Sex, hunger, death are the three challenges that unite us with the rest of the animal kingdom during the relatively brief period of human evolution. The Soviet revolutionary Leon Trotsky called these the three greatest challenges facing humanity (Deutscher, 1966). We are a social and emotional animal whose existence is owed to our sexuality. Yet, I can't think of any other biological activity that is more persecuted, falsified, censored, and maligned than human sexuality.

Might makes right. That is, the power to decide what the laws are and to whom they apply, is principally a purview of those with political power. Young prepubescent boys chained to the beds of commanders in Afghanistan, of both "allies" and "enemies" alike, young girls sold and bought no different than goats. While these examples may seem extreme, similar narratives can be found in the history of the United States with its foundations on the one hand on the principle of coverture (Freedman, 2013) that denied women political rights and control over their own bodies, and on the slavery of human beings stolen from their homes and families on the other. While the Civil War put an end to the large-scale chattel slavery and women, gay, and other groups of non-mainstream genders and sexualities have since gained some forms of suffrage, much of these earlier legacies, like racial segregation, restrictions over our own bodies (from what we consume, to what we do with it to with whom or what we

are intimate), sexual abuse, and conjugal slavery, continue and are very much alive today. For example, monogamy is legitimized and upheld as the gold standard of “normal” and “healthy” intimate relationships, while other, non-dyadic relationships are condemned and criminalized, because, as Mimi Schippers argues, and I agree, compulsory monogamy is central to and reinforces “white heteromascuine [I would also add economic] privilege and superiority” (2016, p. 6).

Rich white men still dominate the economic, political, and legal landscape and are the ones in decision-making authority over what is “right” and what is “beautiful” whether through the government, ownership and control of the media, and/or what gets funded as research. Women still do not have “equal” rights especially over rights over their own bodies and their sexuality. From slavery to the Scottsboro Boys, to the eugenics movements of the past and not so past, chemical castrations, black males especially are stereotyped as hypersexual and as “superpredators” – labels used to justify further political disenfranchisement and legal and extrajudicial lynchings. Black women too, once the property of the plantation owner and denied the right to refuse, are now projected stereotypes to be desired, violated, and abused (Tate, 2015) – triply so (and perhaps even more depending on their sexuality) because of their economic position in society, color, and gender. In the U.S., sexuality has become hyper-politicized, commercialized, and demonized in a toxic brew of class, gender, and race prejudice and oppression together with religious fundamentalism. While in the recent past gains have been made in the political sphere, these degrading and dehumanizing practices have continued to exist, and, as a result of the recent presidential election, have come back out in the daylight along with other forms of extreme American political conservatism.

Despite the APA style requirement (American Psychological Association, 2013) to capitalize the words “white” and “black” I do not do so because neither is a single ethnic group or nationality (like German, Arab, or Korean) but are used to denote “race” depended on the perceived darkness or color of one’s skin, ancestral background, historical context or particular social interaction. Thus “black” and “white” as they are socially, culturally, economically, and politically derived and constructed to denote beneficence, empowerment, disempowerment, and/or disenfranchisement are not uniformly defined in the United States or around the world. So, what is “black” and “white” in the U.S. may not be viewed as “black” or “white” in Asia or in Africa (i.e., South Africa). Even more importantly, the times I know of when “white” was capitalized in the past it was done so by white supremacist groups like the Klan. For these political reasons (and in opposition to APA “objective” “academic” etiquette), I refuse to capitalize either.

In early 1900s in Europe and the U.S. it was Jewish men who fit the profile of sexual predators and deviants as epitomized by the lynching of Leo Frank. Today it is the Arab refugees that are portrayed as the predators in Europe. Nothing gets young men wired up and willing to fight to the death like perceived threats to their womenfolk or promises of virgin wives. This is true of the many young men willing to blow themselves up and become martyrs, as well as the countless religious sects that make claims to one or the other version of the Bible or the Koran. In the Balkan Wars following the breakup of Yugoslavia rape was often the weapon of choice to create and spread hatred among nationalities that had inter-married and lived together under Josip Tito.

Gender and sexuality, while different, are closely culturally intertwined. In a modern society, a woman's position is a good indicator of sexual repression and violence in that society. Some, especially Marxists (Engels, 1972), argue that the whole concept of the modern nuclear family (often ritualized and sanctioned in a "monogamous" "marriage") is nothing more than another form of codification of patriarchal social morals and values of oppression and exploitation, especially of women and children. I agree. Personal choices and relationships between consenting individuals (not necessarily limited to politically "acceptable" "binaries" or "dyads") should not be constricted by economics (not only how we file taxes, pay our bills, or claim medical insurance, but also who we can be with), prejudices, and laws prescribing what our deeply racist, sexist and class divided political and economic system deems as "normal." On one hand our society pervades and criminalizes sexuality, while making it into a billion-dollar industry on the other. It is no accident then that society has such an obsession with controlling women's bodies and that reproductive rights are so contested. How is it possible in a free society that we are denied power to make decisions over our very own bodies? Thus, being "proper" means women have

It is my belief that consenting individuals, should have the right to decide for themselves what they do with their own bodies, with what, whom and with how many they are intimate, what they practice, what they consume, and what they enjoy and find pleasure in. It does not necessarily mean that I agree or enjoy the same; just that government or society should not be victimizing people for their sexuality. This includes youth sex, cross-generational relationships, polyamory, s/m, fetishes, prostitution, and pornography. In this manuscript, I argue for the right of "effective" consent. It is not always easy to decide for example in situations involving younger teenagers if "consent" really is "consent" as different individuals mature differently. This is in opposition to the legalistic "consent" that on cultural and religious grounds criminalizes sexuality that may be natural and healthy because it happens earlier than some random age and/or outside of what is considered a "proper" type of relationship (like homosexuality) or practice.

their sexuality condemned, politically, culturally and all too often biologically. That any part of our body can have so many thousands of nerve endings like our genitalia, nipples and lips have is amazing enough. As far as (Western) science can tell the sole biological role of the clitoris is pleasure. Yet worldwide 100 to 140 million women are estimated to have undergone female genital mutilation. In the U.S. to get ahead whether in academia or in business one often sees women wearing three piece men's type suits rather than celebrating their bodies and femininity (Fordham, 1993). There is an epidemic of women (but not only) suffering from eating disorders due to mainstream ideals of what is "sexy" and what is "beautiful" (Wolf, 2002) that are used to further female exploitation, and ruin the mental | physical health and lives of many families, while generating billions of dollars of profits for the pharmaceutical diet corporations and car and clothing companies who spend billions convincing us we need their products to be happy or look good. And if one's sexuality or "beauty" is outside the boundaries of what is "proper," abuse, beatings, "corrective rape" and even death all too frequently follow, as do being outcast from family and friends. Gayle S. Rubin's classic essay *Thinking Sex: Notes for a Radical Theory of the Politics of Sexuality* (2011) calls into question what is considered "normal" and what is a "perversion." She powerfully details American government's nasty war on sexual "immoral" and "deviant" behavior from homosexuals, to fetishes, to pornography. She very rightly and brilliantly frames sexuality as a social and political construct where the system rewards and provides credence and integrity to those that fit in and victimization of and discrimination against those that don't. To my knowledge Rubin is one of the few to oppose the many forms of criminalization of sexual activities that mainstream (white) heteronormative society has deemed "perverted" and/or "pathological" especially of those who are most vulnerable.

Unfortunately, unlike Rubin, mainstream feminists too often support many aspects of "family values" used to victimize those outside the norms of the nuclear family, and who along with religious fundamentalists look to government to enforce "proper" sexual and moral behaviors such as the criminalization of prostitution and pornography. Like women cannot make their own choices over their own bodies or possibly enjoy porn! My theoretical foundations therefore are not in what I would view as mainstream feminism. All too often upper class white feminists can be quite backwards themselves, such as not only ignoring but through shared capitalist ideologies that outright champion the oppression of working class women, those that are poor, immigrant, indigenous, and/or women of color. I deeply agree with the black critical feminist theorist, bell hooks, when she writes that "In the world of fantasy feminism, there are no class, sex, and race hierarchies that breakdown simplified categories of women and men, no call to challenge and change systems of domination, no emphasis on intersectionality" (hooks, 2016). My roots instead are in the work of Marx and Engels and their writing on sexuality and the class origins of the patriarchal family (Engels, 1972), as well as Darwin's work on sexuality and natural selection (Darwin, 1962) and on emotions (Darwin, 1890; Darwin, 2009). At the same time I remain very critical of how Western science condescendingly

devalues indigenous and non-Western science and ways of knowing (even when it exploits and profits from such knowledge). The sociocultural biases of our society too are reflected in how Western science has historically viewed sexuality and provided a scientific cover for labeling not only non-normative practices as pathological (Rubin, 2011), including those that are specific to female pleasure, like the term hysteria, and labeling women who do not achieve vaginal orgasm from sexual intercourse (likely the majority) as “dysfunctional,” as well as partaking in keeping the population ignorant of basic anatomy and function of the genitalia – especially female genitalia (Winston, 2010) or staying away from doing research in the sexual anatomy altogether (Tubbs, 2015).

INQUIRY INTO CHANGE

Despite such sociopolitical understanding of sexuality, my personal “aha” moment, as I thought of and experienced as my own sexuality, changed only recently. I was about to turn fifty years of age, when I noticed myself falling into depression. Despite staying physically active, especially with martial arts, I had begun feeling my body grow old. My sexual vitality (an important measure for me as well as for many men I know) was quickly becoming a thing of the past. Two teenagers and 22 years of marriage later, my sexual relationship with my wife had become an almost a once or twice a month thing. Sometimes even that often seemed like too much effort. Reaching the 5-0 threshold brought this condition even more to my awareness leading to more stress and depression. Often, even when having sex, I would have a hard time staying erect or focusing and enjoying the moment. Work and other life stressors were part of it but not only. In addition, boredom, sameness, anger, and not valuing what I had also played a part. Mostly though, as I came to realize (and change) later, it was my personal lack of awareness and focus and my social conditionings in believing that getting old is synonymous with becoming sexually challenged and impotent derived not only from mainstream propaganda but also my own lack of knowledge of non-Western understandings of sexuality. Obviously, it seemed, I was getting too old for sex, too physically decrepit and on a path to sensual if not physical death. For several months, I strongly considered asking my physician for a Viagra prescription. Good fulfilling sex was after all a big part of being married (or so many of us think). In the early, turbulent years of my marriage, good sex was what probably kept us together. Then our two sons were born and that put a big damper on our intimacy. The pregnancies and then having to care and provide for two young ones definitely changed us. Having and raising children added some almost insurmountable economic, physical, and mental pressures. Staying up at night, looking after the children, working longer hours to make ends meet, having less time to ourselves and with each other, living a culture where fear, hate, and suffering dominate the news, be it racist killings by the police, war in the Middle East or war on teachers and public education, all took their toll on me. There are so many tensions in our day to day lives no wonder sexuality suffers, in and out of marriage.

Turning fifty was like a switch was turned off; I not only felt old, I also acted old. Beginning with our BC study (Alexakos, 2015) I have been working on becoming aware of myself, my body | mind | emotions (I will use the vertical bar, or Sheffer stroke, when writing about these as I no longer feel we can separate the three, that all three are dialectically intertwined, one influencing and intertwined with the others, and in the process, the others, each other, and it). So even while falling into depression and while it took me some time to realize among the noise what was happening, I began to take notice, though I still did not have the knowledge that something could be done about it nor the techniques to make it happen. While I have also tried to stay above the social and political brainwashing that is imbued in our daily lives perhaps what was very shocking to me was how much I had actually physically | emotionally felt it.

Nietzsche argues that morality as society in general comes to understand it, what is good, what is bad and what constitutes evil, represents the morality of the ruling class and the organized religion that supports these rulers (Nietzsche, Ansell-Pearson, & Diethel, 2006). One example he uses is that of the priest wearing clean clothes. Those of lesser means are stigmatized as dirty. Similarly those who do not look or act like them are seen as evil or barbaric, of lesser intelligence. Those of lesser means to make their suffering bearable begin to view their suffering as cleansing, as something holy. Guilt and fear for who they are become part of their everyday emotions. We see this today with people who fall outside society's "good": Immigrants from Latin America, people of color, those whose sexuality fall outside the heterosexual nuclear family norm not only those that consider themselves gay, but those that don't fit the mainstream approved gender or partner binaries or sexual practices. The morality of a victorious Christianity, built on fear, shame, cruelty, and violence, has perverted Western sexuality since its elevation to that of a state religion. In the U.S., it has provided a cover for the population accepting their suffering with the promise of paradise as a reward for sexual abstinence outside of marriage and the threat of eternal suffering and damnation. Not only teenagers but grown adults don't know how to communicate with one another, and feel guilty about having sex. Confusing what is natural and a gift it becomes criminal dirty and immoral. In a patriarchal society such as the one we live in, this becomes sanctioned violence. Instead of discourse on sexual emancipation, victims are further traumatized. Furthering the government's attacks on sexual and reproductive rights while conveniently deflecting and covering up the systemic social, cultural, economic, and political sources of sexual violence and exploitation. There is too a tendency By equating bad sex or even drunken sex with rape the current campus campaigns and laws making their way across the U.S. trivialize the violence, degradation and terror that is rape, add to the fear and sexual trauma, and No surprise then that over two-thirds of MIT students in a 2014 survey agreed that "rape and sexual assault can happen unintentionally, especially if alcohol is involved" (Perez-Pena, 2014)! Nationally "family values" laws are used to criminalize teenagers who face felony charges for consensual sexual contact or even sharing images of their bodies with each other ("sexting") while those who

truly sexually abuse, exploit, shoot, poison or starve children, are sanctioned and often government sanctioned (e.g. Flint Michigan water poisoning, one in five U.S. children living in poverty, women forced to work through their pregnancies or right after giving birth, the number of children juveniles, and adults (particularly those black or brown) in the prison system, the Catholic Church sex scandals, the imprisonment of victims of sex trafficking, the raping and genocides against indigenous people in the Americas and Australasia- this list can go on forever). Racism, sexism, human slavery, beatings, executions, rapes and sexual bondage, exploitation and control, are just some of the ways historically those ruling have taken their pleasures on the suffering of those they have ruled (Nietzsche et al., 2006) while at the same time not only encouraging acts of sexual abuse, rape, and oppression but also deeming it normal, right, and lawful. For the health and education of the populace it is necessary to have opportunities for youth and adults to be educated and discuss sexuality beyond the mainstream patriarchal, homophobic, commodified relationships and knowledge systems and to have places for discourse on what is acceptable and what is not, to gain a clearer understanding of boundaries and what may be traumatic rather than fun, from bullying to unwanted touching and groping.

I had begun to study Jin Shin Jyutsu (Tobin, Powietrzynska, & Alexakos, 2015), with its philosophy of physical and spiritual health and promises of wellness through unlocking energy blockages and increasing energy flows only a few years earlier. It was then that I became aware that there were other ways of understanding wellness such as the importance of emotions, and looking at the whole person, that I began to see hints of other possibilities concerning my own sexual health beyond the mainstream Western cultural medical practices and traditions of medicating the symptoms and seeing the body and mind as discrete from each other. In the two years since, initially by accident, and then purposefully, I have begun to seek out and study ways of thinking about health and sexuality, more closely associated with Eastern philosophies and practices of being. It has been this “awakening” and writing about it in this manuscript that have brought forth even more the conflicts between societal norms, sexuality, and wellness.

It was someone mentioning to me that he practiced having an orgasm without ejaculation that started my inquiry down this path. For me the idea and implications that someone could have such awareness and mastery of what I had thus far considered an automatic, involuntary response was mind blowing! Furthermore, ejaculation for men, at least in my experience, has been held as the gold standard of being sexually satisfied. I remember many times wondering myself if there was something wrong with me when I felt satisfied and fulfilled but would force myself to ejaculate not because I felt like it but because I thought my partners would feel impotent if I didn't, that they weren't good enough. Male ejaculation after all is what not only the porn industry, but also sexual guides from mainstream psychologists and marriage counselors are geared to and what we are taught represents ultimate satisfaction and goal for males (and often implied for their female partners as well). As sexual education of the American population is left to the fear exploiters claiming

to represent God and their enforcers within our political-educational system continue to breed and justify sexual violence, oppression, and exploitation. On the other hand, mainstream hetero-pornography and glossy magazines too help perpetuate myths regarding what is sexually healthy and possible. They are purposefully overstimulating, focused strictly on overwhelming and super arousing our visual and auditory senses lacking any emotions or care for the other, especially women. Just rapid pounding with the sole purpose of (men) getting off quickly. As public schools only teach abstinence rather than sexual practices, many are left to learn and explore their sexualities from porn or from Hollywood fairy tales (or from friends who too learned through the same means) we develop expectations of sex as speedy, self-centered, involving exaggerated sexual parts, without correspondence to most peoples' realities, that lack any kind of social interaction or emotional attachment. And of course, for many of us, even on good days, such illusory fabrications of sexuality become our nightmares as we try to measure ourselves against these caricatures and travesties of sexual health and vitality.

The first book on developing a more mindful, deeper experience that I read was *The Multi-Orgasmic Man* by Mantak Chia (Chia & Arava, 1996). I was so struck by it; I read it twice in the same day. In his discussion of (his very unique interpretation) of Taoism and sexuality, Chia focuses on sexuality as a form of wellness. Despite how many times I have heard that sex can be healthy, this was the first time that I came across a book (Western or Eastern) that made a case for it and discussed how it can be done. A very welcome surprise (as it is so different than how it is often portrayed in mainstream culture especially porno) was his insistence on the importance of men taking their time, being mindful of the female sexual responses, and treating women as partners rather than objects to be used or to be taken advantage of. Yet this is the kind of education our children should be receiving in middle school and perhaps earlier, rather than the ludicrous and often damaging "abstention" lessons taught today across the U.S. when statistics show that nearly half of 12th graders are reportedly sexually active. These "just say no" miseducation campaigns leave teenagers ignorant concerning the most basic interactions with their own bodies and those of others. Campaigns such as these also leave them uneducated in how to have healthy sexual interaction and practices (including the use of protection against STDs), and damaged and ashamed for desiring and deriving pleasure from their sexuality. I argue that systematizing, propagating and making such ignorance and self-shaming as the legal and cultural norm is criminal as it makes sex as something dirty and hurtful that only "bad girls" and "bad boys" want and engage in and thus "deserve" what they get when they are violated, or in the case of males (especially those who are black or brown), seen as sexual perpetrators. What better way to keep us angry, frustrated, ashamed, depressed, medicated, exploited, and ready to fight against strangers who have little or nothing to do with our own economic, social or sexual oppression and exploitation. Instead of teenagers (and pre-teens) being taught how to enjoy and celebrate what nature has gifted them and learn how to responsibly interact with others and effectively consent to sharing sexual pleasures as

they mature, laws are passed making such pleasure criminal – labeling participants, especially the males, as perverts, and rapists. In the United States consent is not something a teenager can legally give until some arbitrary age, like 18. So, while the legal system can treat prepubescent children as adults when charging them with crimes, these same children and older teenagers have no such “adult” rights when it comes to effective consenting to sexual encounters with others. And of course, race and sexuality play a huge role in the prosecution, conviction, and sentences of such society labeled “deviants.” Black teenage boys and white teenage girls having sex? Statutory rape. In New York State, for example, it is possible for unmarried 16-year-olds to have consensual sex with each other and being the “victim” of one another! Not fitting the sexual norms? A very high probability of being bullied. No need for the legal system to be involved when your peers, your school, your parents, your coworkers and employers can “teach” you right and wrong through shaming, loss of rights and employment, and physical violence.

Chia (Chia & Arava, 1996) makes a point of distinguishing between his interpretation of Taoism and that of others. Rather than abstaining from sexuality, he argues that sexuality is part of our wellness and can even be used to treat many health projects we may otherwise have. From this standpoint, counter to mainstream, (white) heteromale Western concepts of sexuality, we all (no matter our biological gender) have both yin and yang, female and male, energies. It is just that sometimes one manifests itself more than the other. Chia then goes on to clinically describe step by step techniques to improve our sexual experience, as well as concerns and cautions. These include breathing exercises and mindfulness practices, especially respect for our sexual partners, with a lot of attention to women’s sexuality.

The yin-yang duality is part of a greater Chinese philosophy and is found in medicine and wellness. While seemingly opposite (yin-yang), one is made of the other and is complementary to, bound to, and gives rise to transformation of the other (Kaptchuk, 2000) – rather than being considered as dichotomous forms and antithetical to one another. Taoists believe that (like many of the Eastern philosophies, as I found out later on) men and women contain both masculine and feminine energies. Just that men, generally, tend to have more yang (masculine) energy and women more yin (feminine) energy, though these energies are very dynamic and can and do transform into one another (Chia & Arava, 1996). For me the symbolism of yin and yang as a representation of male and female energies (whether truly “energies” in the physics sense or not) existing as a complex whole, rather than as binary (male or female, heterosexual or homosexual) was revolutionary as it allows for gender as well sexual fluidity without judgment or concern that it has to be rigidly defined. Such fluidity, when individuals embody both male and female energies, questions what might be considered “natural” sexual relationships. Thus, we do not need to feel shame, wrongness, or guilt if we feel more one or the other, or if that changes over time, no matter what our physical plumbing may be. This is not to argue that Eastern sexual practices are free of the biases and prejudices found in Western practices. This is especially true of prejudices, persecution, and violence

against those that don't fit within the monogamous, heterosexual mainstream model. Chia too notes that his views on celebrating and promoting rather than turning off sexuality are very different than those of many Taoists.

Chia's book became the first of many (and many more by Chia) that opened my eyes on different sexualities, methods, and techniques. Soon, often with my wife, I began exploring. Such exploration has not only changed and expanded what we think is possible but has also radically changed how our bodies respond to what we are experiencing and how strongly we experience it. Just after reading his book I became aware of a Tantra weekend workshop for singles and couples being offered in NYC by The Source School of Tantra Yoga. This workshop represented a watershed experience in my life. It reinforced the notion that kindness, respect, and caring were needed in intimacy and extended my new understanding of using the breath to expand our senses and heighten and lengthen our experience, while being present, being aware, and being focused to mindfully love our self and the other (or others). Touching, for example, took on a whole new meaning. The whole body became an erogenous zone. It was amazing how much difference simple belly breathing with a focus on the other and being and experiencing the moment makes. In our culture, there seems to be a fixation with sex as a commodity of exchange. You blow me for 15 minutes and I go down on you for the same time. You please me this much and I in turn will reciprocate. In my experience, not only short term relationships but also long term "marriages" (of whatever sort of combination) are built on such commodity exchange. Sex becomes a tool and all too often a weapon. I am angry at you therefore you are not getting any. You did not buy this for me so guess what ... The opposite is also practiced as well. You got me a new car therefore I will be extra sweet to you tonight. Sex has been turned into a reward to give or take away. No wonder so many relationships end up leaving the individuals in them frustrated and angry at each other. Doing this workshop not only made me more aware of my partner but through being aware and controlling the breath, it allowed me to focus on pleasing my partner without my mind wandering or being in a rush. Time became the now, not the when and how quickly. In contrast to lifelong conditioning it allowed me to slow down mentally | physically, giving and receiving.

The other experience that set me firmly on the path of Tantra yoga was a different type of workshop in which I participated – Ipsalu Tantra Kriya Yoga. It was during that time that as a researcher I was becoming more acquainted with the polyvagal theory (Tobin, King, Henderson, Bellocchi, & Ritchie, 2016) and using the breath (Porges, 2007) to mediate physiological responses to fear and anger. For example, it is argued that deep abdominal breathing activates the parasympathetic system while the shallow breathing that many people practice activates the sympathetic system that keeps us in constant vigilance and stresses out the body (Saraswati & Avinasha, 2010). The workshop provided me with fundamental yoga breathing techniques that I could use to get unstuck and manage my emotions, but also made me much more aware of the importance of the breath in sustaining awareness and focus in intimacy, in prolonging sexual encounters, and in lengthening and heightening the levels of pleasure.

When I began the practice of more mindful loving immediately I began experiencing higher levels of physical | emotional energy. Where before I had viewed (in martial arts and in JSJ) energy flows as symbolic, now I began to physically feel the energy flows through my body. For example, in JSJ there are powerful energy flows where the hands “jumper cable” energy from the area of the shoulder and neck to the pelvic area. It was during home practice that when I bridged these two areas with my hands (after some intense breathing and massage) that I felt a huge current flow, like I was being electrocuted. The flow was so intense that I could not control the shaking of my arms. Another example is using the thumb and the index (or middle finger) mudra. I have found this mudra to be very powerful that can be used in many pleasing variations such as the thumb resting on the clitoris while the index or middle fingers are under the pubic bone. During high energy activities, touch takes on a much more active role as I have experienced not only emotional resonance through touch but also flow of current from one to the other.

Breathing becomes central to a more mindful sexual experience. Learning to vary our breath and vocalize our emotions with sounds deepens our experience, helps our bodies | minds relax and become more aware, and helps us multiply and prolong the peaks of pleasure we experience. Who doesn't want greater pleasures during their intimate moments (I am sure there are some who oppose any form of pleasure, but this is for the rest of us)? And isn't that more constructive to relationship building than feelings of boredom, unfulfillment and being used? In addition, by using the breath to visualize the movement of energy around the body I became aware how to channel it for myself. Deep controlled breathing during orgasm, for example, can help with practice to extend the orgasm beyond the few seconds normally experienced. Tightening the pelvic floor muscles while breathing not only helps separate orgasm from ejaculation but does wonders for the health of men and women, especially as we get older avoiding or eliminating many prostate difficulties and urinary and bowel issues. Changing the rhythm of the fingers, the pressure or speed, keeping them static while consciously moving energy through them allow love, happiness, and pleasure to be shared, sustained, and heightened. Adding sounds to our breathing, like the “om” sound, further magnifies our sensations. I have found the book *Jewel in the Lotus* (Saraswati & Avinasha, 2010), an excellent resource for breathing practices, meditation, and sexual transcendence.

NEW BEGINNINGS

These books and the Tantra workshops opened up pathways and knowledge on sexual wellness I previously thought of as fiction. When I first became aware of my sexuality as a teenager, I tried reading everything I could on sex. Searching through college textbooks on anatomy or psychology though it was hard to find much information on the female genitals. Even the location of the clitoris on diagrams of the genitals was vague. It was not until I recently started reading Sheri Winston's book, *Women's Anatomy of Arousal* (2010), where she mentions how historically much about

K. ALEXAKOS

sexuality has been hidden from our education that I realized that it is more of an issue of society's censorship over our sexual knowledge. This book is by a woman for women (and their lovers). So far the book has been one of the best guidebooks I have found on women's anatomy, sexual wellness, and orgasmic abundance. It is at once comprehensive, playful, highly descriptive, and educational while written to be empowering and uplifting. I have been reading and rereading it multiple times and still I am quite shocked at how little I knew and how hidden and limited sexual knowledge continues to be in mainstream, (white) heteronormative sex education.

Counter to "normal" "masculine" and "feminine" sexual practices that can leave lovers exhausted, feeling inadequate, unsatisfied, and too often angry at each other, the "Eastern" practices discussed above offer possibilities for emotional and physical balance, wellness, and expansion beyond the limits of self. These and other experiences I have had since then, have changed my emotional | physical wellness and the ways I think about and enjoy my sexuality probably more than all of the years up to this point, combined. A penis, for example, is no less sensitive when it is flaccid than when it is erect. Impotence is too often caused by anxiety or by some impossible performance expectation. Contrary to marketing by Big Pharma, it does not mean that one cannot be sexually satisfied by giving and receiving even in a flaccid state. Looking at other non-Western connections of mindfulness and sexuality, who would have thought that there is a meditative practice focused on stroking the clitoris for 15 minutes? Many (most?) have little inkling of where the clitoris is found, never mind how to mindfully stroke it. Mindful/meditative practices such as these further blur the difference between giving and receiving and take away some of the pressure of performance anxiety, and focus more on the pleasure found in the process rather than achieving some goal. Such ritualistic, timed exercise without "any" expectations or implications for intimacy, allow us to focus on ourselves and how we feel. It may seem counter-intuitive having one's clit stroked or stroking the clit of someone who may otherwise be a stranger, but it works. It does take some time and strength though to bring oneself into a mindful and focused state. I have found that this practice of concentrating on the upper left quadrant of the clit has brought about a big change into my focus that also expanded to other forms of intimacy, like kissing and touching. What also emerges as crucial from participating in such rituals is the importance of verbally communicating desires and "adjustments" openly and learning to do so as part of a healthy, mindful practice. I have found clear verbal requests for adjustments and amenable non-judgmental responses to such requests to be especially important in creating spaces where partners can be free to not only express their desires, but also allow for these desires to be experienced and enjoyed.

SOME WORDS OF CAUTION

A loving, compassionate presence is essential when energetically connected with another. Like an Octavia Butler novel, emotional | physical contagion and resonance is very high during such states. Sexual energy can be explosive and manifest itself

in different ways. It can be nourishing and invigorating but it can also be hurtful. Energy flow for me feels like I just had a whole cup of espresso. I feel tingling and shaking of my muscles. My breath quickens and I have to slow it down otherwise my heart rate shoots up. If this happens to me in the evening I stay up for hours. The next morning, I usually feel high, sometimes giddy, energy, again like a caffeine kind of energy. I have noticed lately that in that state I seem to more easily resonate with and amplify the emotions of those around me. Attention to the type and flow of energy and the ability to transmute negative into positive energies are necessary. Before I learned what chi was, and to move it through my body using my breath, I would feel chi like a strange heaviness behind my forehead, usually tied in with sex, like unused sexual energy. “Grounding” ourselves (sending our current to the earth) and those we work with becomes important. Having such currents running through my body made me aware of how important it is to be aware of those we are open to as, while the energy can be great, bad energy can also be manifested if our mind begins to wander. Medical conditions too can be aggravated. Zapping another person with energy (like zapping with static electricity but with different feels and “textures”) can be very painful when the mind is in a dark place. Having experienced several such moments, my advice to those interested in working with these different forms of sexual awakening, is to work with someone who is experienced and is aware of such dangers and knows how to deal with them when they do happen. Bringing my awareness into what emotions I am picking up and how I am responding and how to manage such resonance with others – to me and me to others – is a major part of what I am presently trying to understand and work to manage. These practices are both methods and philosophies and as such Tantra practitioners can use them for sexual wellness or use their knowledge and abilities solely for self-gain and self-indulgence. Hence, my advice for anyone wishing to explore a similar path is to do so with open eyes and an open mind.

Often too, during high energy sexual encounters, emotions that may have been pent up and locked away in some hidden spot, such as those associated with shame, guilt and/or abuse, may unexpectedly come to the forefront. Becoming mindful of such possibilities is to be compassionate to our partners and to ourselves at a time of greatest need and vulnerability. In the afterglow of intimacy while lying together in bed it is important to be mindful that emotions and energies are running very high. It is very important then not to go into negative territory, but to stay present. Talking about any of the usual stressors such as money or children while in such a state can, within just a few heartbeats, change emotions 180 degrees to being angry and upset at each other. By becoming aware of our emotions and hidden (or not so hidden) trauma and scars, not only can we begin to change them as necessary but we can also begin to heal.

SUMMING UP

The perversion of sexuality as portrayed by mainstream pornography and social media and peddled in schools, has left many of us ignorant of the wellness and

K. ALEXAKOS

pleasure found in it. Societal norms having more to do with religious, economic and political agendas more focused on fear, hate and profiteering from physical | mental unwellness, have brought on lifetimes of abuse, violence, sexual frustration and overall ignorance about our bodies | minds.

Learning to become aware of ourselves in the many fields we exist, reducing friction and developing harmony with our intimate partner(s) means knowing and respecting ourselves and our intimates, teaching ourselves to experience pleasure from “simple” touching without end goals will help break the cycle of prejudice and hurt. Unfortunately, when it comes to sex education mainstream, society seems hell bent in the reproduction of sexual ignorance and dysfunction through the continuing unequal and oppressive, legal and extralegal sexual mores and practices. People, adults and teenagers included, should be able to learn about their own sexuality and wellness techniques without being branded as sinners or sick. That education would include being kind, respecting ourselves and those around us, being present, being aware and comfortable with our masculine and feminine energies as they manifest themselves, viewing lovemaking as healthy and natural, removing the guilt society places on the pleasure and enjoyment of our own bodies and with our partners, and learning to harmonize our energies and harness them for healing, rejuvenation, and growth.

Due to these recent experiences, what is beauty, what is pleasure, what is sexual wellness, and what our bodies are capable of are changing meanings. Our sexuality can grow stronger, deeper, more nuanced, and much more intense as we grow older, rather than wither away. We can be “beautiful” and attractive no matter how old we get and without buying into the mainstream propaganda that is primarily designed to promote body images unlike us. For me, this inquiry into sexual wellness has been transcending and life changing in ways I could not have imagined possible or real even a year ago.

POSTSCRIPT

A number of the reviewers asked if I could share a bit more about my own experience. Taking these and more advanced workshops has changed me as a person. I had not realized how much being satisfied sexually affected me until I changed my mentality and practice. While I had come to some of that knowledge on my own, it took the books and workshops to expand (by orders of magnitude) and refine it. Much of what we think of as involuntary responses, like men becoming erect, ejaculation, and length of orgasm can become moderated using breathing techniques and mindful practices. As I am still learning and my body | mind are still reorienting and creating new connections and new neurological pathways, I am not always successful, but when I am successful, the effects are amazing. I am not limited by time as I can last as long as I and the person I am with wish (hours, days). By learning to transmute my energy rather than tiredness after sex, I now have more energy. By working with the energies of my partner, we can both often achieve “best ever” orgasms. As a result

of these new practices, I am not stressed about my sexuality anymore. In fact, this is probably the best I have felt in decades. A side benefit to all of these is that I can now use these creative energies for my wellness beyond sexuality. I find that when I have a lot of energy stored I do not need as much sleep. My thinking is clearer and more creative while also becoming more confident in my life professionally and personally (and probably played a huge part in me publically discussing sexuality and sexual wellness).

LASTLY

It dawned on me as I was reflecting on this manuscript that the reader may find it strange that I state that my theoretical foundations are in Marxism and Darwinism and then spend the later part of my paper discussing sexual energy flows. In Eastern martial arts “Chi” or “Qi” is part of the philosophy and part of the practice. In the West, with its imperial prejudices of scientific and technological superiority over other forms of knowledge (especially indigenous knowledge), the importance of such energy is left under-emphasized or ignored. Yet Qigong, Tai Chi, Kung Fu, Aikido or any such art would be empty gestures and rituals if lacking the power of chi. I am only beginning to appreciate energy’s central, underlying role in not only these arts, but in life and physical and mental wellness.

At the beginning of my inquiry this was a conflict and a contradiction for me as well. It took a while for my beliefs to change and then even more for those contradictions to fade. I have come to feel and experience the thing that I here call “energy.” Though I can feel it and sometimes taste or smell it, what it is biophysically I don’t yet understand. But it exists. No different than gravity, whether we understand it or not, no matter if we are aware of the math or the science behind it, this bioenergy or “life force” is still there. This “energy” is not dependent on what clothes someone wears, how much money they have, or what their outward appearance might be. Becoming more sensitive to these types of energies, has made me more aware of the emotional states of others that go beyond visual or auditory cues. Its textures, flavors, and colors arise from within; our goodness, our kindness, our awareness of our emotions, our fears, our focus, our attentions. There have been times when I would experience such energies as taste, smell, or images. While often these have been awesome experiences, there have been times where because of sour or offensive smells, I could not breathe, or my tongue would taste bitterness and become numb as if being exposed to some anesthetic. As a lot of these experience fall outside ‘normal’ Western science, it has been challenging for me to study such concepts and, even more at a personal level, make these experiences more manageable. Creating a boundary-like “force field,” learning to recognize the emotions of others from my own, and learning to be more grounded so that these unwanted emotions can flow out of me without me getting stuck in them has been tough.

Even among caring individuals, there is little available in the way of a useful public education needed to make informed decisions that are not imbued with political,

religious and cultural ignorance, lies, guilt and shame. Youth in particular who are in a very vulnerable time of their lives, undergoing radical changes in the physiology and emotions are restricted in what they can do and learn about their sexuality, their own bodies, and even personal wellness and hygiene and spaces for safe exploration of their sexuality and frequently denied access to birth control and termination of unwanted pregnancies. As children and youth can mess up when it comes to any interaction with each other, there too needs to be healing (for young as well as for “grownups”), both for those that have been hurt as well as repentance and atonement for those who did not know better. Such healing is also often needed to ameliorate pain trauma and distress brought about sexual | emotional decisions made whether in their relationship(s) to others or with regards to their own bodies. Instead, children and youth are left to figure out and fend for themselves what is appropriate and what is not, are taken advantage of and abused without anyone to turn to for help, and suffer guilt, shame and/or may be traumatized for life because of these experiences for which they are often blamed, victimized and ostracized by the government, their families, and their communities. In response to a recording of our next president boasting of grabbing and sexually assaulting women, in a recent Tweet, writer Kelly Oxford described her own experience of being sexually assaulted and asked others to share their stories (Domonoske, 2016). Within one evening, over one million responded, many still suffering from trauma, guilt, and shame decades later because not only they have been victimized, but there is no national discourse or spaces for recovery and healing. Just the opposite; our society continues to blame the victims of such violence while through its political, cultural, and economic institutions, policies and customs of exploitation, misogyny, economic, and racial and sexual hegemonies, it encourages and perpetuates the conditions and environment for such assaults and attacks and even rewards the perpetrators.

Over three decades ago, Rubin pointed to the need for “radical perspectives on sexuality” (2011, p. 275). When it comes to sexual practices, I believe that this is yet to be fulfilled. Too often, in our society even consensual sexual intimacy becomes another component of hegemony, personal accumulation, power, control, and oppression between individuals. Aristotle in his *Nicomachean Ethics* (Aristotle, 1976) argues that friendships are important on their own, that there need not be a utility or advantage. I feel the same about sexual intimacy. There is pleasure in giving and receiving just for the pleasure of it. In addition, moving beyond the mechanics of sexuality and pleasure, the positive energies and sense of wellbeing generated go beyond sex and help us stay more grounded, healthy and spirited even in the face of adversity. Such benefits can become contagious, spreading to those we interact with, whether it is through a warm smile, wishing others a pleasant good morning, or passing on emotional happiness. Unfortunately, sexuality, desire, and morality cannot be separated from the economics and the political. Patriarchal power dynamics and property relations include rights over sexuality. For true education in sexual wellness therefore these economic and political systems of oppression and exploitation too need to be addressed. Moving beyond Western definitions

of masculinity and femininity, becoming open and knowledgeable in the many ways to give, receive and increase sexual pleasure, using this knowledge in ways that are physically | emotionally healing and transformative, both in personal and sociopolitical life, and speaking out for justice for those that have been targeted and victimized by the current political and legal policies, I think are important elements if we are to go beyond the barriers that restrict, deform and often marginalize otherwise healthy sexualities and body | mind wellness.

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K. ALEXAKOS

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PETER WALDMAN

15. OF TWO MINDS

A Narrative Fiction of Active Addiction and Mindful Sobriety

ABSTRACT

In this fictional narrative I represent two modes of human experience – active addiction and mindful sobriety – through the literary convention of alternating first-person limited-omniscient narrators. Each narrator describes, interprets, and acts in the imaginary story from a singular point-of-view, with an omniscience limited to himself and the other narrator. Each narrator describes successive elements of a plot (*muthos*), or the causal chain of events set in motion by the imitation of human action (*mimesis*) (Aristotle, 1982). Each narrator also describes instances of *distentio animi* – literally, *a spasm of mind* (Augustine, 1961), or, the reflection that eludes and punctuates the imitated action of the plot upon which such reflections are based (Ricoeur, 1984). I represent active addiction as compulsive action sans reflection, excepting obsessive reflection over the objects of addiction. Mindful sobriety is represented as ethical and reflective action – a paradox in Ricoeur’s scheme, but a way of being which mindfulness and mindfulness-based practices intend toward. The literary style that animates the tale is to be taken both as a form of knowledge and as a way of doing – a methodology – that explicitly excludes the evaluative criteria of empiricism in favor of the valuative criteria of literature. Literary standards – for example, verisimilitude – privilege the attenuation of ontological and axiological distances (moral, ethical, aesthetic) that hover between readers and texts. Reading and writing fiction finds one both lost and found in a “possible world” (Ricoeur, 1979) – not the ideal locale for the newly sober addict. A brief reflection (*distentio animi*) follows the narrative.

Keywords: addiction, mindfulness, narrative, fiction, *mimesis*, *distentio animi*

LIFE IS SUFFERING

Danny (excerpt from follow-up interview)

[...] According to Buddhist thought life is suffering and desire is one of the lynchpins of suffering. Addiction, to me, is desire on crack. However, I think that by jettisoning addiction as a metaphor to describe it as a mental/bodily phenomenon – as a *thing* with formal properties like mass, color, shape,

P. WALDMAN

contour, texture, etc. – then we might short circuit it as obsession, impulse, and compulsion. That’s part of what ‘mindful sobriety’ means to me. Of course, Carsten doesn’t know anything about sobriety, mindful or otherwise.

Danny’s Side of the Story

First, he looks terrible, Carsten does, which means one of two things. Either he’s using or he’s in withdrawal. I’m thinking he was looking to cool it for the weekend just hoping for the best and now he’s jonesing like all hell. Of course, life happens (as it always does, story to follow) and he’s back in New York for God’s sake. So, despite my obligations I am in no rush to get home and I treat him to the scenic route along Atlantic Avenue, a two-way boulevard of dispossession at this its easterly point, the airport structuring a world of in-transit exploitation, slab-shaped motels, shades drawn, liquor stores and ATMs, drugs if you know where to look.

“I’ll need an x-ray at the very least,” Carsten tells me, culminating his plea.

“Tell me what happened again.”

I’d been distracted by the traffic just getting out of the airport and by anxious thoughts over Carsten who is morbidly obese – surprising given my assumptions – and white as a piece of chalk. A sweeping dermatitis covers his moony face and depilated scalp like a pox. I don’t know where to begin with the questions so I don’t.

“I was *in the air*, Dan, I was flying *inside* the airplane.”

Then he unfastens his seatbelt, for the second time in as many hours, and he lowers his jeans to the crack of his ass where a diploma-sized welt is checkered along his lower back like a landscape at sunset.

“Jesus! What the hell happened?”

“You don’t listen, Dan.”

Perhaps, but I know the moral of the story well enough as I’ve been witness, host, and author to a thousand junky entreaties. But he tells me anyway. Tells me of how he’d unfastened his seatbelt for the first time – a soaring Airbus A320 in this scenario – to peer at a gorgeous sheet of golden cloud cover when he was ripped from his seat by a shock of turbulence and shot backward into one of the bulkheads. Of course, the crew humiliated him in that obsequious dispassionate way of theirs.’ The seatbelt sign was on after all. They cared for him, as they were obliged to, but their care was performed with a distinct distaste for its object, for Carsten. He’d rather have suffered a head injury than reckon with this level of humiliation. How silly he must have looked, how pathetically silly and stupid, splayed out in the single-aisle like roadkill.

“Okay, we’ll take care of that,” I tell him as my toxic self, never far out of range to begin with – I’m four years, eight months, and twenty-three days sober myself – finds an outlet in my right foot, which presses on the accelerator with that much more force, hurtling us, the cousins, that much more wildly into that many more variable sets of potential calamity.

“We’re going to take care of that,” I tell him again, but with a caveat: “We need to stop at home first to drop off your stuff.”

My spleen is in my armpit awaiting his response which comes in the form of a window-faced pout. This fear that addicts instill in me is the fear that *my addict* still instills in me. What’s so frightening is that I want to get high, too. Not to ‘kill the pain,’ not now, but to nurture the anticipated desire for its relief. So, I pull off the road and shift into neutral, yanking on the emergency brake, thinking it an appropriate if inconvenient time for a self-intervention. I place my palms face down on my thighs – ordering for Carsten to please shut up – and I close my eyes and breathe. I breathe and I breathe and I find my breath *as* breath when a thought emerges and an image and a feeling. So, I sit with it, this feeling of *lack*, of *where’s mine?* – deprivation being less a thing than its negation – though there’s a trace of forms gathering in a dustup of clouds. A deadly mass, a tumor, a planet, bone-dry and burnished, pock-marked with craters. Poor old planet pock-marked with pain, the light of your star a pinprick of hope, all alone in the body of space ... Okay, now breathe through it. Breathe through it, on it, and into it like a life raft on a pane of cool water. Find your way back, now. Leave it be and watch it pass invisibly like light through clean glass. Find your breath. Find your breath. Find your breath, find your breath ...

Carsten is incurious, without questions. I merge with the few cars on the avenue as he pores over the cityscape, exhorting the weeds struggling up through the concrete.

“This is the most disgusting neighborhood I’ve ever seen,” he says finally, reverting to gross generalizations, “My God, can you imagine the *lives?*”

I don’t respond to him. I simply don’t respond. There are blocks and blocks of unimpeded traffic with green lights beckoning like open invitations and I take a moment to let the gratitude consume me, fighting to regain the sense of equanimity I’d lost upon first laying eyes on him at the gate. Puffed up in an orange North Face like the Michelin Man’s evil brother and with his neglected shark-tooth smile, he reminded me of one of those late-season jack-o-lanterns, all candlewax and frozen pulp on someone’s bare winter porch.

I tell him that people live all kinds of lives and that for him to condemn an entire neighborhood based on what he happens to notice as he speeds past it in a car with heated seats is the height of intellectual laziness and the definition of prejudice if not blatant racism.

Carsten lets that sit though I’m certain he’d like to remind me of who holds the advanced degrees in the family – a Masters and M. Phil in comp lit, he reads and speaks fluent French – and I think it’s obvious that I’m more licked than ever on AA or Buddhism or narrative therapy or all the above. He does not want to talk about any of that crap. He wants to get high. He needs, rather, to get high, and he’s relieved, jubilant even, that his pain remains unrelieved as it heightens his sense of narcotic entitlement, which makes for a very convincing performance. However, if his pain is legitimate then he’s *not* performing, correct? Then again, if he’s not performing then why does he feel like a liar every time he opens his mouth?

“I really am in a lot of pain, Dan. If we can just –”

P. WALDMAN

I interrupt him: “No. And stop it. We’re going to drop off your stuff and you’re going to say hi to Jan and the kids and you can even take a shower. A nice hot shower. How does that sound?”

Embarrassed by my rebuke and taking his pleasure where he can get it, he ducks among the puny shrubs of false indignation and I fall for it like a mark.

“That’s not what I mean, Car, and you know it. Your back, your coccyx, whatever it is. Don’t be silly, you don’t smell.”

Reverting his pout to the passing streets that approach and recede with each green light, Carsten starts playing ‘I Spy’ with himself: *I spy a 2002 Honda Civic; I spy a BP gas station; I spy a little girl with her older brother (uncle, cousin, friend?) who balances her pastel-colored knapsack on his head.* But when we’re finally stopped at an intersection and the red lights are burnishing our faces through the windshield, the world comes into sharper focus. A tall skinny man wearing nothing but jeans, a thin sweatshirt, and sneakers without socks is lying prostrate over an open grate, conjuring in Carsten’s too-recent memory his humiliation at thirty thousand feet, but neither compassion for the poor soul lying out there in the cold nor for his own suffering self.

SUFFERING IS DESIRE

Carsten (excerpt from initial interview)

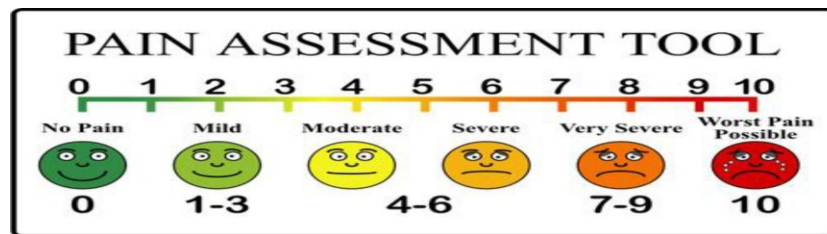
[...] Being a committed relativist, I’m suspicious of the Truth, capital ‘T’ (so called). As such, I’m suspicious of the Buddha’s Four Noble Truths. Why *Four Noble Truths*? Why *Four Noble Truths*? The noun forms of the adjective ‘noble’ are ‘nobleman,’ ‘noblewoman,’ and the collective, ‘nobility’ (e.g., ‘the English nobility,’ or just, ‘the nobility.’ Then there’s ‘the nobility of the poor’ with ‘nobility’ as a descriptive noun, but such ‘nobility’ is a sort of popular myth or a slogan for social realism. However, one of the implied meanings of the ‘nobility of the poor,’ bracketing political considerations, is of a *moral* nobility that has nothing whatever to do with wealth and titles. Perhaps that’s the sort of ‘nobility’ of the Four Noble Truths ... but I really haven’t a clue.

Carsten’s Side of the Story

It’s hellish finding a space so Danny gives in and splurges for a garage. Ignoring my protests and with great difficulty, he spots me down two long avenue blocks through the building’s front courtyard and up the three short concrete steps to the lobby, lugging my bags the whole way. The elevator is one of those prewar coffins with a simple set of rubber-band pulleys and it creaks open onto a wide dimly-lit hallway tiled in quartz-specked linoleum. The walls, barely visible in the low sidelight of the shaded sconces are a mottled cream color and the doors and floorboards shine with a fresh coat of paint, jet black.

“Wet,” Danny says, pointing to his apartment door and to the ‘4F’ stenciled in gold. I remark on the coincidence of his apartment number matching his military classification, a joke I repeat every time I’m here – which is less and less these days – but he ignores me, unfastening a heavy key ring from his belt loop. He’s held the same job at the same small office building in midtown for going on three decades, working his way up from porter to superintendent – an enormous disappointment to his parents who wanted their son to follow a track more closely related to mine, pre-derailment. Danny’s no dummy, though. He graduated magna cum laude from Queens College (not the one at Oxford) and is chapter head of his union local.

I listen for the pins of the Medeco rotating with the turn of his key and for the staccato click of the sidebars dropping into place, when he pushes the door open onto a lighted roomful of people. There are relatives and friends, the old and the young, the middle-aged and the listless, like me, and the nearly moribund. *Of all the nerve!* I treat Danny to a withering sideways look and shake my head meaningfully. *An intervention?! Is he kidding?! Who invites kids to an intervention?!* But the pain unloads on me – a massive 10 on the pain assessment tool, red-faced and weepy – spiraling outward from my abdomen to the shoddy scaffolding of my bones, and I’m sliding down, down, down the freshly painted door jamb, my orange North Face – “*Surprise!*” – taking on a brand-new jet black racing stripe.



CUT TO: EXT. CONEY ISLAND BEACH – MAGIC HOUR

A full legion of mini-sized Donald Trumps – about a foot-long each or thereabouts, like an army of sandwiches – scours the beach for gold with a purloined load of dental mirrors. The bugle sounds but it’s not “Reveille” it’s “My Way,” and the Mini-Trump, blue-suited and platinum-coiffed, drop their mirror-detectors and run in a million directions, taking up trench positions all the way from Manhattan Beach to the fortified shores of Sea Gate. There are snipers caged and swinging in the gondolas of the Wonder Wheel and perched on the Cyclone’s rickety trellises. The anti-aircraft and artillery batteries are aimed seaward where a fleet of Blefuscudian destroyers approaches at fifty knots, or so says Breitbart News. From atop the President-elect’s subterranean bunker complex, Under the Boardwalk Beachheads and Condos™, a barbershop quartet of spectral pallor warbles through the Drifters’ catalogue while a platoon of Mini-Trump, fastens me to the tightly packed mud of the low tide line

P. WALDMAN

using six foot bolts of grey canvas sheeting and meter-long tent stakes like giant hypodermic needles. From high above the world, then, in the purple near-darkness of the domed sky, the asteroid-sized head of Donald J. Trump comes screaming toward Earth leaving a trail of fire and fecal matter in its wake. But it's not Trump of course it's *me*! It's me coming for me! "Now I am become Death, destroyer of Worlds," as what's his name, Robert Oppenheimer said. Woe is me. I'm as guilty as Oppenheimer. Christ, what an ego! Oppenheimer's not mine.

Splitting my eyelids apart by sheer force of fear and will, I fix my wavering gaze upon a golden-knobbed door painted a child's apple green. I strain to hear the music seeping in from under it – the Drifters' "Under the Boardwalk" – and a steady stream of incoherent conversation. I spy a mountain of trophies crowding the top of a blonde Ikea dresser and a litter of digital devices scattered across a blonde Ikea desk. Not a book in sight. But a MacBook Air, fully charged and humming like a power grid is tucked sideways amongst a small collection of vinyl, which I instinctively denigrate as affected and stupid.

Time to Get to Work

But in merely shifting my weight a half inch another blast of pain leaves me (literally) screaming in agony. Aurora, Danny's six-year-old, having heard my wails, charges toward me suddenly like a runaway Muppet, the bedroom door swinging wildly on its hinges. Aurora's mother, Janice, is directly behind her and in hot pursuit. Behind Janice, a full-blown party is in full-blown swing, but she slams the door on it (and for that I have no complaints).

"I'm sorry, Car," she says. "I'll just grab her."

"Uncle C-C-Car," Aurora says, staggering over her epiglottis. She slams the brakes at the foot of the bed to peer at my scabrous face, a changed face that she seems unable to make sense of.

"You look like a monster!" she says, getting the gist of it.

"Aurora!"

She plops herself to the floor nonchalantly and licks her green bracelet, threading her brother's dirty socks through it like a napkin ring.

"It's only temporary," I tell her, a bald-faced lie. *A bold-faced lie?*

"What's 'temporary' mean?"

"It means it won't last forever."

"I know that," she says.

"Then why'd you ask?"

"Nothing lasts forever," she says, "It's called 'impermanence.'"

Janice is beaming at ... what exactly? Her husband's hippied-out New Ageism? Her daughter's gift for mimicry?

"Speaking of impermanence, I'm not feeling all that well and I should probably get to a doctor."

"You can't go to the doctor now, silly, it's nighttime."

“Which is why they invented Emergency Rooms,” I tell her, directing the comment toward Janice who either mishears or ignores me. So, I repeat myself: “Do you know what an Emergency Room is, Aurora?”

I’d forgotten. She points to the stitches scars on her forehead, chin, elbows, and knees from when she ‘fell’ from the back of her brother’s bike, a certain Andrew by name whose bed I find myself reclining in. You’ll hear Danny rationalizing his son’s behavior and uttering false statements (lies!) regarding the boy’s “benevolent intentions.” For example, “he [Andrew] was just trying to share some fun with his sister.” Nonsense. He was calculating the speed and force necessary to fling a small body into space from a banana seat. And no, this has nothing to do with my horrible/non-existent relationship with my horrible, all too existent brother, Phil, who, if he’s here tonight which is not likely, will see the back of my hand. Or maybe the knuckle- sided front of it.

“He didn’t want to spoil the surprise,” Janice says. “He had good intentions. Danny always has good intentions when it comes to you.”

“There’s this road to Hell I’ve heard of that’s paved with those.”

“You’re an ingrate, Carsten.”

I instruct Aurora to hold her hands over her ears and I tell her mother squarely: “I’m very, very pissed off about this if you want to know the truth. What right do you guys have to spring this on me?”

“Spring what on you? A *surprise* party? Oh, God forgive us, Carsten!”

“A surprise party? For what?”

“For your goddamned *birthday*?”

Aurora had dropped her hands from her ears and is scolding her mother for swearing. Janice sweeps her from the floor into the net of her arms and carries her to the door.

“My birthday’s in three weeks!”

“Well it wouldn’t have been a surprise if you’d come up then.”

“Please tell me you’re joking.”

“No, I’m not going to tell you that. There are people out there, believe it or not, who *care* about you.”

I tell her that I have no power over how people feel about me and she laughs like it’s the funniest, stupidest thing she’s ever heard.

“Time to let your uncle rest,” she says, shaking her head at a lost cause, which I suppose I am.

Aurora hardly relents but shouts over her mother’s shoulder, upon her whispered command: “Feel better uncle Car!”

Click goes the door and I am alone again. My default settings, as usual, at craving, which is less a desire for the thing itself (drugs) than it is a desire to fill the holes that drugs leave behind when they vacate the premises. The absence of drugs reveals the precariousness of what usually lies beyond our capacity to sense, in the way that low tide reveals dangers unknown to us at high tide. The dangers still lurk of course, but in not being sensed they are bracketed. What junkies want, really, is for time to still. Time on the nod, that is. All other temporalities should be expedited or slept through – the time spent fiending and scoring, for example, and the time spent in withdrawal.

My phone is dead so I reach for the row of LPs where the MacBook is stashed, thinking I might flag an Uber, but no such luck because my arms are too goddamned short. I lift myself into a sitting position and exhale deeply, scanning the walls and windows and taking special note of the fire-escape. Using my hands for balance and what's left of my pathetic abdominal muscles, I manage to swing my legs over the bedframe and stand. My North Face is sticky with paint but I poke my arms through it and I leave my boots untied. I remove the MacBook from its vinyl sheath between the Beatles' *Abbey Road* and Boston's debut, which is to say that I'm mildly impressed with Andrew's taste and organizational skills.

I log onto my Uber account, but there's a twenty-minute wait, so I tiptoe over the dirty laundry and flick off the lights – the overhead and the desk lamp, to lend credibility to the lie that I'm sleeping. I lift the window slowly and silently and I throw a leg over the sill and onto the cold iron of the fire escape, a gust of frozen air gushing through, when Danny appears in the doorway silhouetted against the warm backlight of the party. Roosted atop a bookcase of dusty classics in the living room, a Bluetooth speaker spits Johnny Cash into our lives. He's warning some foolish green cowpoke to leave his guns at home; and there's a moment between us, between Danny and me, that's like a standoff in a western when the hero and villain are each about to draw. (Guess who the villain is?) But instead of drawing he lunges at me, grabs me by the waist and lifts me off the windowsill, yanks me back into the room.

Janice, cradling Aurora, appears in the doorway with Danny's parents, my aunt Eleanor and uncle Frank. Someone flicks on the overhead, which is blinding, and there is an eerie silence that lingers in the music's wake. Andrew, Danny's demon seed, feels unjustly cheated for having missed the violence so recently transpired in his bedroom; and Uncle Frank, hands full with a plastic cup of iced vermouth and a stinking, unfiltered Camel, his indoor smoking rights grandfathered in, asks if anyone needs help.

"We're fine, Dad," Danny says, looking anything but. I've managed to crawl to the bed where I sit hunched over the mattress, but Danny's lying supine along the floor, resting his head on the baseboard and staring in disgust at the black paint covering his hands.

More people appear in the doorway. Jason Rome, my best friend from high school whom I haven't seen in decades. Dawn, Janice's sister, and her daughter Rosalie. There are distant cousins whose names I never knew to begin with. There are the old folks besides Danny's parents, mostly neighbors and neighborhood acquaintances timed out over four decades, and there are the kids, *en masse*, entire nations of them, poking their snouts into the slough of my despair.

"I just needed a little air is all," I tell Danny and all those in attendance, and my lie seems to have the room convinced, though there are a few wizened hold-outs, including uncle Frank who says, nonetheless:

"Let's hear it for Carsten," placing his plastic cup of iced vermouth on the dresser and poking his mouth with a lit cigarette.

“Happy birthday, Car,” he says clapping his hands like his idea of a party, everyone joining in except for Dawn who stares me down like a stone-starved Gorgon. I return her glare with my Cyclops eye and she recoils, scurrying to the living room and to the safety of white wine. We’ve never gotten along, Dawn and me. I think it’s one of those chemical things, like pheromones, but it’s also one of those chemical things, like drugs – and how we both love using and abusing them, so that when we see each other the mirror effect is intense.

Finally, I decide to make the best of a bad situation – yes, a party in my honor is a bad situation – and I treat myself to a drink, as effective a painkiller pound for pound as anything on the market.

THE TRUTH OF THE END OF SUFFERING: THE END OF SUFFERING
IS THE RENUNCIATION OF DESIRE

Danny (Excerpt from initial interview)

[...] Life is suffering. Suffering is desire. Desire is what we do best. But desire is no smorgasbord of delights for the addict who survives on an attenuated diet of concentrated compounds. Substances function for the addict as metonymic sublimations for desires writ large, and, less conspicuously, for the variety of potentially productive relations, social and otherwise, that the addict substitutes with the counterfeit article.

Danny’s Side of the Story (continued)

“I’m not telling you how to live your life,” my father is saying, “Far be it for me to provide prescriptions for living.” He likes the phrase, *prescriptions for living* and smiles at his eloquence, forgetting his own addiction stinking up the room: “But for God’s sake, man, have you seen yourself?”

Several of the older folks and a few of my friends from work, most of whom voted for the President-elect, have secluded themselves in the kitchen and are speaking about their winner in low, conspiratorial tones, drinking lemonade out of Dixie cups.

“I mean it,” Frank says. “You’re still a relatively young man. What the heck are you doing to yourself out there in wherever you are?”

“I assure you, nothing that others haven’t done before me.”

“We had such hopes for you, Carsten. Your parents had such hopes for you.”

“Let’s not,” Carsten says, still wary over the mention of his mom and dad. He’d just begun his descent into ‘the life’ when his mother passed but his father knew of his every dissipation thanks mainly to his older brother, Phil. I called him anyway, Phil I mean, hoping he’d come out for Carsten tonight. He lives within walking distance. But he said he wanted nothing to do with him. Actually, what he said was, “I want nothing to do with that junky loser,” and not for the first time.

“Fine,” my father says, really trying hard to get through, “*You* had hopes for you. *You* had dreams,” which is true enough. But in his third year of doctoral studies he slipped in the shower, shattering his elbow and snapping his ulna, wrist, and hip against the solid glazed floor of the tub. His dissertation was to have centered on canonical representations and counter-narratives of ‘the grotesque,’ from child-eating Cronus, for example, to Gregor Samsa, and the imbrication of these forms with those of dis/ability. His advisor congratulated him on his prodigious appetite but endorsed a more focused, less suicidal pursuit by limiting the analysis to two or three grotesques *or* characters with dis/abilities of the *same historical/literary moment*. Carsten’s aversion to authority and to being ordered about, especially in underline, was and is formidable. But the boy was dreaming big. Macarthur Genius Grant big. And the Swedes would invent a new category to prize his brilliance. By the time of his physical recovery, however, he’d abandoned his education and his Kantian ethics for a drug-fueled life of floundering and philosophical pessimism.

“I don’t know what to tell you,” he tells my dad. “Life happens. And my dreams, so called, were ill-conceived.”

My father laughs: “What the hell are you talking about, *ill-conceived*?”

“I was doing it for the wrong reasons.”

“And what would the right reasons be?” Frank says, not quite believing his sensible ears. “Why not keep it simple? Finish your degree and get a job.”

Carsten is growing wary over unsolicited concern for his well-being and he excuses himself to refresh his drink, promising not to return.

“Don’t be like that, Car,” my dad says, “We’re just talking.”

But Carsten’s hit the mute button. He’s tuned him out. He struts to the bar, or so he imagines, enjoying the ebullience of the booze and the illusion of freedom it provides. I’ve been nursing the same club soda and lime for forty-five minutes and exchanging small-talk with Jason Rome, who patiently sips from a green bottle of Rolling Rock. Carsten sidles up, as it were, and pours himself a hefty slug of bottom-shelf whiskey. He’d tapped out the Maker’s on the last go around and is feeling very loose and totally pain-free. Drunk, really.

“How you doing, Car?” Jason says. “Assimilated the New World Order yet?”

“I predict he won’t be inaugurated,” Carsten says cryptically, peering through the pass-through at the Trump supporters and whispering, “It’s almost erotic the way they talk about ‘The Wall.’”

Jason says, “Greatest concept album of all time.”

“That’s a bold statement,” Carsten says. Then he starts singing, pickled and out of tune, “*Tommy, can you hear me?*”

“Screw *Tommy*.”

“*Tommy* was the first.”

“*Sgt. Pepper* was the first.”

“The second then. Listen, I love the Floyd, but *The Wall* was recorded ten years after *Tommy*.”

“Who said anything about Ten Years After?”

I laugh and tell them they're both idiots.

Carsten gestures for Jason to join him in a glass-clinking toast, but his liquored-up enthusiasm gets the better of him and his tumbler shatters over the tiara-framed head of my niece, four-year-old Rosalie Conolio. Jason escapes with his bottle and reputation intact and dodges Carsten for the remainder.

I drop to my knees and grip the girl's head in my hands like a well-meaning gorilla, droplets of blood trickling down my useless mitts. Carsten finds a stack of plastic cups on the pass-through, one of which he fills with the same cheap whiskey that's stinging my niece's eyes.

"Haven't you had enough?" my dad says.

Rosalie is inconsolable.

"Not nearly!" Carsten shouts over her cries. "And I don't even *like* the stuff!"

Janice joins me in kneeling before Rosalie. She picks through the kid's bleeding head, trying to get at the shards with her fingernails. Carsten, meanwhile, drink in hand, finds his way to our newly re-upholstered faux fauteuil and to the broken antique lamp roosted above it.

Panicking, I announce that Rosalie needs a doctor, a hospital, the emergency room.

"Yes!" Carsten shouts, "Shotgun!"

"No," Janice says, "She's going to be fine. But where is Dawn?"

Then Carsten remembers just who Rosalie belongs to and his fight or flight response kicks in, searing him to the fauteuil. He is no way prepared to fight.

I cradle Rosalie in my arms and carry her to the bathroom, removing a tweezer from the vanity. I shine my phone light over the top of her head which resembles nothing more frightening, really, than a plate of angel hair pasta with marinara sauce. Janice takes the light and guides my hand over the cusped terrain where I make slow but measurable progress, dropping the shards into the toilet where they plink like kidney stones. Rosalie finally finds herself in the darkness of her fear, which, along with her pain, has lightened. No deep cuts, no stitches necessary, just a few surface nicks and scrapes. A little witch hazel and a gentle shampoo. Crisis averted.

Rosalie clings to me, her ear glued to my chest, as Aurora emerges from her hideout beneath the coffee table and wraps her arms halfway around my waist. More surprising is Andrew, who, despite marching defiantly into his teens can't help but beam at his dad.

Then Dawn clomps in from the hallway, her chunky heels echoing against the linoleum. The living room's wall-to-wall absorbs the din but trips her up and she stumbles in. Following her is a shifty-looking chap wearing a clipped mustache and a tight jean jacket. Wiry and wired, he's coked-up or anxious (or both), which, if you know Dawn's taste in men is par for the course. Meanwhile, Dawn struggles to maintain control of her formerly iced vodka, which she pinches, plastic-cupped, between a thumb and forefinger. Loudly insisting that someone produce Rosalie, she swipes at a comma of coke dust punctuating her upper lip but succeeds only in spreading the evidence around for more to see.

"She's right here," I say. "And she's perfectly fine."

P. WALDMAN

Dawn yanks her daughter away from me and demands to know Carsten's whereabouts while bragging, paradoxically, that she can smell him like dog shit. *If you can smell him like dog shit, I think to myself, then why can't you find him?* But Carsten, noting the return of Rosalie's tears, reveals his voice in the darkness: "Now look what you did, you big galoot!" he says. "You made her cry."

Dawn drops Rosalie to the carpet like a suitcase: "There you are you no good piece of shit," she says.

A friend of Janice's, a single mom with a saucer-eyed five-year-old requests of Dawn that she tone down her rhetoric.

"And what about *him*?" Dawn says, pointing to Carsten. "You don't tell him to tone it down."

Her point is very well taken.

"Be nice now," my father says. "It's over and it was an accident and Rosie's okay, thank God. Let's all take a deep breath," which is the correct prescription. Several deep breaths would be more like it, or a twenty-minute group meditation which I'd be happy to lead.

"You know you really look like shit," Dawn says, getting her last licks in: "A middle-aged junky on his way to jail or an early grave."

Thankfully, and I'd like to think because of my silent but eye-ful insistence, Carsten waves her off, refusing the bait. Or he's too tired, or too drunk ... or he agrees with her. But no one's all that interested anyway as the party has begun emptying out – and who can blame it for that? It is getting late, though. Time to shut up and go to bed – brush, flush, and hush – which is a more than adequate plan as far as I'm concerned.

THE TRUTH OF THE PATH OF THE END OF THE SUFFERING

Carsten (Excerpt from initial interview)

[...] This is what Danny tells me, that the Fourth Noble Truth is 'the truth of the end of suffering,' and that the truth of the end of suffering is accomplished by following the Noble Eightfold Path, which is a capital 'P' Path with eight on-ramps including right view, right resolve, right speech, right conduct, right livelihood, right effort, right mindfulness, and right concentration. Danny says it's impossible to develop right conduct, for example, without practice, and practice is what meditation and mindfulness are all about. Also, he says it's important to remember that the word 'right' (like the word 'noble') has no moral connotation to it whatsoever. For the Buddha, people lived either skillfully or unskillfully. Skillful living involves an understanding and awareness of the Four Noble Truths and a skillful practice of the eight on-ramps to the Noble Eightfold Path. Skillful living leads to a sort of meta-awareness of our incarnate existence and to empathy and compassion for ourselves and for others. Unskillful living leads to the opposite. Unskillful living, for example, leads to *me*.

Carsten's Side of the Story (continued)

There are still a few toddlers milling around purposelessly like junkies in front of a meth clinic and there are women retrieving baby shoes and bottles from the floor and whispering goodbyes or, failing to be heard, gesturing them. Most of the men are long gone, still free in this increasingly small demographic of the obligations of care. Dawn leaves, too, with her new beau and a post-traumatic Rosalie in tow, and for the first time in a long time I feel a deep sense of sadness and a genuine sense of remorse. These are not feelings I enjoy.

Thankfully, Danny interrupts my dark reverie to tell me about the air mattress, which is inflated in Andrew's room – and not to worry as he sleeps like a coma patient. Also, there are some clean towels on top of the hamper in case I want to take a bath or shower.

“How's your back?”

I answer with a wince.

“There's more Advil in the medicine cabinet and there's some ice packs in the freezer that Jan and I prepared.”

“You're the best, Dan. So is Janice. Thanks.”

“Tomorrow we're going to sit down and talk, okay?”

“About what?”

He gives me his *don't-bullshit-the-bullshitter* look, furrow-browed and avuncular: “Tomorrow,” he says, and flicks off the hall lights to begin his nighttime rounds with the kids.

I draw myself a deep, hot bath, and sprinkle in some Mr. Bubble for good measure.

I must admit it. The bath feels good. Wonderful in fact. But I'm getting nauseous. I've been keeping the Monster at bay by popping eight-at-a-time of the hundred or so Tylenol with codeine tablets I muled across the country in a vitamin bottle. And I'm sorry for having kept this from you, I really am, but combating diamorphine (heroin!) with codeine fucking phosphate is like wearing boxing gloves to a bullfight. But it's better than nothing. So, I emerge from the warmth of the tub and trot naked through the freezing hallway to retrieve another handful. I swallow them dry and slip back into the tub, turning on and up the hot water with my toes. Nothing at all to do with salvation, though, my communion wafers and this soggy restorative. No water-sports on the River Jordan with the Baptist. No realizations, no epiphanies. Just water. Also, soap, and a body. I really want to be clear about this.

“*A horse! a horse! my kingdom for a horse!*” I don't know what to do. I simply don't know what to do! Or, I know precisely what to do – *to desist!* – but between knowing and doing lies a great abyss, a yawning chasm, a *fill in the 'endless expanse' metaphor of your choice here.*

I promise myself to visit more; to visit more and to clean up my act, once and for all, but I'm dressed and on the street within the hour, the late season jack-o-lantern, limping along 4th Avenue, my black racing stripe dry now and cracking in the cold.

P. WALDMAN

I ditch Danny, who thinks he's slick following me into the subway, exactly the way Fernando Rey ditched Gene Hackman in *The French Connection* ...

Okay, so that's bullshit as Danny was already dreaming the dreams of the righteous upon my unannounced departure, my presence going unmissed until morning. But the overwhelming reek of Andrew's high-octane marijuana, a bouquet of skunk stink and human urine, was ubiquitous. I thought of chemical warfare and of that darkly hilarious poem by Dorothy Parker regarding the practical nuisances of suicide. I thought of waking Danny and Janice.

Could they know? Could they possibly know?

No way.

Not a chance.

I thought of talking to the kid myself.

Then I let myself out.

REFLECTION (DISTENTIO ANIMI)

Imagination at work – in a work – produces itself as a world. (Ricoeur, 1979, p. 128)

Dialectic of Image and Language

Let's assume that fiction writers use their laptops in the way that carpenters use hammers – “off-handedly,” as “equipment” (Heidegger, 1953/1996) – not in the way that Federer uses a tennis racquet but in the way that one turns a key. Equipment is not “the things themselves” – the “things” being the phenomena upon which Husserl (1931/2002) founded his transcendental phenomenology. What is the “thing itself” of fiction? Well, when I write fiction my *sight*, a privileged sense in phenomenological research, is focused squarely on my keyboard and screen – my equipment – and on the mix of letters, words, and sentences scattered across my field of vision, but my perception is intended toward the unseen images of my imagination. Husserl (1931/2002) described the “pure essence” of phenomena as extractable from all manner of data including the fanciful: “The Eidos, the *pure essence*, can be exemplified intuitively in the data of experience, data of perception, memory, and so forth, but just as readily *also in the mere data of fancy (Phantasie)* (loc. 1889, emphasis in original), which is a transcendental-phenomenological way of implying that truth emerges from fiction; or, the old cliché, that fiction is a lie that tells the truth.

In his trilogy, *Time and Narrative*, Ricoeur (1984, 1985, 1988), a dedicated follower of Husserl and Heidegger, investigates the hermeneutic-phenomenology of narrative fiction, history, tragedy, and spiritual autobiography. Ricoeur (1979) imagined fiction beginning, like Genesis, in “nothingness,” with the light of an image being analogous, it seems, to God's lighting of the world. The image as a formal structure contains two ideas or possibilities: as a copy or reproduction of an original, surely the cheaper of the two, like the “picture” of Grandma hanging

over the hearth reminding us of her former and actual corporeality. However, “that fiction changes reality, in the sense that it both ‘invents’ and ‘discovers’ it could not be acknowledged as long as the concept of image was merely identified with that of picture” (p. 127). In place of the picture Ricoeur posits the image as a referent for an absence, which, like language, allows for slippage and play in meaning and form. A “working” of the dialectic of image (as referent for an absence) and of language produces “new meanings in the sphere of language that generates an emergence of new images” (Ricoeur, 1979, p. 127), and so on, etc. The “possible worlds” of fiction “reverberate” in readers and writers not from things seen – though reading and writing evoke unseen images – but from things said (p. 130). That this fact isn’t immediately obvious is testament to the power of fiction and to the power of narrative and representational language in general in shaping the imagination.

Dialectic of Fiction and Reflection

It occurs to me that in fiction, *distentio animi* (reflection) is as imitated as the imitated action of *mimesis*. The reflections that Carsten and Danny give voice to are representative of authentic reflection but are not in fact authentic.

Distentio animi stops action and therefore disrupts time. No one personifies this disruption more than the drug addict who waits and reflects (obsesses over) *the one and only thing*; and all in anticipation for the time when time will start again, in intoxication. Until then, he “is unable to allow his body to recede, or be forgotten” (Kemp, 2009, p. 120). The drug addict’s lived-body, except when intoxicated, is disruption in amber, which, watching itself, throws itself further into relief. It is only during the euphoria of drug use that the body recedes, but to such an extent that it disappears with the world. In withdrawal and in pain the body neither recedes nor is forgotten but is fully and terribly known: “When the addict is withdrawing,” says Kemp (2009), and Carsten is experiencing both the pain of withdrawal and the pain of bodily injury, “it is also a withdrawal from the world which is also lived as pain.” Where is Carsten’s pain, then, in my depiction of him? “There can be no full engagement with the world while addicted to substances” (p. 129). A character that fails to engage with the world, especially a main character, is a difficult sell in a fiction.

All to say that I failed to represent Carsten as an authentic drug addict in a fictional world, nor did I represent addiction in the way that it presents itself to the addict. I think that Carsten is a copy or reproduction (a “picture”) of an image of the drug addict that has become reified in my imagination – the result of sensationalist drug biographies devoured at too early an age, a genuine fear of genuine intrapersonal confrontation, and fortified mechanisms of personal defense. Kemp (2011) describes “the worlding of addiction” as one of “narrowness” and “withdrawal,” two descriptors that don’t apply to Carsten who flies on airplanes (a difficult proposition for any drug addict), dresses like my dated version of a 1980s bad-ass, functions somewhat, is socially agile and conversationally snarky if not a little funny, though not nearly as funny as he thinks he is.

P. WALDMAN

So, I finished a final draft of the story and presented it to a conference of education scholars organized by Ken Tobin at the CUNY Graduate Center. Of all the suggestions, insights, and recommendations I received to transform the fiction into something other than ‘mere’ fiction, the idea of “grounding it” seemed the most authentic (Anna Stetsenko, small group conversation). But how to “ground” a non-empirical piece? I imagined myself wresting the fiction out of the ether and fastening it to terra firma, just as the Mini-Trumps did to Carsten during his Trumpian/Swiftian nightmare. I decided to stick with Ricoeur and his ilk to “ground” the reflection as a hermeneutic-phenomenology of fiction; and I felt, finally, that the purpose of this reflection/disruption was to provide a dialectical antithesis to the thesis of the fiction. From this reflection, then, would come another fiction based on a synthesis of the two.

Mindfulness and Narrative Desire

I imagine writing fiction as akin to working at the microsocial level in sociology, at the level of what Erving Goffman (1967/2005) called the “interaction ritual.” (What is fiction if not a written record of imaginary interactions, just as the relation between text and reader is hermeneutically interactive?) However, if fiction conjures a “possible world” (Ricoeur, 1979) in which textual referents denote nothing that is real – neither characters nor events – then Hamlet’s question is paramount: “What is Hecuba to him, or he to Hecuba, that he would weep for her?” (II, ii) That we do care for fictional characters in a manner roughly analogous to the care we feel for others in the world is, for me, one of the reasons that mindfulness and narrative fiction are not necessarily a good fit.

Let me explain:

I find it difficult to narrate mindfulness because mindfulness is an attempt to redirect thought away from desire and toward the breath, which is good for *you* but not for your story. (Case in point: Danny’s Atlantic Avenue meditation.) Like reflection, mindfulness disrupts time and action. A mindful life-story approach to addiction would prescribe something less desirous, less unified, less *Aristotelian* than the classically-inclined plots we’ve grown accustomed to, but it would probably make for a less satisfying narrative, too.

Narratives are about desire. Better, per Peter Brooks (1984), narratives *are* desire as desire is the engine of *muthos*. Without desire a story wouldn’t move. Think of King Oedipus’ desire to know the cause of the plague at Thebes, and in finally knowing, knowing the truth of his own wretched self. From “reversal,” or, the twist in the plot, emerges “recognition,” which is “a change from ignorance to knowledge” (Aristotle, 1982, p. 56). For Oedipus, “recognition” is an ontological stripping down that reveals the “pure essence” (Husserl’s *Eidos*) of his blood and guts personhood: illegitimate king, incestuous son, parricide, regicide.

Here is Brooks (1984) on “narrative desire,” which he places within the “motor” of the plot (*muthos*), but also within the storyteller him or herself who desires nothing more than to “seduce and to subjugate the listener”:

Narratives portray the motors of desire that drive and consume their plots, and they also lay bare the nature of narrative as a form of human desire: the need to tell as a primary human drive that seeks to seduce and to subjugate the listener, to implicate him in the thrust of a desire that can never quite speak its name – never can quite come to the point – but that insists on speaking over and over again its movement toward that name. (p. 61)

“The need to tell” and the plot’s “movement toward that name” of unnamable desire excites affective responses in readers that are, like desire itself, mood-altering. Narrative is a mood-altering form.

Of course, my little fiction is hardly the stuff of Greek tragedy. There is action and plot, but transformation, i.e., “recognition,” is put to little use. If there is recognition, it is in Carsten’s recognition of Andrew’s implied addiction to marijuana, but nothing comes of it. To his credit, Carsten thinks of things he *might* do, he thinks of potential courses of action, but he remains unmoved, reflective. He chooses not to act as he has more pressing, biologically-motivated actions to perform: “There can be no full engagement with the world while addicted to substances” (Kemp, 2009, p. 129). For addicts, substances *are* the world in that perception is usually intended toward them. In contrast, spiritual autobiographies, like those told at meetings of Alcoholics Anonymous, recognize an understanding of alcoholism and of the relation of alcoholism to individuals within a group (and within the contexts of a group’s ways of knowing and doing) (Cain, 1991; Lave & Wenger, 1991). But my story offers little hope of transformation for its addicted characters, Carsten, Dawn, and Andrew, none of whom recognize themselves as addicts, and therefore as potentially *recovering* addicts.

What to do, then, with narrative fiction, addiction, and mindfulness since fiction and addiction point us toward what is not real in the world and mindfulness toward what is? Maybe, then, fiction should be nixed from the addiction equation for the more therapeutically reified forms of spiritual autobiography and memoir. Also, in our sense of phenomenological (human) time and of ‘living in the moment’ we are led astray by fiction and its profound capacity to take us out of the moment. However, if one is mindful of the desirous pull of fictional narrative and of the illusion of its temporality, then one is being skillful about narrative. So, the problem of our telling stories about addiction isn’t mindfulness or narrative fiction so much as our not being mindful of the structures of narrative fiction. But that doesn’t quite work either as there’s no point or pleasure in being mindful of the structures of fiction while the structures of fiction are working their magic on you.

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P. WALDMAN

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KIAT HUI KHNG

16. THE IMPORTANCE OF BEING UPSIDE-DOWN

The Mindfulness of Perceiving “As Is”

ABSTRACT

Practice makes better, but familiarity can also breed mindlessness. In this chapter I talk about how our familiarity with our everyday world can interfere with mindfulness and our ability to perceive the true nature of things, clearly, as they are. Drawing on my own experiences, I share my thoughts on how upside-down exercises can be a helpful complement to our mindfulness practice, and how we can choose to be mindful whenever and wherever we are.

Keywords: mindfulness, perception, yoga, inversion, upside-down, drawing



Figure 16.1. Headstand: The point of balance is just before you tip over

I was recently introduced to the phenomenon of upside-down drawing at a talk given by a colleague. To illustrate his point that people can learn and improve at a skill quickly (and dramatically) if you teach them right, the speaker cited an example from a book he had come across: He showed us two sets of self-portraits drawn by a group of individuals

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who were participating in a five-day drawing workshop. The “before” portraits were sparse, crude and childish looking, while the “after” portraits looked refined, realistic and replete with visual details. The drawings of the same subject, by the same individuals, were markedly improved in just five days. He went on to show an example from a training exercise used in said drawing workshop – again, two drawings of a same subject, this time, drawn by one individual, a university student, one day apart. The exercise was to copy/reproduce an upside-down picture of what turns out to be Pablo Picasso’s line drawing of Russian composer Igor Stravinsky (Edwards, 2012). The student had initially misunderstood the exercise and copied the drawing after turning it right-side up. The next day he repeated the exercise correctly, copying the upside-down drawing without turning it right-side up. The two copies looked markedly different, with the first, right-side up copy crude and lacking in likeness to the original, while the upside-down copy was a much more vivid and accurate depiction of the original.

Why did drawing an object/subject in an upside-down orientation result in a much more vivid and accurate representation of the object/subject? As I pondered that intriguing thought I suddenly recalled my other recent experience with being upside-down in yoga inversions. And then the word “Mindfulness” came to mind.

MINDFULNESS

Mindfulness, in the contemporary context and as popularized (for want of a better word) by Jon Kabat-Zinn since the late 1970s, has been operationally defined as “the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment” (Kabat-Zinn, 2003, p. 145). Drawing from the meditative practices of certain Eastern traditions, secular mindfulness-based practices were formally introduced to Western medicine in 1979 by Jon Kabat-Zinn in the form of an eight-week Mindfulness-Based Stress Reduction (MBSR) program, through an outpatient stress reduction clinic at the University of Massachusetts Medical Center (Kabat-Zinn, 1982). Since the introduction of MBSR, various other mindfulness-based programs or therapies have been developed and applied in settings ranging from medicine, psychology, education, sports, and business and organizations (e.g., Mindfulness-Based Cognitive Therapy, Acceptance and Commitment Therapy, Dialectical Behavior Therapy, MindUP, Mindful Schools; see Baer, 2003; Meiklejohn et al., 2012).

Several conceptualizations of secular mindfulness have been proposed, with various scales developed to assess mindfulness and its aspects/components as a psychological construct. For example, Kirk Warren Brown and Richard Ryan (2003) defined mindfulness as the “receptive attention to and awareness of present events and experiences” (in Brown, Ryan, & Creswell, 2007, p. 212). Bishop et al. (2004) emphasized the self-regulation of one’s focus of attention and orientation to experience (stance of curiosity and acceptance). Shauna Shapiro, Linda Carlson, John Astin, and Benedict Freedman (2006) regard three components as essential to mindfulness: attention (paying attention moment-to-moment), intention (on purpose), and attitude

(quality of attention, e.g., non-judgmentally). The popular Five Facet Mindfulness Questionnaire (FFMQ; Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006), is a mindfulness scale derived from a factor analysis of several existing self-report scales measuring dispositional mindfulness (e.g., Mindful Attention Awareness Scale, Brown, & Ryan, 2003; Cognitive Affective Mindfulness Scale, Feldman, Hayes, Kumar, & Greeson, 2004) and includes five components: *observing*, *describing*, *non-judgmental acceptance*, *non-reactivity*, and *acting with awareness*. Although some degree of variation exists across the different conceptualizations, scales and programs/therapies, a common, key goal of mindfulness practice is to cultivate an open, non-judging, and non-reactive attention and awareness. That is, to pay full attention to all incoming sensations, thoughts and feelings, without engaging in secondary processing which takes one's attention away from the present moment – as what happens in judging (and/or reacting to) that present-moment experience, which necessarily involves attaching it to the past (e.g., memories, learnt biases, and habitual tendencies) or the future (e.g., worry, expectations).

The stance of nonattachment is thus a quintessential quality of mindful-attention. Nonattachment does not imply detachment or disengagement, which would mean taking the self out of the moment's experience. In contrast, one can be fully engaged with each new moment as it arises because one is not attached, holding, or fixating on to the previous moment. Each moment is new and because we do not judge it by attaching on to it the past or the future, each new moment can be attended to and accepted with openness and curiosity. Nonattachment does not mean rejecting or denying oneself from the moment's experience (e.g., a distracting thought or emotion); it simply implies to experience/notice it and then to let it go. Hence, in mindfulness practice or meditation, one notices all sensations, thoughts, and emotions as they occur, without judgment, and gently return one's attention to the object of focus. Accepting your experience of the present moment and letting it go, without feeling that you need to *do something* with it or to it, to simply “just be,” can be a lot harder than one may imagine. As Kabat-Zinn describes,

mindfulness is not about getting anywhere else or fixing anything. Rather, it is an invitation to allow oneself to be where one already is and to know the inner and outer landscape of the *direct experience* [emphasis added] in each moment. This implies waking up to the full spectrum of our experience in the present moment, which, as we engage in mindfulness practice, we rapidly discover is severely *edited and often distorted through the routinized, habitual, and unexamined activity of our thoughts and emotions* [emphasis added], often involving significant alienation from direct experience of the sensory world and the body. (2003, p. 148)

Indeed, through mindfulness practice, I realized to some surprise and amusement, how much our experiences are “edited” and “distorted” by habitual and automatized tendencies, how much we function in an “autopilot” mode. That is, we often do not

K. H. KHNG

experience or perceive things *directly, as they are*, but as how we are (or how we have become used to).

PERCEPTION

Our brains make sense of our internal and external worlds by decoding and interpreting stimulus messages from our sense organs. Our sense organs (e.g., those responsible for sight, hearing, taste, touch, smell, body space orientation and location) receive information about our physical world by detecting energy, such as light, sound, heat, and physical pressure, and send stimulus messages (sensations) to be decoded at various levels in the brain (perception). The sensation-perception process is “so quick and familiar that it is difficult to appreciate the processes that allow you to turn sensory signals into your personal experience of reality” (Bernstein, 2011, p. 85). Perceptions influence your subsequent emotions, thoughts, and actions/behavior, which can then, in turn, influence your subsequent perceptions. Other than past experiences, perceptions are also influenced by other expectancies, for example, due to context or motivation (Bernstein, 2011). A current sensation is thus typically not perceived/ experienced independently or “objectively” as it is, but in relation to (i.e., attached to) one’s past or future. This is because we perceive and make sense of the world through an interaction between top-down and bottom-up processing.

Top-Down and Bottom-up

Take for example, making sense of this sentence: “Fo- ex-mp-e, y-u c-n r-ad –hi-se-te-ce –it- ev-ry –hi-d l-tt-r m-ss-ng” (Bernstein, 2011, p. 124). Light information received by our eyes (specifically, the retina) are transmitted along the visual pathway to the visual cortex in the brain and analyzed into basic features such as lines, edges, color. These basic units of processing are recombined at higher processing brain regions and compared with stored representations or information, and recognized as letters and symbols. This is what is known as bottom-up processing, where perceptual recognition is based on processing the direct information or raw sensations from the sensory organs and assembling/recombining these basic information units into a whole. At the same time, you were probably able to understand, to make sense of the sentence even with some letters missing from each word, with help from your top-down processing system. Top-down processing guides perceptual recognition based on higher-order information such as knowledge, beliefs, expectations, and goals. Your past perceptual experiences and knowledge, of words, contexts, and sentence structures for example, created expectancies that enabled you to infer or *assume* what each set of symbols mean:

Top-down processing illustrates that our experiences create schemas, mental representations of what we know and expect about the world. Schemas can bias our perception toward one recognition or another by creating a *perceptual*

set – that is, a readiness to perceive a stimulus in a certain way. These expectations operate automatically, whether we are aware of them or not. (Bernstein, 2011, p. 123)

Hence, when we encounter something that we are familiar or have experience with, we tend to rely a lot more on our top-down processes. We do not need to bother with paying attention to all the bottom-up sensory information, because once we receive partial cues we can use top-down inferences to make perceptual judgments. With familiarity, partial cues are often enough to trigger an established schema and we can complete a task (such as object recognition) without much awareness or attention to the details. It is easy to see how this can be efficient, as our environments usually contain some level of redundancy – that is, more information than we need to function. Although this can reduce demands on attentional/ cognitive resources, it can also lead to operating in a “mindless” or “autopilot” fashion. Conversely, when we are faced with something we are unfamiliar with, or in an unfamiliar context, we can no longer rely on our pre-existing schemas (it has not been established yet!) and need to pay a lot more attention to the incoming basic sensory information to make sense of the whole.

MINDFUL PERCEPTION

Right-Side up and Upside-down

Recall I had started with a case of a student whose copy of a drawing dramatically improved when he looked at it upside-down than when he looked at it right-side up. On a day to day basis, we deal with a world that is mostly the right-side up. We have a lot of experience with things that are the right-side up. We know what things look like and how they function, the right-side up. So, when the students in the drawing workshop were asked to copy/draw something the right-side up, they were probably much less mindful or observant of all the details that made up the visual scene, because all they needed were a few visual cues and top-down processes will kick in to help them recognize the form of an object – we *assume* we know what we saw and need to draw (“I know it’s a face, so I need to draw a face; I know what a face looks like, where the eyes, nose and mouth goes, and I know (sort of) how to draw these ...” etc.). So, the drawing turns out crude and low on likeness because we did not actually *see* all of the object, clearly and fully. We saw part of it or an impression of it and assumed the rest.

We really do this more than we are consciously aware of. I once heard someone joke in a casual conversation that, after a few years of marriage, one no longer sees the details on one’s spouse – you see a vague outline of a person that you recognize to be your spouse and that was it. When was the last time you looked at someone or something familiar and really saw, or paid full attention with curiosity to all the little details about him/her/it? I shared a little mindful-eating exercise with some

friends recently, inviting them to fully sense and experience a slice of apple, paying attention to the visual, olfactory, and tactile sensations of the apple slice as they held it between their fingers, before they even put it in their mouths (and then also while they were actually eating it). One of them remarked how she has never noticed till then, the scent of an apple (and what a lovely scent that was!) Another commented on her “new” experience of the movements of the jaw and being aware for the first time, how the food moves from one side of the mouth to the other when she chews.

Indeed, we often see, hear, and move without mindful awareness because much of the processes in our daily functioning have become habitual, routinized and automatized. Chewing is typically performed in an autopilot mode. So are the actions of walking, or directing the movements of parts of one’s body in space (e.g., raising one’s right arm straight up towards the sky) – at least in the familiar right-side up orientation. Having danced for more than twenty years – including some years in a semi-professional capacity, I have always regarded myself as possessing reasonably good motor coordination and “body awareness.” I knew how to direct and coordinate the relative positions, energy and weight distributions amongst the various parts of my body to achieve the desired movement and balance in a shape – until I ventured into yoga in recent years and started going upside-down in inverted balances (e.g., handstands, headstands, and forearm balances).

I was first, rather amused at my lack of spatial awareness and body control once I was upside-down. I no longer seemed to know which way was straight up, which was front or back, or how to direct my legs to the position in space I wanted them to be in. I could no longer assume I knew what I was doing, what to do, and where to go. My previously automatized, mindless movements (i.e., moving without much thought and attention to the sensations of the movement) no longer served me in the new, upside-down orientation. I had to really slow down and *feel*, be completely *aware* of where I was going, what I was doing, where my weight shifted, how my body was responding to and felt with each small movement or adjustment I made. I had to listen to what my body was telling me, to observe each moment’s experience with openness and curiosity and then respond accordingly – because my old assumptions and schemas don’t work anymore in an upside-down world. I failed to do this when I first started. I was in my old habitual mode, assuming I knew what needed to be done, in a hurry to *get there*. I would make swift, hasty movements, as I was accustomed to doing in the usual right-side up world – and I would completely miss where I was headed for, lose my balance, and topple over.

And so, I realized that I really had to practice mindful-perception in yoga inversions. To pay attention to each moment’s experience, with openness and curiosity, without hasty/premature/unnecessary judgment or reaction. Something very similar probably happened with the workshop participants who were copying from an upside-down image, even if they might not have been aware of it. The lack of experience with upside-down objects and expectations of what the parts ought to make up likely minimized the influence of top-down presumptions and schemas and enabled them to pay close attention to the bottom-up sensory inputs. Indeed,

without the help from top-down processes, they had to pay close attention to the direct stimulus information coming through the sense organs in order to recreate the image. They had to see the object *as it is*, rather than what they assume, expect, or judge it to be. They would really have to look at the object carefully, look at where the lines begin and end, the spaces in between, how each part is placed in relation to others ... Seeing and perceiving more mindfully thus enabled a more life-like representation, *as the object is*.

Though not speaking from the perspective of mindfulness, the author of the drawing workshop made very similar observations about the phenomenon:

it seems probable that you have all the brain power needed for drawing, but old habits of seeing interfere with that ability and block it ... The drawing exercises focus on ... the art of realistically portraying actual things seen “out there”... As one of my students said, “I don’t think I ever actually *saw* anyone’s face before I started drawing. Now, the oddest thing, I find I am really seeing people ...” (Edwards, 2012, pp. 31–33)

Indeed, she states that “*Learning to perceive* is the basic skill that the students acquired, not drawing skill” (Edwards, 2012, p. 46).

One comment in her book I felt really resonated with the power of mindful perception was that:

every drawing requires the basic *seeing* skills ... Aside from complexity, one subject is not harder or easier than another to draw ... Certain subjects, however, often *seem* harder than others, possibly because embedded symbol systems, which interfere with clear perceptions, are stronger for some subjects than for others. (Edwards, 2012, p. 243)

Very often, the illusion of difficulty comes from the preconceptions we associate things or experiences with, what she calls the “embedded symbol systems,” which “interfere with clear perceptions.” If we could perceive mindfully, see everything in each moment clearly as they are, without attaching them to preconceptions and expectations, we will likely realize that there is really nothing much to it. Fear, anger, sadness, suffering, feelings of being overwhelmed, often have much more to do with what we attach to the moment’s experience, than the inherent nature of the object itself.

Where You Are Is Here

As Kabat-Zinn was earlier quoted as saying, one of the tenets of mindfulness practice is that it is “not about getting anywhere else or fixing anything. Rather, it is an invitation to allow oneself to be where one already is” (Kabat-Zinn, 2003, p. 148). Indeed, one of the phrases I frequently hear in guided mindfulness practice sessions is “there is nowhere else to be” – which really is true: you can only be where you already are at any moment; thinking about being somewhere else is really

K. H. KHNG

projecting into the past or the future, taking your attention and awareness away from the present moment. In the past I have sometimes caught myself feeling impatient while standing in a slow-moving checkout line and I realized, after being introduced to mindfulness, that the impatience was largely the result of me attaching the current moment to the future – where I needed to be *after*, *when* will I be *done with this*, what I’ll need to do *then* ... But these thoughts or feelings of frustration really do not serve me as I cannot be anywhere else but where I already am anyway, at this moment.

We seem to be habitually always going somewhere and doing something. The ability to reside in a moment’s stillness, being comfortable without trying to get somewhere or feeling like you need to fix something, was also something I found through my inversion balance practice. It did not come intuitively. When I first started trying to find my balance upside-down I was often too *set* on getting to the end pose/position, and I would just move to *get there*. And as a result, I usually couldn’t get there; I would wind up throwing myself off balance in the process. But as I slowed down and moved carefully, with awareness, I found that the balance was there in all the moments – when I was moving, when I was not moving, and all the moments in between. Which is probably why they say in yoga to “float” into the position (e.g., a headstand or handstand), and not “muscle” your way into it. It may be a little challenging to understand if you’ve not had the practice, but when you float, up into a handstand for instance, it no longer feels like you are effortfully trying to get your legs up – it just happens. And it is an amazing experience observing that unfolding, and *letting it happen*. I couldn’t do this in the beginning. I didn’t just observe and let it happen, let my legs float up. In the micro moments of stillness where it seems like I’m not moving or nothing is happening, impatience sets in and I would reflexively try to adjust, move my legs (or some part of my body) somewhere – and end up throwing myself off balance. Or sometimes fear sets in (because the point of true balance is a fine point just before the tipping point) and I would panic, reflexively try to go somewhere “safe” or to “fix it” – and throw myself off balance again. Impatience and fear came from attaching the present moment to something in the past or the future. They didn’t serve me in my practice. In fact, by trying to fix something I often ended up ruining it; by trying to get somewhere I often ended up not getting there. I could start to float (sometimes we say fly!) only by letting these attachments go. And that was a liberating experience on many levels.

Letting Go

In the 200-hour yoga teacher training course that I had recently completed, I was introduced to story of Prince Arjuna from the Bhagavad Gita (“Song of the Lord”) (e.g., Bhaktivedanta Swami Prahapada, 1974). Part of the Hindu epic Mahabharata (see e.g., Rajagopalachari, 2012), the Gita is a 700-verse dialogue between Pandava prince Arjuna and his advisor/charioteer Lord Krishna, around Arjuna’s dilemma, before he goes to war with the Kaurava princes. A full exposition of the philosophical

THE IMPORTANCE OF BEING UPSIDE-DOWN

discussions, metaphors and allegories in the Gita is beyond the scope of the current chapter, but it involved Arjuna being advised to act in accordance to his *dharma* – which necessitated his letting go of his attachments. There are several variants to the translation and/or interpretation of the Sanskrit word *dharma*. One prevailing definition is the cosmic or natural law and order of the universe, inherent in the nature of all things, sometimes also referred to as “the true nature of things.” To be released from his conflict/ dilemma, Arjuna was to recognize his *dharma*, his true nature, and then live, perform his actions to the best of his ability according to that *dharma*, with equanimity. Sentiments that arose from his attachments to the past (e.g., memories) and future (e.g., outcome) prevented Arjuna from seeing his *dharma* and path clearly, *as it is*. He had to let them go. And I thought it greatly symbolic that Arjuna was an archer: the power of an archer, of an arrow, can only be realized by letting it go.

THE IMPORTANCE OF BEING UPSIDE-DOWN (OR NOT)

I had spoken of how being upside-down can literally give you a new perspective. Inversion balances or upside-down drawing are wonderful, natural opportunities to practice or experience mindful attention/perception. But what happens if schemas and automatized heuristics start to form with continued practice? Will being upside-down not become subject to the same top-down interference as being right-side up?

That is why it becomes even more important to practice mindfulness with purpose and intent. Mindfulness has been described as paying attention in a certain way “on purpose” (Kabat-Zinn, 2003, p. 145). One can say that we have to be mindful of practicing mindfulness, and not segue into mindless action just because we have done it many times before. With no attachments to the past or future, each moment is new and approached with openness and curiosity. In this way, even if you have been doing handstands (or anything else) for a thousand times, each can be experienced like it is new, with a beginner’s mind.

A Beginner’s Mind

If we can always adopt and maintain a beginner’s mind, each moment can be experienced mindfully – be it upside-down or right-side up. Because we do not bring our past impressions or future expectations into the experience but approach it with openness and curiosity, what is familiar should be given similar attention and awareness as what is unfamiliar. Mindful perception is then equally possible; the true nature of things can be seen clearly, unclouded by our projections into the past or future. But these concepts are often difficult to fully grasp and realize in practice, even if we may understand the words semantically. It is in this sense that I found the upside-down exercises to be particularly helpful in facilitating an actualized, embodied understanding of these concepts that I have heard and tried to practice many times over.

So, I do recommend upside-down exercises – or any new exercise in an unfamiliar paradigm that compels you to shed your assumptions, preconceptions, and expectations – as a complement to one’s mindfulness practice. And then, *choose* to bring that beginner’s mind to each moment, each experience, even if you have done “the same thing” a thousand times. In a strange stroke of serendipity, I recently attended a ballet class while visiting a new city and the teacher of the class (who wishes to remain anonymous) happened to comment on the importance of bringing a beginner’s mind to class. She was saying how that was especially important for ballet because ballet training is *so repetitive*. Even if we have practiced a move a hundred times, each time we do it is a new opportunity to experience, to learn, to feel, to make the most of each moment. She reminded us beautifully that, “The art of dance is in the moment.” And she reminded us that, “It is a choice.” Indeed, you can choose to spend your time in a situation feeling frustrated/angry/impatient/bored, just going through the motions mindlessly, perhaps wishing you were somewhere else doing something else, or, you can choose to be fully present and to be open to “the full spectrum of (your) experience” (Kabat-Zinn, 2003, p. 148), wherever you are. Each moment can be very rich, if we open our minds and hearts.

What we have is now; where we are is here. Each moment arises and falls away to the next, never to be lived again. You have a choice how you approach and live each moment.

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Her work includes investigations into the effects, mechanisms and boundary conditions of mindfulness, as well as mindfulness in education.

Fannie also has an extensive background in dance, and has worked as a dancer, dance teacher, and choreographer for many years. She received her yoga teacher certification in 2016. She thanks Dr Kian Bee Ng for introducing her to the phenomenon of upside-down drawing.

MARIA MINIELLO

17. JIN SHIN JYUTSU AND OUR HANDS

Instrumental for a New Way Forward

ABSTRACT

In this chapter I describe the origins and development of Jin Shin Jyutsu (JSJ), a healing art developed by Jiro Murai in Japan in the 20th century and then disseminated worldwide, largely due to the seminal practices of Mary Burmeister and colleagues headquartered in Scottsdale, Arizona. I provided some of the basic tenets of JSJ and illustrate how it can be used by trained practitioners to address health projects and as a self-help tool. I illustrate how JSJ can complement Western medicine, including major surgery, in four case studies associated with my practices with: abandoned orphans in Malaysia; Australians labeled as HIV-positive; a family member who developed leukemia; and a woman who experienced a surgical error during a laparoscopic sleeve gastrectomy. I describe roles of JSJ practitioners in terms of the metaphor “jumper cable” and emphasize that changes in health are up to the receiver.

Keywords: Jin Shin Jyutsu, complementary medicine, Mary Burmeister, Jiro Murai, safety energy locks, Organ Function Energy, integrative medicine

DEVELOPMENT OF JIN SHIN JYUTSU

Jin Shin Jyutsu® (JSJ) founder, Jiro Murai, was a man of compassion: living and being that paradigm every day of his extraordinary life of exploration. He began his lifelong research into the alleviation of pain and disease in 1912, utilising his work of locating the Safety Energy Locks (SEL) and Organ Function Energy Pathways (OFE) within the body. It marked the beginning of what would be a lifetime of research leading to the development and refinement of the Art of Jin Shin Jyutsu.

Safety Energy Locks (SEL) (Figure 17.1) are spheres of energy located throughout 26 distinctive sites on each side of the body, which act as circuit breakers to protect the body when the flow of life energy is blocked (when there is a damming effect). SEL location adaption of, original 3D render of a female skeleton with body shape in three views by Bernhard Ungerer (2008), arranged by Maria Miniello (2016)

Schema of the 26 Safety Energy Lock (SEL) locations

Left side locations on the body illustrated

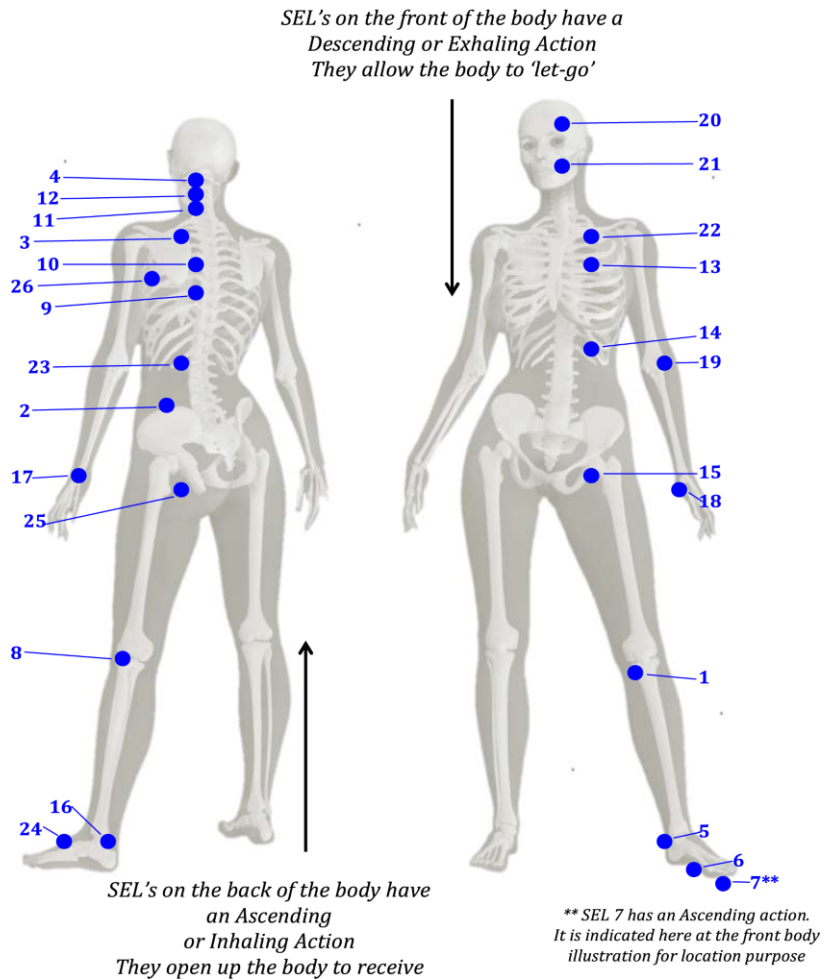


Figure 17.1. Location of the SEL's – left side of the body shown only

This Concept Is Jiro Murai's Own Discovery

Once a SEL shuts down, symptoms or disharmonies will manifest in a corresponding part of the body. These symptoms serve both as a warning and an indication of the source of the imbalance.

From the energetic level and the start of 'coming into form' or on a more tangible level, are the Organ Function Energy Pathways. The Body Function Energy is

divided into 12 individualised Organ Function Energies (OFEs) that are continuously circulating throughout the body.

These Are What Jiro Murai Felt in His Body After a Series of 12, 3-Week Fasts

Jiro Murai's body was highly sensitive and he was able to feel, understand and draw the pathways from the experience of fasting during his illness and subsequent research. Jiro Murai drew and redrew the pathway movement he experienced, until he was satisfied with the refinement process, resulting in the final presentation of the 12 OFE Pathways.

The Unfolding Story of Jin Shin Jyutsu

Jin Shin Jyutsu physio-philosophy (the awareness of Myself) is the Art of a Japanese practice based on ancient principles. A practitioner uses his/her fingers and hands on another or on him/herself to balance energies, eliminate stress, create emotional equilibrium, and relieve pain and acute or chronic conditions.

JSJ is the KNOWING who, what, where, when, why and how the flow of the BATTERY of life can be kept vitalized. The battery of life is "eternally guaranteed" with a "jumper cable" (practitioner's hands) attached (Burmeister, 1997).

The story of the intent of Jin Shin Jyutsu reveals itself in the well-considered name. A few combinations of specific words in the name were introduced at various times of the development phase, until the final grouping was established defining the three-levelled approach – Awareness; Understanding, and Application.

Jin – Compassionate Man

Shin – Source/Creator

Jyutsu – Art

Jin Shin Jyutsu – The Art of the Creator through Man of Compassion



Looking at the words ART versus Technique in the context of JSJ physio-philosophy:

Art is the way we apply our hands, i.e., 'jumper cables,' how we approach each individual and their particular need, the expression or application of human creative skill and imagination. The origin of the word Art is 'BE' – *the essence or the basic nature of a thing – the quality or qualities that make a thing what it is.*

Technique is a skilful or efficient way of doing or achieving something, applying that skill without a sense of inter-connectedness: *Application with an absence of awareness.*

"Collecting techniques equals a fish for a day" (Burmeister, 1997, p. 16), i.e., techniques are usually directed to the effect, whereas 'Art' or awareness will look for the cause.

Creator suggests something that brings something into existence. It is a nod to the notion of "in the beginning." What we had in the beginning was Light – Movement – Warmth/Heat, which was the start of all things.

Jin, in this context, refers to Man of Compassion and Knowing, who practices the Art through a level of Awareness and Interconnection between him/her and the receiver. The Kanji symbol at the top representing Jin has two horizontal strokes. These elevate ordinary man to a person of knowing and compassion. Practically speaking, JSJ is the *Art of Harmonising the Body, Mind and Spirit by utilizing the Universal energy that endows each of us*.

The notion of looking at 'Harmonising' the body refers to looking for balance in all aspects of the functioning of the body and on all levels (Figure 17.2).

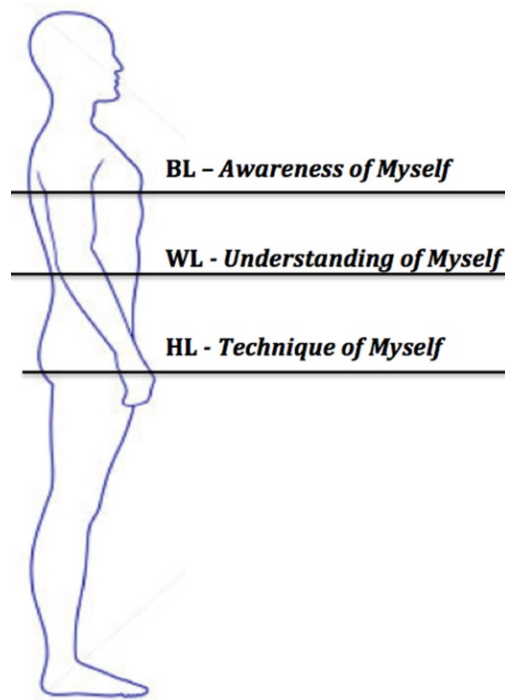


Figure 17.2. The 3 levels of finding balance in the body

JSJ applies a Spirit, Mind, Body approach to seeking harmony and balance.

- Spirit – The BustLine (BL) area represents what we are feeling, our emotions, beliefs and level of Awareness.
- Mind – The WaistLine (WL) area represents what we are thinking, our mental processing centre and our level of Understanding.
- Body – The HipLine (HL) area represents our physical body and how the Awareness and Understanding are applied (utilising Technique) to our daily activities.

PREPARING THE WAY TO BALANCE AND HARMONISE THE BODY,
THROUGH AWAKENED INNATE KNOWING AND AWARENESS

The best anyone can BE is to remind one of what one already KNOWS – not a journey of discovery, but one of remembrance. This Platonic notion opens the way for us to take the first step of rediscovery – To truly Know, Help Myself, through self-discovery, self-understanding and self-action.

Knowledge is confidence, and our first confident step is to Exhale, re-enacting the first action of coming in to the world through the birthing process. The passage through the birth canal applies pressure, which aids in clearing the lungs, exhaling the build-up. At the moment of birth the change in ambient surroundings then stimulates the Inhale. This completes the start of the first breath cycle.

Self-help classes are designed to introduce new students to the fundamental principles of JSJ Physio-Philosophy (the Awareness of Myself) and how to apply the Art of JSJ to our selves and those in our lives. Utilising the breath with a simple breathing meditation, clearing our minds of all that we have learnt, is how I start the students' JSJ experience in a self-help class. This prepares students to be open to new ways of seeing.

The breath meditation may start with crossing our arms and giving our selves a 'Hug.' The hand sits under the opposite arm with the thumb placed on the lateral chest area, and the rest of the fingers coming to rest on the lateral lower section of the scapular. This location is at SEL 26 (Figure 17.1) and its action, bringing us back to a place of wholeness and a feeling of 'Total Peace/Total Harmony.'

If this position is too difficult, we can simply bring our hands together so that the palms are touching.

The students, can be sitting, standing or lying down, and are then guided through the breath meditation. It may be presented as follows:

Exhale and drop the shoulders.

- There is no place to arrive; there is nothing to do.
- Exhale all of your scepticisms so that you can enjoy inhaling your Breath of Life.
- Exhale; unloading all of the impurities from within for the clean and regenerative Inhale to come in and fill that cleared space.
- The more one exhales – “gives” – the more one can inhale – “receive” in abundance.

Breathe consciously.

- 3 times a day, stop be aware of the moment, go inside, empty yourself, exhale and let go – Head to Toe, then breath in – Toe to Head.
- Allow the breath to go and allow the breath to come; you don't have to do anything.
- Allow it to go from head to toe and allow it to go from toe to head.
- Wisdom always recognises the wholeness, while ignorance sees the importance of parts.
- When I understand myself, I understand the totality.

M. MINIELLO

- There is no comparing, or looking back and there is no competing, projecting forward
- Wherever I am, I am just beginning – every moment is NOW.

EFFECTIVE APPLICATION OF HANDS (ON) IN VARIOUS SITUATIONS

The key to an effective hands-on session is to relax and drop the shoulders, as Jin Shin Jyutsu is the ‘Art of non-doing.’ What this means is that we don’t need to ‘try’ to ‘do’ anything.

We are human BE-ings, not human TRY-ings or DO-ings or Strive-ings. (Burmeister, 1997, p. 7)

To ‘drop the shoulders’ means to exhale and relax so that you can receive and tune in to the rhythm of the body. SEL 11 is located at the T1 area and is known as ‘The Hub,’ where a major indicator of tension presents itself. The build-up in the shoulders will impede the smooth flow of energy and breath.

When your shoulders are relaxed, your mind will be able to sense all that is moving, or not moving in the body of the receiver. In this way, adapting and adjusting to all situations will be effortless. The receiver can be lying down, sitting, or standing, whatever position is the most convenient and comfortable in any given situation.

NEW IDEAS AND CONCEPTS WITH THE OPENING UP AND MODERNIZATION OF JAPAN

Jiro Murai was born in 1886 at Daishoji (village), Isikawa prefecture and worked as a sericulture engineer. This work would have provided the scientific mindset in how he approached the research into the functions of the human body.

He was born at a time when Japan was undergoing a transition of major cultural and political reform. After a series of political challenges, a chain reaction of events saw the transformation of the nation from a cloistered society, ruled by an old feudal system to what was the start of the idea of modernisation.

In 1868, Japan opened itself up to the rest of the world with the establishment of the Meiji Restoration period. The ideals of westernization were introduced and embraced and every inherited and widely accepted convention was questioned and changed. Temples and tradition were considered obsolete and many of the temples were desecrated or destroyed at this time.

Emperor Meiji was sworn in as emperor and established into law ‘The Charter Oath of the Five Articles.’ It outlined a confidence in the people and state in allowing a democratic and open debate on all matters across all aspects of the newly reformed society and its government. The reform marked the end of the centuries old cloistered society and old feudal system. Japan was changed forever (Duhaime, 2010).

With this newfound confidence, the Japanese people reconsidered and revisited their own rich history and Jiro Murai was able to absorb and adapt to these many changes. Coming from a medical family, he was familiar with many of the medical practices of that time and of practices from the past.

Murai became aware of hand positioning on statues located within the various Temple grounds. The hand positions are known as mudra – from Sanskrit – A ‘seal,’ ‘mark’ or ‘gesture’ utilising the fingers and hands. We could describe gesture of the mudra as a ‘seal of intent.’

The body is the result of a 3-levelled developmental process. The cycle goes from un-manifested (formless) to manifesting (forming) and then manifested (form), with the progression continuously and simultaneously circulating in the body after the first completed cycle from formless to form.

Each of the fingers is able to connect with the energetic movement in the body (gas-like) on the un-manifested level; the 12 “Individualised” Body Functions on the manifesting level (a flow, like liquid); or a Body Function on the manifested level (form or solid). With the intended action of a particular mudra position, whether you are holding one finger or another in certain positions of the hands, you are effectively ‘sealing’ that intent.

Due to poor lifestyle choices and after experiencing days of a cold state in his body from a debilitating illness, Murai fasted, meditated, and practiced the art of utilising mudra. On day 7 of this intense meditation and period of recovery, he felt a ‘fire’ rush throughout his body, after which, he started to feel the unimpeded flow of energy in his body again. This was the start of his journey in understanding the mudra and the long-term study of the fingers and hands in helping to harmonise and balance the body’s energy system.

The development of JSJ during this atmosphere of new ways of seeing what was, is, and could be, seems to have imprinted itself in to the “DNA” of the art, meaning that change is often experienced at the core of one’s level of understanding and belief system. There are many testimonials of students coming out of a JSJ class or an intensive series (10 or more) of JSJ sessions, with new perspectives on what was once considered a given. These changes can also be experienced by both practitioner and receiver during a JSJ session, where simple tension release holds can present physical, emotional and mental changes.

THE NEW WORLD – ANOTHER PERSPECTIVE

Mary Burmeister was born Mary Mariko Iino on October 21, 1918 in Seattle, Washington. It was in Japan that she would meet the man who would forever change her destiny.

Mary first met Murai when her family moved back to Japan at the end of World War 2. She was working as a translator when she was introduced to Murai. He asked her, “Would you like to study with me to take a ‘gift’ from Japan back to America” (Burmeister, 1997, p. 2). Not knowing the impact the meeting and that question

M. MINIELLO

would have on her life, she accepted the invitation to join Murai's exclusive lecture series.

On attending his first lecture, Mary recalls how she was filled with a sense of humility and awe of that moment, as she realised that she had 'found' what she had been searching for.

Mary went on to study with Murai for about 7 years, returning to the US in 1953, and from there continued to correspond with Murai, until his death in 1960. During this time, she was indefatigably active in studying and translating the material into a form that would be comprehensible to people unfamiliar with Japanese cultural expressions and concepts.

Mary learned Jin Shin Jyutsu in a language and understanding, where the major circulation flows were all named after Gods and Goddesses. These Deities, from the Japanese book of ancient things called the Kojiki (Phillipi, 1969), were well known in Japanese culture. Mary refined and translated these passages to be able to be understood by a Western mind, a process of refinement taking many years to complete.

These translations and developments included terms and concepts that Mary introduced from her personal research, based on social conventions, beliefs, movements and contemporary ideas and spirit of the time. Terms like 'jumper cables' to describe our hands; 'depths' which explain the process of energy 'densing-down' to matter and the corresponding levels or layers in the body; and 'attitudes'; added another layer to the material Mary learnt from Murai.

The Depths and Their Associated Philosophies Are Mary's Own Concept

These concepts are covered in detail at the 5-Day Basic Seminar which was Mary's preferred way of teaching others about JSJ. Part 1, the foundation, introduces the qualities of the 26 SELs, the Trinity Flows, and the concepts of depths within the body, and the physio-philosophy of Jin Shin Jyutsu. Part 2 introduces the 12 organ flows, listening to pulses, and the special body flows.

The basic principle that we utilize in JSJ, is that there is a 'light' energy that circulates throughout the universe and within each individual organism, this life energy manifests itself on varying levels of density. In JSJ these levels are known as the depths – a core concept in JSJ – which encompass all the spiritual, psychological and physical aspects of our being.

Energy circulates down the front of the body and up the back in a continuous oval, creating a relationship between the upper and lower body and the front and the back of the body. For instance, if a symptom appears above the waist, then we know that the cause will be found below the waist, and the same relationship exists with the front and the back of the body. For instance, you may have knee pain, but it may be due to back stress, or a headache may be due to a blockage in the pelvis.

The SEL locations in [Figure 17.1](#) are not in a linear sequence from head to toe, they encompass the depths in the body as energy is continuously circulating down

the front and up the back. Each time energy circulates the body, it is ‘densing down,’ becoming more and more manifest, and every one of the cycles manifests another depth.

Starting at SEL 1 at the inside of the knee, energy goes down the front and up the back through SELs 2, 3, & 4, coming back over the head and down the front of the body again. As it passes the SEL 1 area at the knee, it goes deeper into the next depth and continues through to the 5th depth. The 5 depths correspond with a particular layer in the body. To summarise:

1st Depth – SELs 1–4 – relate to skin surface

2nd Depth – SELs 5–15 – relate to deep skin (connective tissue)

3rd Depth – SELs 16–22 – relate to blood essence

4th Depth – SEL 23 – relates to muscle

5th Depth – SELs 24–26 – relate to bone

In JSJ we identify the term ‘attitude’ as a habitual or stuck emotional state and the main disharmoniser of the body. Each of the 5 manifested levels of the depths is susceptible to being disharmonised by an attitude if allowed to continue as the depths and attitudes have a relationship. Our 5 fingers are connected to a particular depth and attitude as well. With this connection, we can start to see the many layers of this complex and sophisticated art unfold.

Put simply, the attitudes of worry (1st D – thumb)); fear (4th D – index finger); anger (3rd D – middle finger); sadness (2nd D – ring finger) and try-to’s (5th D – little finger), have the effect of disrupting the balanced flow of energy to one side of the body to another, thereby creating a disharmonising and energy sapping workload as the body works to balance itself. If not resolved, the continuing struggle will begin to work its way deeper into the body function system, which may then negatively affect the particular organ function that is governed by that depth.

Mary recognized fear as the underlying cause of the 5 attitudes, which primarily affects the breath. When we are in a state of fear, we tend to hold on to our breath – i.e., we don’t fully exhale – as a response to a perceived threat. Our primordial fear is isolation and fear isolates. So, we are in fact realising and reinforcing our worst fear when we interrupt the breath cycle, which in turn will disrupt all connective body functions. This process then becomes a vicious cycle of ever mounting and deepening disharmonies.

INNER KNOWING

The cause (attitudes) will always present with a resulting effect. Each one of our fingers is connected to the harmonising potential for the attitudes. By simply holding the thumb, we can harmonise our stuck states of worry; the index finger for fear, the

middle finger for anger, the ring finger for sadness and the little finger for try-to's (pretense).

There exists in us an innate knowledge of how to harmonise our own self. As Murai discovered through his own experience and further research, our hands are the key to balance out all of our disharmonies.

Knowledge of what we know as the principles of JSJ has also been passed on to us in very subtle ways through stories and by the kind touch of our carers, family, friends, and others. We replicate from examples and over the generations, have established these holds and practices into our very being.

For example, a baby sucking its own thumb may be harmonising an attitude of worry – a normal feeling after being initiated into a strange new environment, which will impact the baby's breath. Lung Function Energy ends in the thumb (Figure 17.3) – or the digestive system. Lung Function Energy begins in the stomach and Stomach Function Energy and Spleen Function Energy (which are both on the 1st depth level) are also connected to the thumb. Accordingly, through the lenses of JSJ, a baby comes into the world with an innate understanding of his/her own body's needs.

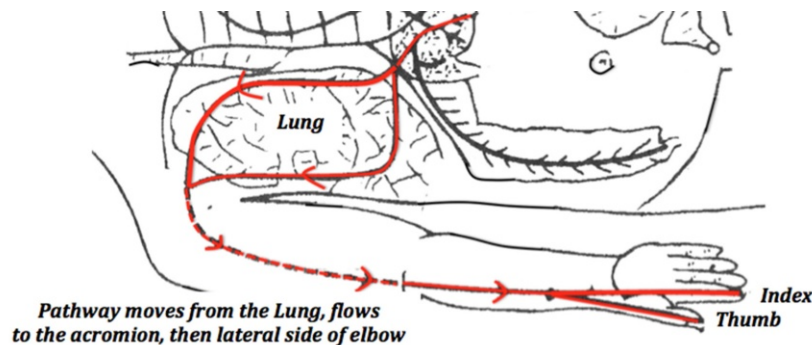


Figure 17.3. Simple illustration of the lung function energy pathway

Rather than recognising the baby's wisdom and inner knowing, an initial reaction to thumb sucking may be to interfere with the baby's own need to harmonise by stopping the action, probably through fears and complying with accepted norms, or perhaps compelled by the thoughts of orthodontic bills later in life. An alternative response would be to tune in, recognise the baby's call for help, and address the imbalance indicated through the thumb sucking.

The way we lose focus is through the distractions and fears that present themselves in numerous ways. We lose our common sense, that basic ability to perceive, understand, and reflect on certain aspects of life, living and the daily choices we are faced with.

With common sense, we give ourselves permission to break from the rules of expectations, allowing us to act on the task of the moment. This flexibility is our own innate survival mechanism.

JSJ supports common sense in all aspects of daily life – sleep, walk, water, and food.

JSJ opens us up to develop a sense of love for work, food and life – to be happy and content wherever I am – if this quality was missing.

By the simple application of the hands on the 26 vital locations, i.e., SELs (Figure 17.1), all types of stress and discomfort can be alleviated, and through the ongoing practice of hand placements, one will experience the growth of awareness of the body's potential to experience greater balance, health and happiness.

APPLICATION OF THE ART OF JIN SHIN JYUTSU – PHYSIO-PHILOSOPHY

Abandoned Orphans in Malaysia: Focusing on the Job at Hand

Over a period of a few months, I was invited to Malaysia to share self-help classes and during my times there, had the opportunity to work with some special needs children and adults.

One of the centres we visited, an orphanage for abandoned youths and young adults (13–35 years of age) with special needs, presented us with as many lessons as we gave. The two visits were all too brief, and in some cases, we didn't know where to start, but were inspired by Mary's words – "*Whatever your awareness, utilize it.*"

That is just what we did, by showing the carers simple ways to help the residents, and sometimes just giving a 'hug' (e.g., holding SEL 26). The touch works both ways (i.e., it benefits the hugged and the hugger).

Our first visit to the orphanage was just before lunch, to share quick tips on how to give JSJ holds. It was very difficult for me to come up with suggestions in the chaos that we encountered. The friendly ones welcomed us with handshakes and some of the others stayed away from us. Though my core was initially shaken, and as difficult as it was to find stillness in that environment, there was so much beauty in this chaos.

Looking around, this was about as real as it gets. The residents just got on with the business of living and surviving with their second chance in life, regardless of their disability. With the centre being understaffed, the residents helped each other with daily routines. I looked over and saw two blind girls – one feeding the other who had physical disabilities as well as having no sight. Another resident's job was to release the ones who were chained to their chairs when there was a need for the bathroom.

After a few very deep breaths my mind came back to the reason for us being there and to just get on with it. Again, remembering more of Mary's words, "*To do, just BE.*"

M. MINIELLO

My attention was focused on an autistic boy who was rescued from an abusive family. He spent most of the day chained to a chair as he had a tendency for violent outbursts. He had scars on his wrist from where he was restrained, and he looked emaciated. He pushed me away every time I came in close to him. I stood near him for a while, then slowly went to a few different locations on his body – 4 s, 14 s, 1 s, 7 s, etc., and each time, he pushed me away.

These SELs are some of the important locations for brain-affected injury and deficiencies.

SEL 4 (base of occipital bone area) – brain, consciousness;

SEL 14 (anterior side of the base of ribcage) – balance, integration;

SEL 1 (inside of the knee joint) – the prime mover;

SEL 7 (pad of the big toe) – head, chest.

The boy was getting agitated so I backed off slightly and started to clap my hands rhythmically to see if I could engage him in a playful way. He was interested and started to engage by tapping my hand. With more time, I could have possibly gained his trust in allowing me to apply my hands on him.

The situation wasn't really conducive for any pondering, or for me to spend the time with each individual, as I would need to for a more beneficial session. It was a matter of working fast, at least getting some sort of hands-on demonstration going for the carers.

With the help of the carers, we managed to gain enough trust in another of the young men to demonstrate the beneficial and calming holds. The carer saw that I was



Figure 17.4. Cradling the 4s and holding centre 13 area. This young man remained very still and calm throughout the demonstration. We had made initial eye contact, which helped him to relax into my hands (photo by Alan Yong)

neither threatening nor disruptive, and so allowed me to demonstrate some holds on a couple of the young residents – mainly holding or cradling the 4 s (holding both SELs with one hand) and the centre of the 13 s (centre 13 s – thymus area) (Figure 17.4) which has a reassuring and calming affect.

By placing the left hand on the centre 13 area, excess energy is brought up over the head and directed down towards the feet, helping to unburden the mind and generate a feeling of security and wellbeing.

Holding both 4 s (Figure 17.5) is very effective in connecting both sides of the brain and releasing tension in the Bustline (chest) area as well as relaxing the legs.



Figure 17.5. Gently holding the 4 s. Young man opening up to receiving. Normally I would not be hovering over a client's face but in this demonstration, I was using sounds (humming) and eye contact for reassurance(photo by Alan Yong)

On our second visit, prepared with what we thought was appropriate literature for the carers, I asked if I could work with some of the boys. The first response from the weary carer was “no.” He said that the ones who were chained up would run away. I complied for a while but then started inching my way over to one boy and played with his hands. He was so friendly and engaging. Offering your hands is a friendly and engaging gesture, which draws curiosity. As you start to work through the fingers and palm areas, a language of communication starts to unfold.

Another boy restrained with a chain to the window bars looked lost, so I gave him a ‘hug’ and was rewarded with the biggest smile. As he was unable to join in any of the activities, that simple contact was enough for him to relax and feel connected with the rest of the people in the room.

All-inclusive approach to harmony and balance Having re-established our goodwill, we regained the carer's trust. I then demonstrated the application of the self-help version of the Main Central Vertical Harmonising Flow (MCV) (Figure 17.6). This is the general harmoniser of all 3 levels in the body – Superficial (BL), Middle (WL) and Deep (HL) – and of the whole endocrine system. MCV is a simple yet

M. MINIELLO

powerfully effective sequence as a general wellbeing harmoniser. When applying on others, sit on the receiver's left side.

Each step of the MCV can be used as a 'quickie' (a one step hold) as a more localised or specific harmoniser noted in each of the steps above. For example, to help relax the mind and aid sleep, hold the first step of the MCV. Hold until you can feel the body relax and release the tensions of the day. When first utilising the MCV, new students will usually fall asleep before the 2nd or 3rd steps.

As we were leaving, another young man with Down's syndrome offered a huge and loving smile and offered his hand to shake. I squatted with him and played with his hands. He was speaking to me in sounds, gestures and the occasional word and I engaged with receptive facial expressions. He was telling me a story and at one point leant over to tell me a secret. He was using his hands to further express his story. The subject matter was irrelevant; it was our inner spirits that were connecting.

A creative approach to find a connection. A few months later, on another visit to the country, I was asked for a one-on-one session with a special needs child. The list of disabilities and labels the mother was explaining to me was mind-boggling. Some I recognised, others needed explanation but the main task at hand was to soften the rigid body a little – to harmonise some of that tension that was evident in the small, thin, and delicate frame. The mother explained that the child had had her hip dislocated by a carer who moved the child's leg too quickly.

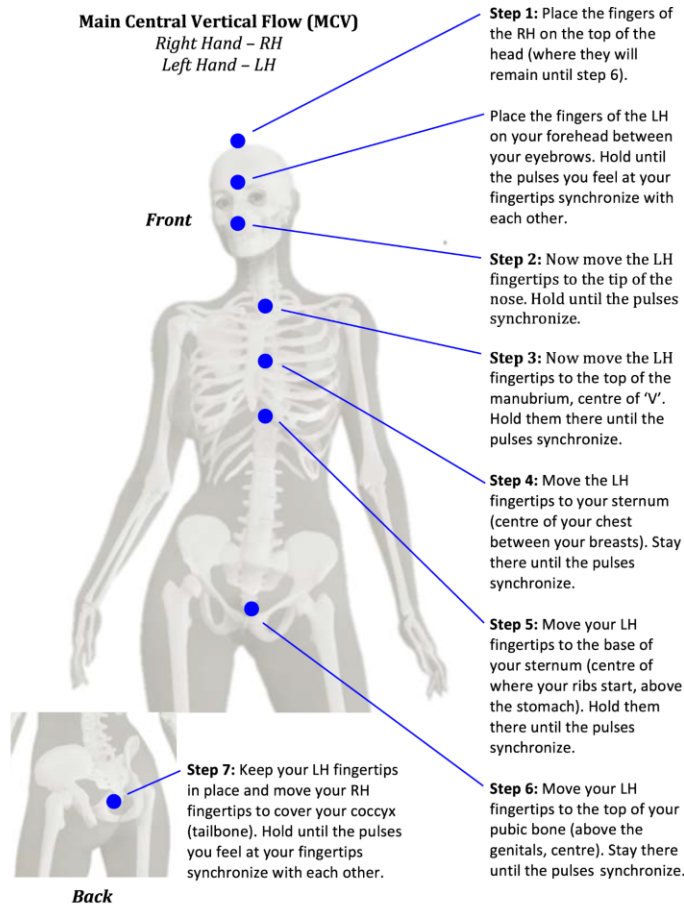
The child was placed on the bed and we made eye contact. I started singing as my hands gently held her body. I sang every child's song that I knew, including one in French. All of this helped to build trust and the rhythm of the song helped to make the initial connection. As with the use of clapping hands in an earlier meeting at the orphanage, a connection was made using a basic communication method. Rhythm is mind calming and allows a moment of escape from the usual confusion of the thought process.

The session went very well and the child, who was non-verbal, started making sounds. Her mother took notes and was keen to continue with the hands-on. As promised, she did continue on with the pointers I gave her and the child is continuing to respond with sounds, sighs and exhalations and her body is beginning to relax a little more each day.

In all of these situations, energetic connections are made and there is an unspoken bond that exists throughout the time we spend together.

AIDS Council Volunteering: Addressing Underlying Judgment – Adapting and Understanding

My initial objective in volunteering at the AIDS council was to help to find a universal and comprehensive way to alleviate symptoms of AIDS. My findings were to be shared amongst JSJ practitioners so that there would be a reasonable protocol for us to be guided by.



MCV - Harmoniser of the Endocrine System:

- Step 1** – Pituitary, Pineal and Hippocampus – Helps with mind clearing and sleep.
- Step 2** – Revitalises superficial body energy – Releases tension in the pelvic girdle.
- Step 3** – Thyroid and Parathyroid glands – Helps to prevent heart attack and stroke.
Balances and regulates calcium and metabolism.
- Step 4** – Thymus gland – Revitalises immune system. Governs reproduction. Aids breathing.
- Step 5** – Adrenal glands – Revitalises energy path of adrenals and spleen;
Helps release digestive juices and hormones including digitalis.
- Step 6** – Revitalises descending energy.
- Step 7** – Revitalises ascending energy – Keeps circulation in legs and feet moving;
Helps cold and clammy hands and feet

Figure 17.6. Main central vertical harmonising flow – (MCV)

It soon became apparent to me that there was very little commonality between any of the people I saw on that weekly visit and that the disease was secondary to their own personal needs.

M. MINIELLO

My own shift from method to adapting and understanding opened the way for me to see beyond the label and connect with the challenges they face from day to day. In fact, there was little difference between theirs and any one else's needs on that physical level, but there was one distinction, on the mental/emotional level, which was even more debilitating than the disease.

With the HIV label, comes the judgment and discrimination heaped upon them by all aspects of society, a hangover from the early days when information was scant and there was a ridiculous amount of speculation about how one becomes infected. Mary added the word label after a diagnostic name, as an adjective to remind us that it is just a name for something, thereby removing the associated emotive attachment to that word.

I was no exception to the lack of awareness and confusion of how those affected were perceived. The realization about the emotions attached to this label came to light when I was asked if I would ever be intimate with a HIV+ person. My first thought was that this was a trick question to test my safe-sex knowledge and practice and so my response was, "No, I wouldn't."

The awakening that followed was powerful indeed. I was told that I would be denying a loving touch and embrace that was so needed in this environment, an environment of social judgment that has shunned this group of individuals, who were financially destitute as well as socially isolated. The need to be touched was probably the most important aspect of their ongoing journey to wellbeing.

This moment impacted on my psyche. Again, I had allowed my head to dictate a response (probably better described as a reaction), without allowing my mind a moment to reflect on the impact of my answer. All of us new volunteers had attended a two-day training program outlining the facts of HIV and AIDS, where we participated in exercises aimed at revealing our own preconceived ideas about many aspects in the people we come into contact with. My own thoughts had to change for me to provide effective sessions.

I continued to volunteer sessions one day per week for about 18 months, and in that time worked with many individuals from all walks of life, spanning the ages of 18–80 years.

Interestingly and unexpectedly, I came around full circle with a possible suggestion to an idea I started with. The most effective flow sequence across all various disharmonies and circumstance was, in my experience, the 14 Flow. A flow is a sequence of SEL location holds calculated by Jiro Murai, which are the most effective and efficient pathway for helping (i.e., harmonizing) a particular SEL or function.

SEL 14 is located at the anterior base of the ribcage and is considered the key to equilibrium in the body, or the 'bridge' between waist-up and waist-down functions. Situated at what is considered middle ground – the waistline – and the main processing area with the associated organ locations, this area also affects the process of thought, the mind.

The 'bridge' becomes compromised and a feeling of detachment is the result and is common with a lot of people who are HIV+. The 14 flow was very effective in 'reconnecting' waist-up with waist-down and their own personal feeling of reconnection. It acts as a mediator between left and right sides of the body; reconnecting the diagonals and above waist with below. If you trace the sequence on a body, you will find that you have covered most of the areas of the body.

In July 2016, the nation's top scientists declared "the end of AIDS" as a public health issue, as Australia joined the ranks of a select few countries, which have successfully beaten the epidemic. Despite this progress, researchers are still quick to point out the end of AIDS is not the end of HIV. About 1,000 new cases of HIV are reported in Australia each year. Perhaps this news will release or minimise the stigma associated with HIV to a certain extent.

Family Member – Remaining Flexible in All Matters and Dealings

Critical states can have the effect of being trapped in a vortex. The deeper you are pulled in, the greater the force; therefore, more strength, energy and will power are needed to reverse the situation. If there is a lack of any of these, there will be a point of no return in that downward spiralling force. It then becomes too difficult to reverse the process.

My experience with a close family member, Anthony, in such a state, tested me personally on many levels. Looking back, there seemed to always be an underlying sense that something was not quite right.

Too many minor symptoms, "nothing to worry about, it will pass" attitude.

Melancholia returned, embedding itself even deeper than the last bout, excess weight had become borderline obesity; teeth and gums needed attention, unshakable fatigue and a recurring urinary tract infection.

How are these connected? They must be connected.

We started with regular JSJ sessions, mainly for the fatigue, as there was very little else that was shared with me. A lot of guess work on my part, working with an ever-deteriorating body. Tension was released during the session, and then lifestyle would return the body to the state of disharmony. There was a defence mechanism in this body and mind, which did not allow the attitudes that fed the stuck state of mind to be released. The willingness to change can only come from within the receiver.

Many factors contribute to a stuck state of mind. To abandon the lifestyle is to also abandon the supporting network that goes with it. The fear of change ensured that downward spiralling direction, resulting in lack of sleep, fatigue, weight gain, teeth decaying, gums infected, knee joint pain, ongoing urinary tract infection – opportunistic infections and bacterial growth in a severely compromised body. This accumulating disharmony was the result of a life of hard physical work and fear-based emotional instability.

We were getting no-where and the disharmonies were mounting. A second medical opinion was sought and with those fresh eyes and a new set of blood tests, the news

M. MINIELLO

came back – myelodysplasia, a condition that causes the ineffective production of all blood cells.

If change is not, at the least initiated, or embraced, then change will be enforced. A new schedule of medical intervention was about to alter our lives. My own role in all of this needed to change as well. I let go of my own personal approach, to support the decision Anthony had made, to go with the procedures suggested by his numerous medical specialists. It became a full-time job.

So many projects, on many levels and as the medical industry is so specialised, it was difficult to bring all aspects of treatments together. What was needed was a mediator, a time-consuming job that I took on, forgoing our sessions together.

My support during this time was as a co-ordinator, bringing together information from specialists in Psychiatry; Haematology, Urology, Sleep/Breathing, and Dental. I became a processing centre, co-ordinating treatments, appointments, medications, hospital stays, and being the main communicator between all parties.

As the bone marrow disease took hold, more and more time was spent in hospitals. Platelet transfusions were required before any medical procedure that had the possibility of a bleed. Simple dental work became a major operation. Medication and changes in medication were presented at every appointment in case of possible contraindications.

We were diligent and as we conquered each of the chronic states, and resolved as many sources of infection as we could, Anthony started to show signs of lucidity and improved posture.

Then came another personal setback, this one too deep to heal. The will to continue had gone. Anthony was just going through the motions. Time for another change as the need for full time care became a reality. The move into a new community with the prospect of new friendships brought some excitement for life again.

I arranged for twice-weekly JSJ sessions at his new home, which helped with calming and general wellbeing. Communication from carers was sought on a daily basis through the settling in process and after a few months, with a new routine in place, all seemed to be harmonious with progress in conquering that list of projects.

Following another minor dental procedure, I hadn't seen or heard from Anthony or the carers for about 3 days, when I arrived for another medical appointment. Anthony was a shadow of the man I dropped off just days earlier. The carers told me that with his mouth still numb from the dental work, he bit his tongue during lunch. The bleed was extensive but they managed to stop it and thought no more of the incident. Unfortunately, with his compromised blood condition, infection had taken hold and by the time I arrived for our appointment, he had deteriorated to such an extent that I rushed him to hospital for immediate attention.

In that short timeframe, Anthony's condition worsened and tests revealed the worst-case scenario, the Myelodysplasia had progressed to Acute Myeloid Leukaemia. We were now at a critical stage of the disease. Prognosis was dire and there was a sense of defeat all round.

I started applying hands-on at this point to provide support and comfort in the atmosphere of defeat. Having spent a lot of time with Anthony, I was aware of his

body's distress and states of consciousness indicators, so was able to differentiate between states of consciousness, extreme fatigue, and indifference. All three states could present as the same motionless body, but there was a subtle difference not easily detected.

On one of the occasions when Anthony was going in and out of consciousness, I was applying the 'Opposite Fingers and Toes' sequence (Figure 17.7). The specialist consultant arrived when I was midway through the sequence, but stepped out of the way for the consultation; there was no arousal during that medical examination. Once the room was vacated again, I continued on with the sequence and as I resumed, his eyes opened. Conversation returned as he talked about his overall weakened sense of being.



*Figure 17.7. Opposite fingers and toes sequence – first step demonstrated
(photo by Camille)*

The next day, Anthony was refusing to be cannulated (where a cannula is inserted into a blood vessel) for another blood transfusion. It seemed hopeless and he was angry. Anthony's eyes were closed and after a lot of yelling, I intervened. Blood was sitting there ready to be transfused and would have been discarded if it sat there for too long.

Anthony's eyes remained closed as if to remove himself from the environment. I placed my hands at the backs of the knees, and talked to him. Still a lot of anger as I moved laterally down the lower limbs and held there for a while. The anger started to calm. Then as I moved to the outer ankle, that sense of a calmer state was replaced with tears. "I am frightened," he cried.

We knew the outcome and it was just a matter of time. No leaving the hospital this time. I gave hands-on at each of the three-times daily hospital visits. Staff told me that the only time he was at peace was when I was there with my hands, calming those fears, a gentle touch in an otherwise clinical and unnatural environment.

I recall a quote by Émile Coué (1922), a French psychologist who introduced ideas of self improvement based on optimistic autosuggestion, "when the will and

M. MINIELLO

the imagination are antagonistic, it is always the imagination which wins, *without any exception*" (p. 14). From this notion, I can see that we were fighting a losing battle. Anthony's underlying state of melancholia and his rejection of any hope of recovery may have been his way of protecting and preparing himself from the possible disappointments in his prognosis.

As a practitioner, I can offer a way – the word Jyutsu provides that – and some relief from the discomforts of the debilitating condition and treatments. Change itself, is up to the receiver.

"Change in Belief affects a corresponding change in the body" – Mary Burmeister

Leanne: One Small Step at a Time – One Step too Far

Struggling with her weight all of her life, Leanne opted for elective surgery to help control her calorific intake, in the hope of rapid weight loss.

After a surgical mishap during a laparoscopic sleeve gastrectomy (stomach stapling) procedure, she woke the next morning and was very agitated. The discomfort continued to worsen over the next day or so until the third day when she collapsed and was near death. Damage to the body after the procedure included deep vein thrombosis, dropped left foot, and holes in the stomach seeping food and fluids.

Sepsis had spread throughout her body and she was rushed back into surgery for the 'clean up.' This shock to her whole system left her in a coma, in intensive care for six weeks. She was eventually moved to a rehabilitation hospital for recovery and the family gave me permission to visit and offer JSJ sessions.

I arrived at the hospital with a family member. Having met Leanne on social occasions, I was shocked to see just how much the trauma had aged her. Her hair was greying and wiry and she was just finishing up with her first physiotherapy session designed to help her regain mobility. There was a sense of great fear from her as she thought her legs were about to collapse from under her with each step.

As she was guided back into the safety of her hospital chair, we walked over to where she was seated. I leaned over and held the outside of her wrists at SEL 17, the bony knob at the back of the wrist, on the little finger side – so that she could calm a little. This is the area where the Heart Function Energy flows into the little finger. This particular hold harmonises the nervous system. Leanne asked me what I was doing to her and I said, just helping her settle.

The body and demeanour had gone from showing sheer terror to relaxing into a calmer state, though the language was still frantically recalling the fear of falling in the preceding exercise. Leanne calmed enough for me to then ask for permission to continue on with another sequence, to which she agreed.

As this was my first visit, and not knowing at this stage the full extent of her injuries, my approach was careful, though I had some understanding from the small amount of information I had been given from a family member, about the areas

most damaged in the torso. From her now seated position, I could access all fingers and toes easily without disturbing any other part of her body, so I proceeded to apply the Opposite Fingers and Toes sequence (i.e., hold the left big toe and the pinky on the right hand. Systematically work through all fingers and all toes.). This one sequence has many, many testimonies of visible change and this case was no exception.

I found a cushion to sit on and from that floor position, I was able to support each of the feet as I started the Opposite Fingers and Toes sequence. It was a perfect position, as it seemed I was doing nothing and she remained focused on telling us her story. As I moved through the sequence, on about the third hold, the language changed – small talk that comes easily when relaxed – she was now engaging with us. A pink tone replaced the grey pallor of her body and there was a general sense of relaxation as the conversation moved to a more amusing topic, completely unrelated to the hospital setting. There was even laughter. My session worked its way seamlessly into the room, company and conversation. I asked my friend if I could come and see her each day and she agreed.

Leanne's list of 'projects' was so numerous that we applied the 'divide and conquer' method in our approach. 'Project,' was a term Mary Burmeister used to replace words that focus on diagnostics. Working on a 'project' indicates a plan to achieve a particular aim. A simple individual approach to a complex situation as we focussed on the most pressing of these, tackling one hurdle at a time.

Big 'projects' need to be broken down into manageable components. This notion was simply and succinctly described in an interview with neuroscientist Stephen Porges. He said, "When you deconstruct the reaction process in the body, fear is removed" (Stranger, 2013).

Our first task was to regain a sense of independence by supporting the removal of a urinary catheter, which had been in place since the first of the emergency procedures some 2 months earlier. Two previously unsuccessful attempts to remove the catheter had made the nursing staff nervous to the outcome of this third attempt. Once the catheter is removed, the patient is monitored closely for the bladder to void within a certain timeframe. If there is no evidence of this within a predetermined time, the catheter is replaced so that the bladder can void, thus eliminating the risk of over stretching and permanent damage to the organ.

We worked on the Bladder Function Energy (Figure 17.8) (one of the 12 "Individualised" Body Function Energies that are part of the JSJ knowledge system) for 5 days, harmonising and energising that pathway, as well as a few other supporting flow sequences. By the end of that week, the plan was in place and the catheter removed. I received a call from a very excited Leanne with news of a successful removal and subsequent voiding of the organ.

I continued to visit everyday for one month, working through different needs. Blood was taken daily for analysis and Leanne became so sensitive to the procedure, that she recognised the different footsteps of visitors. She had become particularly attuned to the phlebotomist's footsteps.

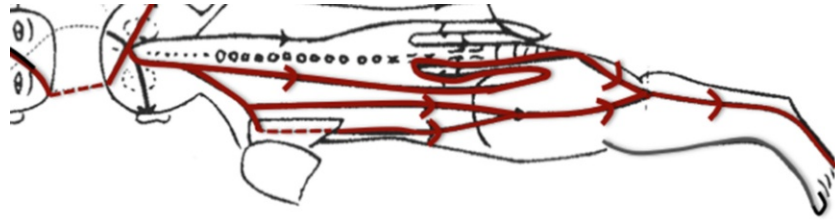


Figure 17.8. Simple illustration of bladder function energy. Pathway shows the scope of coverage down the back of the body clearing all accumulated energy. Burmeister considered the bladder flow sequence as important as the MCV

Interestingly, visiting everyday, I also became familiar with footsteps approaching. When one of the nursing staff came our way, we gave each other a knowing glance and hands would come off the body to make way for regular blood taking or general monitoring. Knowing nods also came our way from the staff as they left, then hands would go back on to the body to complete the session.

We laughed together, especially when I would do my best impression of a contortionist (a skill learnt as a child at dance and acrobatic school) getting to parts of the body, working around tubes, attachments and that hospital bed. Sometimes we talked a lot and sometimes we just sat in silence through the session.

As her young family visited daily, memories of what once was came flooding back and then regret, for that initial decision to voluntarily alter her body, started to weigh heavily on Leanne's mind.

At discharge, Leanne was still a long way from her full able-bodied self, but she was at least mobile with the aid of a walking stick. Unfortunately, we lived quite a distance from each other and I didn't get to see her again.

Adapting to a new way of living was going to be difficult enough, but now all of the physical complications were added to her situation. The deeper injuries were still an ongoing problem and a few months after discharge an attempt was made to go back in and surgically repair some of that initial damage. Unfortunately, that reconstructive procedure left Leanne in a coma due to another mishap in theatre.

I received a call from Leanne's sister and rushed to the hospital to see her in intensive care. The family allowed me to have access. I watched as the intensive care nurse, gently cared for her. She had suffered hypoxic brain injury due to complications following cardio-respiratory arrest, in association with an air embolism during a gastroscopy and stenting procedure. Basically, her brain was starved of oxygen during the risky reconstruction procedure.

My hands found their way to her body one last time. From the left side, I held her left ring finger while cradling both of her 4 s, until there was one last exhalation.

UTILISING THE ART OF JIN SHIN JYUTSU TO INTEGRATE, AUGMENT,
SUPPORT AND COMPLIMENT CONVENTIONAL MODERN MEDICINE

JSJ is not intended to be a substitute for conventional medical attention, but complementary. As we are creatures of progress, ever evolving, ever curious, and ever changing, this is a time where we can start to reunify; work together in a spirit of cooperative, collaborative and progressive application and purpose.

In medical emergency situations, simple holds can save time and resources and may avoid unnecessary long-term complications. For example, the following holds are very complementary to conventional procedures and can be applied without interference in a hospital setting:

Little toe and same-side SEL 16 (located at the outer ankle area) for stroke, to minimise or avoid useless limbs;

SEL 7 (big toe) for heart, brain projects and seizures, to bring excess energy away from the affected area;

Holding the left little finger for heart disharmony, taking the burden away from the heart area;

Teaching patients simple holds may save valuable time and alleviate the need for intensive intervention, by reducing the risk of side effects from medications and sudden bodily function breakdowns, or simply holding the feet or toes of a child during a procedure will help him/her stay connected and grounded during what may seem to be an 'alien invasion.'

When a patient presents with a long list of medical needs, as in the case of Anthony, a holistic approach to treatment may be useful in realising the potential for major change and recovery. All of Anthony's problems stemmed from an overworked physical body, causing the Kidney Function Energy to be severely depleted. Kidney Function Energy is responsible for bone, gum, teeth, nail and blood formation; all reproductive functions; muscle function and so on. When this flow is functioning under par, the lungs can be overwhelmed and have difficulty in ridding the body of waste. If a person presents with one or more seemingly unrelated effects (symptoms), it may be useful to take a moment and see if there may in fact be a causal connection.

Similarly, before any procedure, whether it be a minor or major surgical intervention, a chemical treatment, etc., there are ways to prepare the body, where tension is removed allowing the way for an effective treatment.

I was fortunate enough to be called into the emergency room when an aunt was taken in after a brain aneurism. She was in a contorted position with severe head pain and was not responding to questions. Even though I couldn't get to apply the SEL 16 and little toe hold because of the position she was in, I did manage to hold both outer ankles at SEL 16 area.

Both the Bladder pathway and Gall Bladder pathway start in the head and both come through the outer ankle area at SEL 16 and end in the little and ring toes respectively. So,

M. MINIELLO

this simple and effective hold is useful in bringing down excess energy from the head. I held for as long as I could until she was taken away for test and a major operation to clear and stop the bleed in the head. She recovered after a long period of convalescence with no paralysis or memory loss. I asked her if she remembered anything from that night and she recalled feeling hands at her feet. As I had worked with her before, she said that she knew they were my hands and that she was being helped.

The best way to share this information is to experience the feeling for ourselves. We can start simply with holding a finger, exploring every aspect of the finger from the tip to the base and feel the differences in the body. These differences may feed your curiosity to delve deeper into the How, Why, and What you are experiencing, to BE(come) your own testimony.

Similarly, when faced with a client for the first time, applying hands-on will establish an initial contact. This can be in a very subtle way like shaking that person's hand. The feel of the skin, colour, texture, grip and temperature (warm, cold, clammy), will be a useful indicative start. A quick scan of the body posture as they walk in, making eye contact and listening to the vitality (or lack of) in the voice and the words they use will add another layer to the information. Finally, the most mysterious and powerful touch, the art of pulse listening. Pulse listening is a fundamental component of a JSJ session and is the closest communication you will have with the receiver. They are the whisperings of the past and the future and how these two are integrated with the present – the NOW. Training and integrating this practice in all settings will open up a clearer understanding of the workings of the body. Pulse diagnosis is a little more cerebral and mechanical, whereas listening through our hands, seeing with our hearts and understanding the whisperings of the pulses, at the BL, WL and HL levels, will guide us to how we can re-establish harmony to the body.

In oneself lies the whole world. If one knows how to see and become aware & understanding of Now Know Myself, the door is there and the key is in my hands.

No one on earth can give either the key or the door to open except myself.

I am my own responsibility, my own limitations.

I do not have to seek out there for anyone or anything.

I am the universe and all is within the Now Know Myself.

(Mary Burmeister)

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ABOUT THE AUTHOR



Maria Miniello was introduced to Jin Shin Jyutsu in 1998, through the book “The Touch of Healing” by Alice Burmeister. The draw to the Art of Jin Shin Jyutsu was immediate. Many years and classes later, the journey of discovery continues. Maria lives in Perth and is a Jin Shin Jyutsu class organiser for the State of Western Australia, practitioner, and devoted student. She has a background in clothing design. Working with the body and its form, Jin Shin Jyutsu has progressed that focus, to work through the layers of the physical body all the way to its core and then beyond, to the original “blueprint.”

PAMELA A. PROSCIA

18. COMING FACE TO FACE WITH FEARS

Journeying to Wellness

ABSTRACT

How can we maintain our health and equilibrium in a fast-paced world? In what ways are our fears and illnesses related? How can we best work with our emotions to create a healing state? Conventional medicine too often focuses on bodily symptoms alone ignoring the psychospiritual and emotional conditions that can underlie illness and contribute to the total ecology of a human being. The great healing traditions early on acknowledged the differences in individual temperaments and constitutions, which have been used as a basis of healing for centuries. Today what was learned and accepted as traditional wisdom is largely ignored and has been replaced in Western medicine by an approach that focuses on relieving symptoms without identifying a cause. The mindset of Western medicine is based in materialism and too frequently negates the knowledge and value of other healing systems.

This study explores multiple perspectives on states of fear, including their purpose and relationship to wellness. Using bricolage, historical research, and autoethnography, this essay shows that knowing our constitutional makeup and balancing our emotional temperament has historically been a path to ways of healing human beings in diverse cultures.

Keywords: dynamics of fear, energy balancing, mind-body medicine, mindfulness, emotional centering, self-understanding

This above all, to refuse to be a victim. Unless I can do that I can do nothing.

– *Surfacing* by Margaret Atwood (1972)

Fear wears many faces. Looming at some unspecified time in the future is the fact that all that is living dies; no matter the species, death is inevitable. Knowing however consciously or unconsciously that this is our eventual fate, undoubtedly shapes our cosmology and holds sway over our thoughts and subsequent actions. The concept of a physical realm and its association with a manifest world engages us in a limited experience of life. The belief that it is finite can give rise to feelings of helplessness, which in turn spawn the need for control born out of fear of losing our lives. Further, these beliefs subject us to a cadre of rules governing physical forms,

locking us into a reality shared by a large majority of the populace. With this view in place, social regulation is deemed a necessity. By extension, the use of fear enables certain controls to be instituted and leveraged. These conditions are experienced as the norm and go unquestioned for extended periods of time if they contribute to our fundamental need for order, a sense of equilibrium, and provide safety as well for the majority.

Another aspect of fear emerges in the realm of the unknown. We go to great lengths to create an illusion of stasis, the perception that our world is unchanging. More accurately, the nature of our world is that it is ever changing. Buddha is said to have remarked, “The world, whose very nature it is to change, is constantly determined to become something else.” He continued, “It is at the mercy of change, and it is only happy when it is caught up in the process of change, but this love of change contains a measure of fear, and this fear itself is *dukkha* [awry, flawed, frequently translated as suffering]” (Armstrong, 2001, p. 75).

Other fears circle around illness, poverty, failure, pain, and suffering, to name a few, which can take us back to thoughts of the so-called end game – death. Merriam Webster.com defines fear as “to be afraid: expect with alarm.” Is there a healthy aspect of fear; and when does it make us sick? What is its purpose in illness and wellness? Is there a psychospiritual connection between fear and the roots of illness?

My own fears over the decades have often provided the most fecund ground for breakthroughs of consciousness and have afforded me opportunities for growth in ways I never would have envisioned in my life. Coping with fears can help us to break through barriers, offering us a new key to a previously locked door and bringing us to a deeper level of self-understanding. As a child, I can recall having a fear of the darkness, until one day I realized that darkness did not necessarily go hand in hand with danger. The absence of light did not need be scary. I learned to sing in the dark, be more sure-footed in my movements, and found new strengths in myself. Darkness then became my teacher, no longer synonymous with fear, and helped me to develop courage. Lissa Rankin (2015), who is a medical doctor interested in the intersection of science and spirituality, notes that courage is not “being fearless.” She discusses “true fear” as that which “our bodies are hardwired to feel when our lives are in danger” (p. xvii). Gavin de Becker (1997) also distinguishes between states of fear. He describes the experience of a woman who was in jeopardy of losing her life at the hands of a rapist: “what she experienced was real fear, not like when we are startled, not like fear we feel at a movie, or the fear of public speaking. This fear is the powerful ally that says, ‘Do what I tell you to do’” (p. 5).

FEAR AND ILLNESS

When you give rise to that which is within you, what you have will save you.
If you do not give rise to it, what you do not have will destroy you. (Yeshua/
Jesus, The Gospel of Thomas, #70, Davies 2002)

What provokes the tendency to think the worst? We come down with a cold and if it persists, we might think “maybe it’s pneumonia!” Not everyone, however, is inclined this way. Another person with a cold might take action against the tendency toward fearful thought and instead find ways to boost the immune system. When is the fear response appropriate and when is it not? Should we strive to do away with fear in our lives? As a mind-body medicine physician, Rankin invites us to reframe our relationship to fear so that it “can *cure you*” rather than bring harm. She asks, “What if fear isn’t something to avoid, resist, or feel shame about? What if, instead, fear is here to help you? What if fear is the finger pointing toward everything that stands between you and true well-being?” (2015, p. xviii).

How we can work with our bodies to enhance and support our natural ability to maintain and heal ourselves is the subject of Andrew Weil’s pioneering book, *Spontaneous Healing* (1995). Some have come to see illness as a gift as Weil writes:

Because illness can be such a powerful stimulus to change, perhaps the only thing that can force some people to resolve their deepest conflicts, successful patients often come to regard it as the greatest opportunity they have ever had for personal growth and development – truly a gift. Seeing illness as a misfortune, especially one that is undeserved may obstruct the healing system. Coming to see illness as a gift that allows you to grow may unlock it. (p. 251)

Perceiving our bodies within a physical domain concentrates our focus on the physical symptoms that manifest; nevertheless, many people have been working with thoughts and emotions and their relationship to disease for many years. Lawrence LeShan (1989) has carried out research for more than five decades on how the self-healing ability of patients with cancer and other illnesses is mobilized. Our thoughts and feelings are an important factor “in the total ecology that makes up a human being. Feelings affect body chemistry [...] just as body chemistry affects feelings” (p. xiv).

In recent years there have been advancements in research on the body-mind experience and mental-spiritual connection to health and illness. Even with the currently growing public awareness Weil points out, “What the public does not understand is that these visible efforts are not representative of medicine and science in general” (1995, p. 89). A widespread belief that science holds the answers to conquering disease has become the dominant position of our way of thinking on a global scale. Our acceptance of these claims as a society, as Roberta Bivins (2007) suggests, is largely due to our belief that “biomedical knowledge is based on rigorous and objective scientific investigation of the natural world. Yet the sweeping cultural authority currently granted to science is, in historical terms, fairly new” (p. 4).

There have, of course, been biomedical interventions that have helped in the control of certain illnesses, nonetheless, humans have been balancing their health for many centuries, far longer than ‘biomedicine’ (Bivins, 2007) has existed. Many so-called scientific discoveries have come about through a series of trials and errors, leaving a trail of casualties in their wake. Biomedicine has narrowed its focus on

treatment of physical aspects of disease related to a limited understanding of the relationship of microorganisms to the disease state. While the unknown cause may be invisible to the naked eye, the belief is that it is still rooted in the material and knowledge of its substance can be determined by developing enhanced technologies to help locate, analyze, label and therefore ultimately control it. This orientation is a major trend in the current Western mindset and rationale for product development in the medical marketplace.

In this system that upholds a clinical detached style of medical intervention, human contact and personal connection are minimized; doctors barely spend fifteen minutes with a patient, no matter the gravity of their condition, before they are whisked away to the next examination room. Generally, prescriptions for pharmaceutical drugs or surgery are offered as the standard protocol. Yet we find earlier systems of medicine approached healing on multiple levels and upheld views of positive health and longevity that were inherently preventative (Basham, 1976).

Advances in Medicine from the Second Century AD

The Hippocratic Oath is the most widely recognized of the Greek medical texts and in modern times has become an integral step in the process of attaining membership as a doctor in the medical profession. Two noted admonitions of the Hippocratic Oath are: “‘First, Do No Harm’ (*Primum non nocere*) and ‘Honor the Healing Power of Nature’ (the *vis medicatrix naturae*)” (Weil, 1995, p. 36).

In the second century AD, based on earlier findings of Hippocrates (ca. pp. 460–380, BC) that established a separation of medicine from religion, it was commonly believed that the causes of illness were to be found in “external, physical factors, not by the gods, and [practitioners in accord with Hippocrates] sought to heal by promoting harmony within the body” (Paul, 2016, p. 27).

Galen, who lived ca. 130–216 CE, advanced the Hippocratic model of human physiology. He popularized the technique of bloodletting and used a lancet referred to as a *phlebotome* to open the patient’s veins (Paul, 2016). Many of Galen’s views were ahead of their time, and whereas other interpretations were misleading, his version of medicine became widely accepted as fact until the seventeenth century (Paul, 2016). He also believed in humoral theory and that each of the four humors: yellow bile, black bile, blood, and phlegm, related to personality traits. The four temperaments were: sanguine (extrovert and sociable), melancholic (creative and kind), choleric (energetic and charismatic), and phlegmatic (affectionate and dependable) (Paul, 2016). The practice of bloodletting caught on “as a means of rebalancing the four humors that had stagnated in the extremities, causing illness. It was prescribed for dozens of diseases from acne to pneumonia, epilepsy to stroke” (Paul, 2016, p. 38). Its use was so broadly accepted that even though in 1628 William Harvey disproved the theory supporting bloodletting, it was still widely accessible in barbershops. George Washington requested he be bled after coming down with a throat infection,

and it was this procedure that caused his death “after almost half his blood was removed over the course of 10 hours” (p. 39). Despite these tragic occurrences and mounting evidence against its use, bloodletting was still recommended in a medical textbook as recently as 1923 (Paul, 2016).

The Greeks, of course, were not the only ones investigating how the body worked. Health concepts and practices of people worldwide, as Charles Leslie (1976) notes, “continue traditions that evolved during antiquity” (p. 1). Leslie writes:

Ideas about the ways that body processes are thrown off balance by the improper consumption of ‘hot’ or ‘cold’ foods, or the ways that envy, fear, and other strong emotions generate poisonous substances by disturbing the body’s equilibrium, are based upon humoral theories that were first elaborated in the classic texts of medical science several thousand years ago. (p. 1)

As far back as the last five or six centuries before Christ, the traditional Indian medicine system can be traced to the *Atharva Veda* and its evolution into “something like its surviving form” (Basham, 1976, p. 19). In the early period, “the archetypal physician was the divine sage” and healing was intertwined with Hindu philosophy and religion (p. 20).

The science of medicine became known as *āyurveda*, ‘the science of (living to a ripe) age.’ The term is significant from the semantic point of view, since its first component (*āyur*) implies that the ancient Indian doctor was concerned not only with curing disease but also with promoting positive health and longevity, while the second (*veda*) has religious overtones, being the term used for the most sacred texts of Hinduism. (Basham, p. 20)

It was believed health could be maintained by balancing the three primary humors or *dosas* (literally meaning ‘defects’) of the body, which were wind (*vāta*), gall (*pitta*), and mucus [or phlegm] (*kapha*). “Discord ...is disease, concord ...is health [...] Similar ideas concerning vital humors and vital breaths were known to classical and medieval European physicians, and it is a matter of speculation whether there was influence in one direction or another” (p. 20). Medicine as a concept was a way of preserving health not only employed to cure disease, and the ancient text emphasized diet and adaptation to climate changes. Healing systems undoubtedly borrowed from and were influenced by each other to the extent that resources, such as herbs and plants, could be obtained in a particular area. To a large degree this is what manifested variances in certain applications within different cultures in accordance with their particular values, religions, and beliefs. Thus we see Arabic or Islamic medicine, called *Unani* (also *Yūnānī* from the Arabic language meaning ‘Greek’ [Ionian]), shaped by the Galenic system (Bürgel, 1976) and by Muslim rulers who influenced medicine in India (Basham, 1976). *Āyurveda* was the foundation for Tibetan medicine as well as influencing Chinese healing systems although each of these cultures had its own distinct knowledge system of healing.

MY OWN HEALING JOURNEY

My own evolution in health and healing began in my teenage years. An ever-increasing awareness has developed since that time as to the power of emotions to balance or imbalance our well-being. I was a doctoral student for several years at the stage of embarking on a field study for my dissertation research in 2009 when what I thought was a routine visit to the doctor put my life into a spin. This was not the first time I had experienced a “crisis of healing” in my life, but it was the first time I’d been diagnosed with a life-threatening illness and with it the direct realization of the possibility of my own death.

My first heightened awareness of serious illness came at the age of 11 on being told that my maternal grandmother, a non-smoker, had lung cancer, which eventually metastasized into spinal cancer. After surgery she came to our home to recover. Not fully understanding the gravity of the situation as a child, I can remember lying on the bed with her, feeling her presence and overall condition, and sensing that what was wrong was far different from having a cold or the measles. She died when I was 12 years old. Around that very time I was in a car accident and instructed under doctor’s orders to wear a neck brace for a whiplash injury. The X-rays that were taken at that time made me aware of a congenital spinal condition, which had then become aggravated due to the impact of the collision. After the accident, I was treated for a period of five years. My life was marked during this period by many and frequent visits to doctors. Their opinions conflicted regarding the necessity of surgery or not; and the possibility of spinal surgery was a scary proposition. I recall vividly one very supportive physical therapist who said, “Listen, kid... you do these exercises everyday...” His directive provided a window of hope and support that encouraged me to believe there was something *I could do* to make a difference in my state of health. I faithfully did the exercises everyday, which contributed to a new awareness as I focused my thoughts on strengthening the muscles to support my spine. The experience set a precedent throughout my life for a feeling of agency and optimism where health is concerned. The event has influenced my view toward healing to this day. I also began to believe in the power of prayer and felt the need to connect with something greater than that which my experiences of modern medicine had provided.

This “crisis of healing” happened in my early teens and marked the course of my life in many ways. I developed a keen interest in various approaches to aid my body to heal itself, which led to wide exploration of modalities related to health and wellness. In my mid-teens, I was introduced to yoga asanas (poses) through a Public Broadcasting System (PBS) television program, regularly worked toward learning them from the weekly show, and began to read books on yoga. While still in my teenage years but old enough to work, I found a job in a local health-food store. In between tending to customers and shop chores, I took to reading every book for sale in the store. This led me to pursue studies in health, nutrition, and wellness, at a time when alternative modalities were akin to quackery. I was able to follow these

interests to some extent through a flexible college program at Empire State College, State University of New York. As a student, I had the good fortune to meet Bob, who I chose to work with as my mentor. He had been quite involved with alternative healing practices and unraveling the medical conundrum for a number of years. At that time, I met many people engaged in mind-body practices and became acquainted with biofeedback, acupuncture (which at that time was just being introduced for clinical use in the U.S.), and debates on different types of vegetarianism, organic vs. non-organic foods, along with many other modalities and approaches dealing with health and illness.

Outside of college life, I also took numerous workshops on a variety of topics including homeopathy, herbology, āyurveda, Bach Flower Remedies and other knowledge systems pertaining to health and well-being. I attended a nutrition course in Desert Hot Springs, California and earned my certification in nutritional counseling there from an organization led by a biochemist and nutritional researcher who also headed research for a large well-known, reputable vitamin company. Although the certificate was not directly transferable to New York, I did work for some time with individuals privately as a nutritional counselor. I found for the most part people wanted to be given a pill or something that would be the solution to “fix their problem” rather than enter into a process of self-examination of any habitual behaviors that might have led to their conditions.

As years passed, I could not help but notice that some of what had been little known in the past about complementary and alternative medicine was becoming less obscure, not quite mainstream, but there was afoot a growing awareness on topics such as acupuncture, as well as the relationship between certain foods, one’s diet and health – in short, much that I had been introduced to so many years ago. Knowing that my interest in healing fell outside of conventional approaches, I continued to learn and freely share what I’d learned with others. Uncertain still of how to support myself financially beyond mainstream pathways, other interests began to take over. My passion for the arts, especially the performing arts, became paramount at this point in my life. Applying my knowledge and skills in these disciplines, working with children, I was able to earn a livelihood. I had started musical training at the piano in my early childhood and later, as a young adult, began voice studies and dance training, with a base in the Graham technique of modern dance. Eventually, the work with the arts and children converged. After many years, I felt as though things were finally coming together. I had opportunities to perform in a range of venues, including Madison Square Garden in New York City, and worked with many cultural organizations as a resident artist in schools. I was gaining recognition for my work and was awarded several arts grants which enabled me to develop free public programs of music and movement for young children. I experienced the healing power of the arts with others and was engaged in work I loved!

My life has always seemed to develop in unconventional ways. The theme of healing continued to evolve and weave itself into most of my pursuits over the years. In 2001, it led me to the study of a hands-on “healing art,” an eastern-

derived modality developed in Japan known as *Jin Shin Jyutsu* (JSJ), a precursor to acupuncture. After a five-day intensive training in Scottsdale, Arizona in the summer of 2001, I was quite taken with what I'd been introduced to in that first seminar. I became more intrigued when a practitioner in the training was accurately able to detect that I had a hip problem by listening to my pulses! As a dancer, I'd developed an awareness of the shifting states of my body, i.e., if a muscle was hurting, in a day or two the soreness would go away. So after that first hands-on JSJ session when my hip did not hurt, I didn't know if it had corrected itself on its own or if it was affected by the JSJ treatment. JSJ also has a self-help aspect; it wasn't until a few months later on the historic day of 9/11 in 2001 that I realized the healing potential of Jin Shin Jyutsu. I was three blocks from the World Trade Center's North Tower on that day, and when I finally made it out of the area of attack, I had an enormous headache and throbbing all over my body. I was, of course, in shock after witnessing the devastation to the Twin Towers and experiencing the utter chaos of that unforgettable event.

A few weeks earlier, I had started to teach myself some of the JSJ self-help material. When I was in a safer place later that same day, in an effort to relieve my own state of angst, I began to work with what was fresh in my memory, the Main Central Vertical Universal Harmonizing Energy (MCV), which connects us to the source of life. Specific locations on the body's surface referred to as Safety Energy Locks (SELs), which can be "described as spheres of living intelligence that assist us toward greater harmony" (Ferstl, 2001, p. 59), are touched with the hands in order to stimulate the natural flow of energetic circulation patterns that move through the body. "We have 26 keys to unlock 26 'SAFETY' ENERGY LOCKS, 26 on left side and 26 on right side of body" (Burmeister, 1997a, p. 13).

I began by putting my right palm on the crown of my head and my left hand just above the bridge of my nose in the area of the "third eye." I became aware of the pulsing in both of the sites my hands made contact with and kept my hands there until I sensed the rhythms of both pulses were unified. When these pulses synchronized, I continued applying the Main Central Vertical flow, keeping the right hand on the top of the head and moving the left hand to the next position in the sequence, the tip of the nose. After only a few steps when my left hand was on the center of my clavicle, having carried out the flow for about 5–10 minutes, I noticed that my headache and the throbbing were completely gone! At the time, I thought *this was directly attributable to JSJ*. The extreme state of tension persisted during those weeks, and I was experiencing unusual bodily aches. Finding out that there would be JSJ training in New York City in October 2001, I felt compelled to take a second training. During the weeklong training, I reaped enormous benefit from self-help as well as relief from hands-on sessions given by other practitioners. From that time forward I have continued learning JSJ.

Initially to finish up a long-dangling Bachelor's degree in 2002, I returned to academia. I went on to complete a Masters degree before entering a PhD program in the fall of 2005. With the increased demand on my schedule, between teaching,

academic work toward the doctorate and other responsibilities, stress was at an all time high. Time available for Jin Shin Jyutsu, dance, music-making, and other activities that nourished me physically, emotionally, and spiritually, was, however, at an all time low. Only minimally involved with music, dance, and the arts – my lifeline – although making steady progress toward a doctorate in education, I had, in a sense, lost my way.

In spring of 2009 the shocking and life-threatening diagnosis rocked my world. I had been asked to come into the doctor's office to go over the results of some recent tests. I could not have prepared myself for the words I would hear the doctor utter that day: "the report is positive – for cancer." After the initial shock and a period of grappling with my mortality, I recognized to some degree the challenge I would be undertaking if there were indeed a way for me to regain my health and well-being. I began applying the MCV flow to myself immediately after hearing the diagnosis, as well as using simple finger holding related to balancing five emotional states: worry, fear, anger, grief and pretense. (Variations of finger holds are called *inju* in Japanese and are related to *mudras* in āyurvedic practice.) I instinctively knew that Jin Shin Jyutsu, focused attention to my diet, and other activities vital to a renewed state of health, were critical to regaining equilibrium and changing the course of the disease. In addition to JSJ, good nutrition and adequate rest were of paramount importance to better strengthen my immune system. I also began intensive research in several of these areas, for there was very little offered that shed light on alternative modalities to standard medical protocol. I decided to get more than one opinion and subsequently had the lab reports from the first heart-wrenching visit, together with the accompanying slides of the biopsy, sent to three additional leading hospitals in the New York metropolitan area. The result was medical professionals from a total of four hospitals agreed with the original cancer diagnosis. Suffice it to say, there were many upsets and ups and downs with the "health care" system, insurance, and other issues. Seeking out alternative and complementary health practitioners was costly, not covered by most insurance companies, and, unfortunately, not financially viable for me. A transformative shift within my own mental and emotional realms would need to occur in order for bodily changes to take place and spontaneous healing to happen.

A seeker on the path to enlightenment, I embarked anew on the journey to heal myself. During this three-month period between the diagnosis and the scheduled surgery, however, I noticed bodily changes that seemed to indicate improvements in my health. Could it be that I was healing so quickly? I returned to the appointed surgeon and asked, "isn't it possible that I could be healing?" The doctor's reply was that it could be possible but the medical protocol would still be to carry out major surgery as previously discussed. This was the medical standard of care for the condition diagnosed.

There were moments of great anguish, and I don't know if I would have come through it so well without the aid of Jin Shin Jyutsu. Generally, I am a calm person, but for days I was in a state of shock overtaken by severe panic, and

when debilitating thoughts took over, my whole being was seized by a gripping fear that held me in tremors. At times I was mentally paralyzed and stood in my apartment unable to move, frozen and terrified, aware of the sound my teeth made as they chattered against each other, uncontrollably. This condition provoked by distressing thoughts I referred to as “the spiral downward.” I knew I needed to redirect my thinking through mindful attention. Rankin (2015) notes there are ways that fear can help us and points to the fact that the way we feel and think about stress has much to do with its effects on us physiologically. With the support of several dear people in my life, I was able to cultivate a more hopeful, expansive outlook. I began to trust the universe once again. Being able to help myself with support and guidance from two JSJ instructors I had reached out to, along with several JSJ practitioners who helped by giving me a few hands-on sessions during those weeks, gave me a profound feeling of comfort and hope. The JSJ I practiced on myself for at least two hours daily put me into a state of meditation and deep relaxation. The instructors with whom I was in contact advised me to focus attention on the ‘three toe flows,’ which relate to the solid organs – spleen, liver, and kidney. (See Burmeister, 1997b) Each morning upon waking and at night before sleeping I would listen to my body through my own fingers. Sensing my body in this manner I became aware of pain and sensitivity of which I had been previously unaware and began working on those areas, especially at the bottom of the ribcage.

I frequently integrated listening to music while administering JSJ to myself. When I put the music on, it signaled a time for healing and I embarked on an inward journey. I could feel myself enter into a more relaxed state, as I let the waves of music in along with JSJ. As I became more mindful in the moment, the pattern of my breathing changed and deepened, and I experienced connection with a larger energetic ocean of a healing force. My body was healing because I was spiritually regenerating. “Jin Shin Jyutsu [...] offer[s] a way of Being to help MYSELF, help others and to KNOW Cosmic Oneness” (Burmeister, 1997b, p. 1). I found a safe place within myself where I could *be*. Near the end of Buddha’s life he shared these thoughts with his followers:

My dear friends, my dear disciples, don’t take refuge in anything outside of you. In every one of us there is a very safe island we can go to. Every time you go home to that island with mindful breathing, you create a space of relaxation, concentration, and insight. If you dwell on that island in yourself with your mindful breathing, you are safe. That is a place where you can take refuge whenever you feel fearful, uncertain or confused. (Hanh, 2012, p. 71)

I decided not to use the “C” word and generally would not allow myself to think of myself as ill. “Fear plays a particularly big role when we’re talking about cancer, which research has shown to be the most feared disease in America. ‘Carcinophobia’ – fear of cancer – is a relatively new phenomenon” (Rankin, 2015, pp. 40–41).

The weight that has been constructed around the term “cancer” is particularly devastating; although many live well beyond the diagnosis and treatment period for this illness, the gravity with which it is initially presented is extremely unsettling. (My personal journal, 27 July, 2010)

A week after the diagnosis I wrote: I firmly believe for every problem there is a cure ... finding that cure is the path I am on [...] I choose not to reveal just yet the label by which this condition is called. Suffice it to say that the word sets up an effect similar to an earthquake (My personal journal, 7 April, 2009). How could I restore harmony at the cellular level? I sought to create a state of peace in myself and so I decided not to think of fighting a disease. After all, the cells – normal and abnormal – were all a part of me. Instead, I thought of myself as coming into a state of alignment and renewed health. I began to feel more energetic and believed I would be well again. There were risks involved in going through with the surgery, and yet perhaps other risks if I were not to have it. At times I wanted to skip the surgery and circumvent all the biomedical conventions. My deepest need was to embrace and love myself fully and unconditionally. I needed to trust in my highest self and an imperceptible wisdom.

The surgery date that loomed in the distance had finally arrived – the day of reckoning. I would need to surrender to a greater force and soon would know my fate. My blood pressure was normal that morning as I was wheeled into the operating room. In that moment the fear was gone; I was at peace with my decisions and myself. I emerged from the operation about four hours later, and was in recovery, when one of the surgical nurses came over to me as I regained consciousness. I was catapulted into a state of ecstasy by the words she spoke: “They found no cancer!” No trace of the original diagnosis was found! A mixture of great joy, relief, and gratitude pulsed through me. There are perhaps many ways to explain this phenomenon. I believe, however, I would not have come through it all so well without reconnecting to music, movement, and having the aid of Jin Shin Jyutsu – all of which bring about a state of flow – along with attention to revamping my diet, which stimulated and helped reestablish energetic balance through nutriment. This event, this “crisis of healing” has shifted my interest and focused concern on the many forces and factors that impact our health and wellness as well as actions we can take to mediate our health, healthcare, well-being and the balance (or its lack) between these areas. I believe what I learned earlier in my life helped to guide many of my choices and actions that enabled my health to be restored. It has been nearly eight years since my recovery from this health crisis; seven years ago, a door opened for me to share JSJ sessions with patients in cancer treatment. These ongoing experiences using JSJ and wellness coaching have brought the theme of “alternatives” in diet and other modes of healing back to the foreground of my thought. It is through the gift of mindfulness and attunement that I have experienced the great fortune of reconnecting to the safety of my own island; and whenever possible, I offer guidance and the awareness of these gifts to others.

SUPPORTING THE BODY'S HEALING INTELLIGENCE

What relationship exists between the body's immune system and cancer or other illnesses? According to Rankin (2015), "Fear and anxiety, left unexamined and unhealed, weaken the immune system and interfere with the body's ability to heal itself" (p. 30). In a natural state of relaxation, "the body is beautifully designed to repair itself" (p. 10). She provides researched evidence that fear can indeed cause illness. Rankin also covers the hazards of early diagnosis and overdiagnosis. The *Journal of the National Cancer Institute* has estimated that "25 percent of breast cancers detected on mammogram, 50 percent of lung cancers, diagnosed by chest X-ray and sputum analysis, and 60 percent of prostate cancers diagnosed by prostate-specific antigen (PSA) are 'overdiagnosed'" (Rankin, p. 41). Rankin defines "overdiagnosis" as

the diagnosis of a 'cancer' that would otherwise not go on to cause symptoms or death. It is not the same as misdiagnosis, which implies that the pathologist made a mistake looking at the specimen under a microscope. Overdiagnosis suggests that the cancer exists, but that it is clinically irrelevant – that left untreated, either it would regress spontaneously [...] or that the patient would die of something else before the cancer caused harm. (p. 41)

The emphasis on clinical testing to analyze data to determine a diagnosis and reliance on technology has become the standard. The adoption of certain conventional approaches to the practice of westernized medicine or 'biomedicine' appears to be "both powerful and long established" (Bivins, 2007, p. 4). As Bivins points out:

[This] monolithic system holds a monopoly supported by a potent combination of laws, regulations, state and commercial interests, cultural beliefs and popular expectations. Biomedicine claims unique, exclusive, and absolute knowledge about the body in sickness and health, knowledge that is universally valid and ostensibly independent of cultural or social constraints or meaning. (p. 4)

The people's wisdom of generations, their ability to pass on survival traits and traditions has been discounted and displaced by the guise of an elite and superior brand of science. "Science of/by the people" is to be distinguished from and is incompatible with the centralized patriarchal project of "science for the people" (Prakash, 1999, p. 160). Whose interests are being served by the ambitions of the so-called "science for the people"? The further removed we become from our true connection to nature, do we diminish understanding our own nature and ability to heal our planetary home and ourselves? How can we maintain health as well as emotional and spiritual balance in what appears to be a time of distortion and chaos on the planet? We are living in a time of great uncertainty. How can we free ourselves from the worries of everyday life? Our lives are full of wonderful moments as well as difficult ones. In the words of the Buddhist Zen master Thich Nhat Hanh, "The only way to ease our fear and be truly happy is to acknowledge our fear and look deeply at its source" (2012, p. 1).

I am still learning that everything begins with self-study. Music, dance and the arts have been pathways for my own journey of self along with my connection to the healing art of Jin Shin Jyutsu. Nature is still the most profound teacher. “If you go back to the island of yourself, you will see the teacher in you” (Hanh, p. 73). There are oceans of possibility; one only needs to be willing to travel the currents.

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JED SCHWARTZ

19. COMPLEMENTARY APPROACHES TO WELLNESS

ABSTRACT

I use an autobiographical style to describe my introduction to Jin Shin Jyutsu (JSJ) and subsequent experiences as a practitioner and teacher of the art. In so doing, I address some of the key tenets of JSJ and illustrate its applications as a self-help practice, complement to Western medicine, and practice that can be used to harmonize the body and sustain good health. I introduce iridology, diet, and herbal supplements as constituents of a complementary approach I employ while educating and working with clients in a variety of contexts that include pre-and post-surgery. I emphasize the importance of self-help as a component of maintaining good health. Finally, I provide specific examples of my work with clients, addressing topics that include: complementary approaches to wellness, stroke, respiratory infection, broken bones, skin burdens, and abdominal pains.

Keywords: Jin Shin Jyutsu, iridology, complementary medicine, diet, herbs, wellbeing

The truth is that within each one of us lies the power to cast all misery aside and to KNOW complete Peace and Oneness-to BE that beautiful creation of perfect harmony-to truly KNOW (Help) MYSELF.

(Burmeister, 2015, p. 1)

The quote is from the introduction to Text book 1 of Mary Burmeister's Jin Shin Jyutsu (JSJ) 5-day basic instructional workshop (Burmeister, 2015). This sentence shares the magnitude of the Philosophy, Psychology and Physiology of JSJ, offering a way to open the boundaries of what we think is possible for each of us to be in this physical body. To some it is a radical idea that we all have the possibility, no matter what situation we find ourselves in, to find perfect harmony in our lives. It is this sentence that drew me into this limitless Art of healing and harmony. That I can change my mental, emotional and physical health once I understand who I am and how I can apply simple practices of JSJ to achieve harmony and wellness. That I am not just the body, mind and emotions but am infused and created by subtler forces of energy. I am interconnected to the seen – the body, and the unseen – mind, emotions, and spirit. They are not separate; so, unless I become aware of the totality of who I am, I will not be able to achieve real health and harmony, peace, and oneness.

OVERVIEW OF THE CHAPTER

In this chapter I present four main sections in which I lay out my experiences with JSJ, iridology, diet and herbs or supplements, and examples of applications of an integrated approach to professional practice within a paradigm of complementary/alternative medicine. I present self-help, education, and self-awareness about the body's harmony and resources to access if and when health projects emerge.

JIN SHIN JYUTSU

I have been involved with JSJ as a practitioner for about 35 years. In 1978, I had been working as a Physical Therapist at a Pediatric Rehabilitation Hospital and began feeling I was not seeing the whole picture with my clients. I knew I was missing something and I did not know what that was and, as a result, I felt as though I was not adequately helping many of them. I began to take classes for alternative and complementary healing approaches. In 1981, I heard about JSJ from a friend and was fortunate to be able to attend the first JSJ class taught in New York City. Mary Burmeister was the instructor and I did not know at the time that she one of two direct students of its founder, Master Jiro Murai, who rediscovered the Art of JSJ in Japan in 1910. While sitting in Mary's class I soon realized what I was looking for. In order for me to help others, I first had to know myself. As Mary puts it: "Now Know Myself is the Art of JSJ." I began to realize that the subtle energy body is the template or blueprint from which the manifested body is born. A great revelation for me at the time was that my thoughts and emotions had a profound effect on the physical body, its wellbeing, and vitality. Through the understanding of how these subtle forces flow in the body we are able to release blockages that affect the harmonious circulation of these invisible rivers that build and create the body. Using our hands to gently touch very specific locations on the body helps to open the pathway of this energy stream so that it flows, as intended, to maintain health.

JSJ is often referred to as light touch therapy because no pressure is used. We are not directing, forcing, or manipulating the energy. We simply place our hands on the body at specific locations or Safety Energy Locks (SELs), as Mary describes them. The connections made by our hands on our or another's body are metaphorically like jumper cables, helping to recharge run down energy. When blockages occur in the Universal energy that circulates our bodies, it is due to disharmonies caused by our attitudes, injuries, lifestyle, inherited biological issues, effects from the environment around us, etc. By placing our hands on these SELs in specific flow sequences, we help the body to clear away these stuck energies so that harmony can be reestablished. This is analogous to using a key to open a closed lock of a canal so that it can continue its flow.

The light bulb went off for me when I heard these words and the descriptions that Mary used to explain the body. I began to look at my own life, how I was feeling, and what I was doing to create my own disharmonies. It was then that I realized that we must all start with ourselves at the center of our being and move outward. Modern

medicine never taught me that to help others starts with your self. Hippocrates's quote: "Physician Heal Thy Self," is often lost in our present way of living. So, I began to look inward and practice JSJ on myself. As I did this, I began to feel subtle changes in my vitality and overall general health. This naturally led me to share self-help with others; and, hearing their testimonies of healthy changes, added motivation for me to take further classes so that eventually, as my awareness grew, I was comfortable to share my hands (Jumper Cables) with others.

JSJ works on all the layers of the body, mind, and spirit. This includes the subtlest of thoughts and feelings as well as all the layers of tissue of our body, to our very core, center. This is why JSJ is so effective. When we look at our selves, or others, in Western medicine, we approach health by looking at the symptoms that the person is complaining of. But where did these symptoms first come from? The cause of all illness comes from within and on the unmanifested body. JSJ goes to the energetic blueprint to harmonize the flow of energy, and the result is that the physical body will correct or harmonize itself. This is why Mary speaks about JSJ as not doing anything but allow the natural intelligence of our bodies to harmonize.

The primary invisible energy or Main Central Vertical flow circulates the body down the front and up the back. It then divides into two denser streams or Supervisory flows, that go down the front of each side of the body and up the back. The energy then divides into two diagonal or Mediator flows, which circulate, crossing each side of the body, the left to right and right to left. The energy densens down further to what we call the 12 Individualized Body Function level. This level is similar to what in Traditional Oriental Medicine is called Meridians. Energy continues to dense down further to what JSJ calls the Special Body Function Level which helps to build the actual tissue of our bodies. The more we understand, perceive, and work with these Universal Harmonizing energies the more we can live a life filled with Happiness, Longevity and Benevolence. These happen to be the three early translations of JSJ by Master Murai, who later called JSJ the "Art of the Creator for the Compassionate Being."



Figure 19.1. Jed administers a JSJ flow



Figure 19.2. JSJ can assist health projects for any living being

A two-week old deer, named Antony, was injured by a mower. His left front and back legs were broken and tendons severed. There was a bone lost in the back leg that required the insertion of two pins. I had the opportunity to work with Antony during a class I was teaching in Isny, Germany. One of the students, Barbara, was his veterinarian and had to feed him every two hours. I did some simple JSJ holds involving SELs 11&25, 11&15, 8, and 2/25. I worked with Antony for about 10 to 15 minutes and noticed him starting to move the hip. The next day Barbara reported that he had his first normal bowel movement and was able, for the first time, to move his back hip. While working on him the second day I continued the same flows adding some additional SELs for the front leg and back paw. After 10 to 15 minutes Antony stood up and started walking.

From the moment a person contacts me to come in for a session, I begin to pay attention as deeply as I can. Listening to their words and the quality of their voice. When I see the person in my office, I notice their posture, breathing, how they carry themselves, and how they move and situate themselves on a chair or treatment table. I observe symmetry, color, size, proportionality of the body. I lightly touch the body to observe changes in body conformation, temperature, and texture of tissue. All of these observations help me to discern how the energy is flowing in their bodies. I then listen to their energetic pulses by placing my hands on the ventral side of the wrist just below the thumb. Placing three fingers on each wrist, I listen to the Universal energies flowing in them, and how harmonious these flows are circulating and where they may be congested. This practice of pulse listening is commonly used in Eastern Traditional Medicine though it varies with different approaches. The pulses give me an understanding where I need to place my hands to start working to harmonize the person by utilizing flow sequences that were developed by Jiro Murai.

When people come to see me, it is not always because they have a diagnosis or are aware they have a health issue. Often it is because people hear about JSJ or me from others who have found benefit from it and have recommended them coming to see me. This is the best way to advertise one's work – through word of mouth. Some people get JSJ because they may simply want to improve their health or for preventative reasons. Sometimes doctors will recommend me because they have patients that have found improvement. In JSJ we do not diagnose, we simply harmonize the energy. This practice makes it extremely complementary with Allopathic medicine. JSJ is not a substitute for Western Medicine. I always tell people they need to see their Medical Doctors and discuss their medication and diagnoses with them. What often happens as people receive JSJ, is their MDs enquire what they are doing because they observe changes and improvements with blood work, or symptoms lessen, and/or their need for medication reduces. MDs are the best supporters of this work once they see these changes in their patients.

JSJ is growing, not just in private practices, but also in Medical Institutions. JSJ is being incorporated at Morristown Medical Center and Overlook Medical Center as well as the other two Hospitals run by Atlantic Health System in New Jersey. For many years, there have been JSJ practitioners treating both in- and out-patients in these hospitals. JSJ is now in all the ICUs (including medical and surgical ICUs), Emergency Department (ER), cardiac, neurology, oncology, orthopedics, pre-surgery, post-surgery, pediatrics, neonatal, labor and delivery and all medical/surgical floors. Besides receiving sessions, patients are shown self-help that they can use to help relieve discomfort, whether it be emotional stress or physical distress. The reason JSJ has been accepted is because the hospital staff sees direct results from patients using self-help and/or receiving sessions from trained practitioners working in the hospital setting.

Consider patients in their hospital beds or in the ER waiting area who may be experiencing some distress while they are waiting for medical staff. Patients can be shown how to hold something simple, like a finger, to help reduce or alleviate their symptoms. For example, holding the thumb can reduce anxiety and holding the middle finger can relieve pain. It is an amazing gift for patients to learn something they can do on and for themselves. JSJ has been accepted at Morristown Medical Center and Atlantic Health Systems because it works so simply and effectively.

Presently they are doing a study with JSJ for the purpose of replicating Donna Lamke's study: "Not just a theory: the relationship between Jin Shin Jyutsu, self-care training for nurses, stress, physical health, emotional health, and caring efficacy." This study is groundbreaking because researchers are focusing on: "care for the caregiver," which is a huge topic in healthcare right now. Nursing burnout is a large, costly problem; so, by showing that self-care improves bedside care, there are significant implications. This study brings us back to the key premise that, by helping ourselves, we can help others. Also, the Atlantic Health System and the Mary Burmeister Institute have developed a Professional Practitioner Course (2)

J. SCHWARTZ

which has been accepted by the *American Holistic Nurses Association (AHNA)*, for continuing nursing education credits.

These examples are signs of changes in the thinking of the Allopathic institutions supporting the use of different complementary healing approaches to work together both in- and outside of medical institutions. I consider practices such as these as a new paradigm for true holistic medicine.

IRIDOLOGY

In 1991, I was beginning to feel there was something I was neglecting in my own health. I could feel something in my energetic body that I was not addressing but was not sure what that was. It was a deeply intuitive feeling since from all outward signs I was in excellent health. I heard through a friend of mine about a woman, who was an iridologist and herbalist, that he had started going to see. I observed changes in my friend so I felt that it would be valuable for my own health to see this person. Once I saw her, I was really impressed by what she was able to perceive about my physical, emotional, and mental wellbeing. Just by looking at my eyes she knew about old traumas and illnesses. Based on what she saw in my eyes, she gave me suggestions on diet and herbs, which I followed, and as time went by, I experienced a deepening transformation of what I felt missing in my health.

Based on these personal experiences, I began to study Iridology and received mentoring with my iridologist. As I progressed in my learning, I began to make suggestions with clients about their diet and herbs they could use to support themselves. For the last 10 years, I have incorporated iridology into my JSJ practice with clients. When I first see someone, I begin by reading their eyes and then, if they want, I offer suggestions about nutrition and supplements. When people are in a doctor's care, for any medical condition, I recommend they inform and gain approval of their physician before making any changes with their nutrition. After the eye reading, I use JSJ to continue working with them in the session. In this way, I incorporate both modalities in my practice.

The eye is like a map with markings that indicate or represent different areas of the body. Imagine a clock where each slice of the minute hand represents a different body part and then there are seven concentric regions going out from the pupil that represent different zones of body tissue. By looking at the markings in the iris, we can see varying depths of eye tissue representing the quality or health of that area of the body.

There are signs from hieroglyphs on pyramid walls, that the iris was used by Egyptians as a diagnostic tool. In modern western civilization, the earliest iris drawings were by Ignatz von Peczely, a Hungarian doctor who, in 1867, graduated in medicine at the Vienna Medical College. While still a child, von Peczely accidentally broke the leg of an owl and noticed a black mark appearing in the owl's eye at 6 o'clock. This black mark changed over time in form and shading. von Peczely continued observing the irises of patients and gradually was able to develop a map of

the eye correlating areas of the iris to parts of the body. He systematically recorded, correlated, and published his research in a book: *Discoveries in the Realms of Nature and Art of Healing*. von Peczely's 'Iris Chart' was established in 1880. Since then, the charting of the eye has continued to advance, incorporating latest developments that reflect subtler awareness of the relationship to the iris and the whole body.

The eyes allow you to see one's constitution; emotional trauma, structure, old injuries, illnesses, and the condition of all the body tissue, including organ systems, endocrine, structure, lymph, circulatory, and skin. The more advanced the practitioner, the more s/he is able to perceive from the markings in the eye. What we see in the eye is often the preconditions, or the forewarning, that we might be moving in a direction that could lead to medical problems. Although iridology is used all over the world, it is not widely used in the United States, nor is it recognized by most allopathic medical practitioners. However, in Germany, which is probably at the forefront of iridology, there are many doctors who validate its authenticity and effectiveness in helping people.

NUTRITION

Once I've looked at someone's iris, I suggest foods to eat or avoid, as well as recommending herbs that will help work on specific weaknesses I've seen in their eyes. People have been taking herbs/plants for thousands and thousands of years for medicinal purposes. This knowledge of the healing properties and use of herbs/plants can be seen in every culture throughout the world. It is possibly the oldest form of medicine and not specifically limited to human beings. When a wild or domesticated animal is ill, it will often search out and eat a specific plant or grass, and either regurgitate it or go somewhere to rest. Those of you who have cleaned up after your dogs and cats are keenly aware of this. How do they know what to eat and for what purpose? Is it accidental or does it come from some deeper knowledge passed on from their ancestors or some communion with nature that tells them what each plant is for? Ultimately, this is a deeply, earth-connected consciousness with which most modern human beings no longer stay connected. In our modern culture, we have come to depend on others to help us, rather than rely on our ability to help ourselves, or find help in nature.

When I suggest a diet for someone, I need to look at their lifestyle and what is feasible for them to accomplish. It does not make any sense to suggest something that they will never be able to do. Food is fuel. Just like the gas we put in our automobiles to run our engines. The better quality the fuel, the better and cleaner the vehicle will run. If you know your vehicle, you will get the best performance from it. But most people do not know what is best for them and that is where the problems can develop. We learn to eat from desire and not from awareness of what our bodies need. This practice is like having a high-performance vehicle and putting in low octane fuel. The vehicle is not going to run well, or for very long, without lots of visits and expenses at the repair shop. It is the same with us. Simplify the food we

J. SCHWARTZ

eat to include more natural whole foods, vegetables, some fruits, whole grains, and less processed foods. The more alive the food, the better. For those who eat animal protein, the leaner and more organic the better. Removing inflammatory foods, such as sugar and sugar substitutes, dairy, and wheat can support people's healing. Not everyone is willing to change what they eat, as it requires discipline, willpower, and education. The food we eat often has a lot of relationships to our memories and emotions so for many people it is good to work with a psychotherapist as they go through this process. It is hard to truly heal ourselves, not just stop the symptoms with medication when we continue to eat foods that can be toxic to our systems. Not every diet is for every person, so I give specific suggestions to each person I see. That is the benefit of working with knowledgeable professionals, rather than changing one's diet arbitrarily.

What I practice is a way that people can "Know Themselves," and take responsibility for their own health. I see my primary duty as an educator. Showing people how to help themselves with JSJ self-help tools, like holding their fingers or placing their hands on specific areas of body to promote self-healing. For example, someone who injured her knee just called me as I was writing this chapter. I simply told her to hold her hands on either side of the injured knee, sandwiching it in a diagonal and to do this for as long as possible while resting. In a short time, this simple application helped her to reduce pain and inflammation in the knee. Suggesting dietary programs and herbs allows the people to be able to be in control of themselves. It is empowering when we learn things to care for ourselves rather than to be dependent on others.

APPLICATIONS OF COMPLEMENTARY APPROACHES

The recommendations I give to clients are based on observations that I've discussed previously in this chapter. Each person receives a very individualized program and treatment plan. Because of this, I am not giving much detail in the following examples as I do not want readers to make assumptions that they should eat a certain way or take certain herbs or supplements without seeing a trained practitioner or consulting their medical professional.

Even though I Am Taking Medicine the Symptoms Persist

Someone called me who was recently released from the hospital after a bout of irritable bowel, bleeding ulcer, and acid stomach issues. He was still not feeling well and was experiencing many of the symptoms he went into the hospital for despite taking medications that had been prescribed by his physician. The doctors were not offering him any suggestions other than to wait and see if the medications kick in. I suggested a simple tea of Chamomile along with Chlorophyll, Slippery Elm, and a few other herbs. Also, I suggested he eliminate sugar, wheat, and dairy from his diet. I recommended he use a simple JSJ hold of one hand on his shoulder, and the

other hand on his sit bone. Both hands were placed on the same side of his body. After one day of doing as I suggested, his discomfort went away. He came in for an eye reading and JSJ session, after which his vitality returned and some discomfort abated. He went on a more detailed program of diet, herbs, and self-help JSJ. He began to feel better than he had in years and was able to resume his normal active life. After his last medical checkup, his doctor also was impressed, and suggested ending his medication.

The Need for Prescription Medicine Disappeared

A woman, who had a chronic liver enzyme problem, came into see me. Her doctor wanted her to go on medication if the liver enzyme levels got any higher. She came to see me and after reading her iris and assessing what weaknesses were affecting her system, I recommended specific herbal and dietary support. The herbs were to support her liver (e.g., Milk Thistle) and the other systems of elimination in the body. She was also having pain in the right abdominal area, which we began to work on with JSJ sessions as well as daily self-help homework. In less than a month, she experienced little to no pain. After 6 months, her cholesterol and liver enzyme levels began to normalize. She has continued following the nutritional protocol and, at each medical checkup, her physician has continued to see improvement. She did not need to go on medication.

Stroke

My mother was in her 90s when my sister, who is also a JSJ practitioner, found her one morning unable to move her left side or speak. She appeared to have had a stroke. To move the energy, we immediately began to give our mother herbs and JSJ throughout the day. She slept through the day and night, and when my sister went to check on her in the morning, other than feeling a bit tired, she was speaking and feeling fine. Mom had no memory of anything from the previous day. We continued to give her JSJ and supplements. When she went to her MD, he could not believe that she might have had a stroke by the way she was now functioning. My mother's MD began to open up to the power of JSJ and nutrition by how well my mother was doing.

I was doing some volunteer work at a foundation in upstate NY when a neighbor who lived nearby called me to say her 83-year-old husband was having a stroke at just that moment. She asked me if I could come over to help. They were several minutes away, and I said I'd be right over to work with him and help get him to the car to go to the hospital.

When I arrived, I found him seated in a chair with his left side paralyzed, the left side of his face was drooping, he could not close his mouth, and his speech was slurred. I immediately started giving him JSJ while his wife prepared to take him to the hospital.

J. SCHWARTZ

Since this was a rural area, there were no adequate medical facilities closer than 1½ hours away. I began holding the outside of his ankle (SEL 16) and the little toe. This helped to clear the energy blockages in his head. Within 5 minutes we all began to observe improvement with his facial tone, swallowing, and speech. The change was so dramatic that he and his wife wanted to wait longer for me to finish. As the minutes went by he continued to say he felt better and better, and he began moving and using the parts of his body that were involved. After 45 minutes, he was able to stand and we could walk with him to the car. I gave him some simple self-help to do while he was being driven to the hospital, and for the wait to see a doctor. She called me that evening after returning from the hospital to say that by the time the doctors were able to examine him, they were unable to detect any symptoms that she described him having. They released him. After he got back home, I showed them both self-help they could continue to use. What is beautiful about this example, is the ability we have to help ourselves, no matter where we are.

Respiratory Issues

My mother developed a bad respiratory infection and went with my sister to see her MD. Once he examined her, he said that normally he would put her in the hospital, but because my sister was using JSJ and herbs, my mother had a better chance of regaining good health at home than being exposed to all the problems that come with hospitalization. Mom was clear after a week of intensive JSJ, twice to three times a day, and intensive herbs for infections and to support the respiratory system. When mom went back to see her MD, he was most impressed with the progress. This partnership, involving Allopathic Medicine and Natural Medicine, promoted a powerful relationship between patient, family, and her medical professional.

Broken Ankle

Another example is a client and JSJ student of mine who leads wilderness canoe trips in Canada. He and his group are dropped off by plane in remote areas that are often days and weeks from civilization and sometimes radio contact. On one of his trips he severely broke his ankle. With self-help JSJ and his knowledge to tell people where to place their hands on his body, he was able to clear the pain and reduce the swelling. With his first aid knowledge, he was able to splint the leg and get back to medical help. He told me that without the JSJ it may have not have worked out so successfully.

Skin Burns

A friend called me that her 2-year-old had knocked over some boiling liquid from the stove and burned the front of her chest. I suggested that she get her daughter comfortable on the bed and to go to her daughter's feet and place her hands on the

back side of her calves, fingers toward the head. This JSJ application helps clear the burn and regenerate the skin. I checked in with her periodically throughout the day and she told me that within 15 minutes of palming the calves the daughter stopped crying and fell asleep. She continued holding and over several hours observed the area that was burned transforming. She later told me she fell asleep in this position for several hours and when she woke up the skin had now changed to a pink color of new skin and there was no sign of the burn. She took her daughter to the doctor who found it difficult to believe it was a fresh burn since this area looked as though it was an older wound that had healed.

Abdominal Pains

I received a call from someone I knew, who was in the hospital with extreme pain in her abdomen. She was diagnosed with Pancreatitis and was given medicine, which relieved some of the pain, but not all of it. She wanted to come in for a session. I observed in her eye a lot of inflammation and poor digestion. I shared JSJ with her to relieve the congestion in her abdominal area. During the session, her discomfort went away. I gave her self-help to continue with at home. Also, to calm her digestive system, I suggested a very simple diet and some specific herbs. She accepted my suggestions and continued to get better and better. Whenever she goes back to her former ways of eating (e.g., consuming dairy, sugar etc.), her abdomen begins to feel uncomfortable and reminds her that she still needs to eat in a more harmonious way. Often, when we feel free of symptoms, it does not mean that the body has completed the healing process. So, going back to old patterns can sometimes result in the old issues returning.

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ABOUT THE AUTHOR



Jed Schwartz went to the University of Maryland, College Park, in 1972. In 1977, he graduated from the School of Allied Health, majoring in Physical Therapy, with a specialization in Pediatrics. Jed worked from 1977 to 1978 in the Baltimore County Public Schools and then from 1978 to 1987 at Blythedale Children’s Hospital in Valhalla, NY. In 1981 he met Mary Burmeister and began studying Jin Shin Jyutsu. Jed became a practitioner of Jin Shin Jyutsu in 1984 and in order to commit to full time study and practice, in 1987, he discontinued his work in

J. SCHWARTZ

Physical Therapy. In 1995 Jed joined the faculty of Jin Shin Jyutsu Inc. in Scottsdale Arizona (now the Mary Burmeister Jin Shin Jyutsu Institute). Jed teaches JSJ classes in North and South America, Europe, the Middle East, Asia, and New Zealand. Jed began studying Iridology with Dr. Bernard Jensen in 1993 and continues studying Iridology with his Mentor.

Jed has a full time Jin Shin Jyutsu practice in New York City and Woodstock, New York. He and his wife, Lois reside in Woodstock, New York.

MAŁGORZATA POWIETRZYŃSKA

20. TAKING CHARGE OF OUR OWN WELLNESS THROUGH COMPLEMENTARY APPROACHES

An (Inter)Personal Narrative

ABSTRACT

This manuscript is a complement to the previous chapter authored by Jed Schwartz – a JSJ practitioner | educator, herbalist, and iridologist (Chapter 19 in this volume). As an academic who has been struggling with a condition that Western medicine is unable to diagnose and cure, I provide a receiver’s perspective on Jed’s multilogical approach to wellness. I also describe the way I (and others) experience and understand complementary methods of healing vis-à-vis Western medicine. Included is a brief metalogue that represents an individual journey towards recovery after a major health setback.

Keywords: Jin Shin Jyutsu, complementary healing methods, iridology, self-help, Western medicine

A VISIT WITH JED

A visit with Jed is an experience like no other. Its comforting uniqueness commences right “at the door.” Jed comes out of his office and greets me as if I were his dearest friend or his most beloved family member. He makes me feel as if I were this extraordinarily special person he is most happy and grateful to see. Already these very first moments of togetherness fill me with a sense of warmth and peace. Once in his office, Jed sits me on a stool right across from where he is seated, also on a stool. Then, he engages me in a caring, unhurried dialogue around my state of health (unlike the majority of my doctors, Jed devotes a full hour to me). We are in very close proximity and, as I talk and he listens, Jed may occasionally gently squeeze my elbow in a gesture of reassurance and encouragement. Notwithstanding the tight dimensions of the tiny space we are in, I come to understand that Jed needs me within arm’s reach, not only to create a connection between us, but also because he will eventually proceed to intently examine each of my irises. Indeed, Jed’s holistic and multilogical approach to wellbeing continues to unfold when, with a precision of a jeweler or a watchmaker, he uses a loupe to delicately peer into my irises that I know serve as his windows into my body (the physical) and my

M. POWIETRZYŃSKA

soul (the energetic, emotional, mental, and spiritual) (Figure 20.1). He then shares with me what he sees and invites me to become the “self-seer” as he explains how changes in each iris may point to developing health projects in my body (e.g., organ inflammation, rampant candida, or a shut lymph system). Armed with a simple, hand-held instrument consisting of a magnifying glass set in a crookedly shaped wooden handle that shows signs of frequent use having been held by multiple hands of Jed’s clients (Figure 20.2), I am looking into my irises and I symbolically begin a journey to becoming not merely Jed’s partner in addressing my health projects but most notably a person taking charge of my own healing. It is not a coincidence that Jin Shin Jyutsu (JSJ) practitioners refer to and treat imbalances as projects (rather than *diseases*). Using such nomenclature implies mutual, collaborative, and active engagement in working through the project by the practitioner and the receiver (i.e., patient) as equal partners.



Figure 20.1. Jed examining my iris

To that end, we move to the next set of modalities. Fully dressed, I lie down on my back on a massage table, a big, fluffy pillow underneath my knees. The table is lined with a thin foam mattress, which makes it easier for Jed to slide his hands underneath my body in order to access SELs (Safety Energy Locks) that are located there. Before applying JSJ holds, Jed surveys my body checking for asymmetries and irregularities, such as raised knuckles on my hands, that may



Figure 20.2. A self-examination tool

further inform his assessment of my state of health. He then places his hands around my wrists in order to read my pulses (Figure 20.3). Each of his index, middle, and ring fingers is positioned in a location that corresponds to a specific organ in my body (for example, the middle finger of left hand is for a gall bladder or liver function energy) (Burmeister, 2015). Pulses provide additional insights into the in-the-moment condition of my organs (see Chapter 22 by Ken Tobin & Nick Ansari in this volume). In my experience, pulse reading (which is distinct from feeling the pulse as an expression of one's heart rate) is widely used by practitioners of many complementary modalities, including acupuncture. Jed has mastered the art of interpreting specific quality, patterns, and strength of the pulses. Usually, he will focus on the organ(s) that appear to call for most attention, i.e., the respective pulses are out of the ordinary. Burmeister (2015) instructs, "When body is not in balance, left and/or right pulses will be rapid, uneven, heavy, disorderly, missing, or fading out, indicating disharmony" (p. 5). The importance of pulse listening is emphasized by an Australian-based practitioner Maria Miniello (Chapter 17 in this volume). She notes,

Pulse listening is a fundamental component of a JSJ session and is the closest communication you will have with the receiver. They are the whisperings of the past and the future and how these two are integrated with the present – the NOW.



Figure 20.3. Pulse reading

Informed by this thorough assessment (based in my description of symptoms, iridology, body scan, pulse reading), Jed proceeds to meticulously apply JSJ holds and flows. Generally, the touches are light, since, unlike acupressure, JSJ does not require concentrated pressure. Occasionally, however, certain holds/touches may manifest themselves in considerable discomfort as acknowledged by Jed even though he reassures me that the quality and strength of the hold is no different than those he applies to other spots. I come to understand that the area, which Jed is a true master in locating, is in disharmony due to a blockage(s) of the universal energy flow. Indeed, Donna Lamke and colleagues (2014) describe JSJ as “a time-honored, comprehensive healing art similar to acupressure, which uses hand contact at specific locations to harmonize the flow of vital energy circulating through the body in organized pathways” (p. 279). Of note is that the authors refer to JSJ as healing *art*. As remarked by multiple authors in this volume (e.g., Maria Miniello in Chapter 17, Ferzileta Gjika in Chapter 21, Ken Tobin & Nick Ansari in Chapter 22), JSJ cannot be framed or practiced as merely a set of techniques; instead, it requires the practitioner to develop ability to tune into and flexibly respond to each body’s in-the-moment state that is subject to dynamic changes. Thus, it is impossible to preplan what needs to happen in each session, but rather every visit/session becomes a unique experience. As Jed applies holds and flows, he and I may stay quiet, or we may engage in a calm conversation. Jed has a knack for storytelling and over the

years of his practice he has amassed quite a portfolio of uplifting stories of good life and healing. Every time, like a magician, he is able to dazzle me with a story he pulls out of a hat.

Since it is I who is in charge of my wellbeing, our visit concludes with homework assignments in the form of specific self-help JSJ holds, and a regimen of herbal supplements, and dietary recommendations. The program is quite rigorous and, I must admit, it requires a fair amount of self-discipline. For example, in the initial stages, I am advised to stay away from dairy, wheat, pork, and beef as well as any form of sugar (including fruits and alcohol). At the same time, I'm advised to supplement my diet with a variety of herbs and vitamins and to apply JSJ holds on a daily basis. Jed often reminds me that disharmonies develop over long years as we abuse our body, exposing it to stress and poor diet, and depriving it of proper amounts of sleep, rest, and exercise. Therefore, we cannot expect the road to recovery to be short and simple. It takes time for the combination of JSJ holds and flows, diet, and herbs to work their "magic" (or, as Jed often says, to "clean out the house"). Thus, one needs to be patient and consistent with the program as it works quite differently than the pharmaceuticals, which may provide instantaneous relief (mostly by targeting the symptoms rather than the root of the problem while often causing undesirable side effects).

My visit ends with a friendly hug and I leave blissfully elevated, reassured that, for the most part, my health is in my hands. Jed's approach reminds me a little of that of Denton Cooley, a cardiologist who, as reported by Warren Spiser and Andi Lew (2008), had phenomenal results with his patients. Everyone wondered about Cooley's unprecedented success only to discover that the secret was not only in his surgical technique or expertise but mostly in the way he interacted with and treated his patients. After each surgery, Cooley was known to spend considerable amount of time with each patient. He sat by a patient's bed, held and gently stroked her hand while reassuring her that she was on a definite path to recovery. It's very easy for healthcare providers, such as doctors and nurses, to lose compassion for other human beings. I often think of a story my college friend, Anita, shared a few months into her "battle" with pancreatic cancer. Anita reminisced about two doctors' approaches to her *disease*: while one dismissingly and cruelly referred to her condition as a case of a "really bad luck" and gave her no hope for recovery, the other doctor became her "go to" confidant whom she was welcome to contact anytime she needed someone to talk to. My friend died within less than a year following her diagnosis, but the quality of the last months of her life were surely enhanced by the "go to" doctor who saw her as a human being rather than a hopeless "cancer case." As noted by Jed (Schwartz, Chapter 19), the complementary, holistic approaches to healing stand in stark contrast to potentially damaging effects of the fragmented, rational-specialist-driven ways of Western medicine, which is narrowly preoccupied with dealing with discrete health problems (as opposed to overall wellness). In this context, I am reminded of Jeremy Narby's fascinating volume that explores indigenous ways of knowing. Narby (1998) explains,

[T]he rational gaze is forever focalized and can examine only one thing at a time. It separates things to understand them, including the truly complementary. It is the gaze of the specialist, who sees the fine grain of a necessarily restricted field of vision. (p. 77)

Not all hope is lost, however. Some Western medicine specialists experiment with more humanistic approaches to interacting with their patients. Federica Raia and Mario Deng (2016) demonstrate that it is quite possible for a doctor in “high-tech modern medical encounters” to actually “zoom in from the person-level to the organ, tissue, cell and molecular gene levels; and then out again, back to the whole person level” (p. 236). Raia and Deng use rituals in which Deng engages (in his work as a cardiologist specialized in the care of patients with advanced heart failure, mechanical circulatory support devices, and heart transplantation) to illustrate how mindfulness practice of centering oneself may assist the doctor in establishing a doctor-patient relationship characterized by attunement and synchronization to the Other (patient) in a series of encounters they refer to as *Relational Acts*.

Needless to say, Jed is a deeply mindful and spiritual person. Mindfulness affords connecting and empathizing with others through going inside oneself. When quite recently I was anxiously awaiting the results of a CT scan after a doctor identified a mass in my abdomen, I reached out to Jed to help me cope with a very fragile emotional state of absolute panic (possibly similar to the experience described in Chapter 18 by Pamela Proscia). He suggested, “This is the time to use your mindfulness practice. Imagine your abdomen filled with light dissolving all substances that are not to your benefit.” For reasons unknown to me (perhaps because I don’t consider myself a very spiritual person), engaging in visualizations is not something I excel in. Thus, when faced with fruitless attempts to imagine this internal light, I sought further guidance from Jed. His simple advice to think about the sun turned out to be what I needed to “get it.” This event reminded me that entering and interacting with our interior self (i.e., being mindful) is an endeavor unique to each of us and we each need to identify our own “tricks” of getting and being there.

IS IT ALL IN MY HEAD? – WHAT BROUGHT ME TO JED

I have been living with an undiagnosed digestive tract condition for over two years. During that time, I have visited several medical doctors (both in the United States & in Poland) including numerous gastroenterologists recommended by family and friends. The doctors, who appeared to have every good intention to ease my suffering, ordered test after test from a multitude of possibilities in their respective portfolios. However, even though the test results kept coming back as negative, my symptoms were persisting. As the diagnosis was eluding them, some of the puzzled doctors would prescribe medication for me to “try out.” Baffled by this strategy, I refused to take the pills as I wondered why someone would recommend a drug without knowing what he was attempting to treat. I was troubled even more,

however, by suggestions that my condition was psychosomatic. In an interview with NPR Radio's Lulu Garcia-Navarro, Suzanne O'Sullivan, a neurologist and an author of a book *Is It All In Your Head*, defines psychosomatic illness as,

a disorder in which people get real physical symptoms that cannot be explained by physical examination or medical tests. No disease can be found to explain them. And there is usually believed to be a psychological or behavioral cause. (Garcia-Navarro, 2017)

While I acknowledge that there is a strong body-mind connection, I rejected (and was quite offended by) an insinuation that I was making myself feel sick by imagining my symptoms (particularly because, as I noted earlier, I am not a very imagination prone individual). Admittedly, like my dad, I am a bit of a hypochondriac, but in the fifty plus years of my life, I have not dealt with such a concentrated, consistent, and long-term set of indicators of being unwell. I reasoned that the condition, which (among other symptoms) manifests itself as pain intense enough to jolt me out of deep sleep every night, must have its root in imbalance in my body rather than being a product of my psyche. As I was dealing with the relatively low quality of life and uncertainty around it, my ears always perked up when I heard about people experiencing similar circumstances. Such was the case when driving from work one evening, I heard an episode of TED Radio Hour, which featured a story of individual persistence and scholarship that afforded self-diagnosing of an otherwise undiagnosed condition. Similar to me, the story's protagonist, Jennifer Brea, was experiencing severely debilitating symptoms without any medically explainable cause. Unable to pinpoint the problem, her doctor diagnosed her with *conversion disorder*, which, as Brea explains, until 1980 was referred to as female hysteria. Brea notes that by making the diagnosis,

the doctor was invoking a lineage of ideas about women's bodies that are over 2,500 years old. (...) The problem with the theory of hysteria, or psychogenic illness, is that it can never be proven. It is, by definition, the absence of evidence. (Raz, 2017)

Evidently, *conversion disorder* (where a mental/emotional incident "converts" to a physical problem) is also called *functional neurological symptom disorder* (Mayo Clinic, 2014), a label used in reference to my condition by a physician in my most recent attempt of seeking a diagnosis. It is troubling to me that, while surprisingly the doctor spent a considerable amount of time with me during the initial visit, he never endeavored to explain what he meant by this diagnosis. Oftentimes, the perceived power difference (that may stem from the doctor thinking of himself as an expert and not perceiving his patient as an equal partner in a medical transaction) prevents doctors from engaging in a dialogue in which both parties' contributions are considered essential for developing a better understanding of what might be going on. It seems to me that when doctors resort to suggesting that a mental disorder (which in itself carries a myriad of socially constructed negative associations and

assumptions) is the cause of physical symptoms, they shift the burden of dealing with the condition from themselves to a patient (i.e., it's all in the patient's head so she better work on getting it out of there). This blame-the-victim approach relieves the practitioner from the responsibility of perhaps going beyond the obvious (i.e., what works in the majority of cases) in investigating the underlying cause of a condition. I am not suggesting that medical doctors lack care or compassion towards their patients. Rather, I understand that they work within the limitations of a modern biomedical framework as well as profit-driven structures of healthcare systems. At the same time, faced with the absence of evidence that something is indeed wrong with me (the tools available to Western medicine say otherwise), I often find myself feeling helpless and humiliated whenever my complaints continue to be dismissed as unfounded.

As noted by Pamela Proscia in this volume (Chapter 18), becoming agentic in matters of our wellness may prove quite liberating. In Brea's case, engagement in intensive research led her to identifying a set of scholarly manuscripts that addressed symptoms consistent with hers. Accordingly, she appeared to be afflicted with *myalgic encephalomyelitis* also known as a *chronic fatigue syndrome* – an ailment, which Brea discovered, is not included in mainstream medical school curricula. Once she knew the label, Brea was able to locate a doctor who specialized in treating this rare affliction and thus provide desperately needed help.

As I describe in the opening section of this chapter, my way of employing agency was to seek complementary ways of healing. To that end I underwent a series of acupuncture treatments first from a Chinese and later a Korean practitioner each of whom applied quite distinct techniques. I also had a brief encounter with osteopathy. Eventually, however, I decided to turn to Jed's multilogical approach. As I was stepping onto this new path, I needed to accept that Jed would not offer a label for my condition. This required a considerable shift in the here's-your-diagnosis-and-a-medication-for-it thinking many of us are conditioned to adopt in the context of Western medicine. Indeed, early on into our experience with and research on JSJ, Ken commiserated with me as he shared the challenge associated with attachments to labels:

For me it [relinquishing the need for labels] requires a paradigm shift in my way of thinking about health projects. For the moment I am setting aside any need for labels in the Western sense. This helps me to deal with Jed. I think it is also an example of being mindful and not getting stuck on a need for labels. It is a complicated situation because others expect me to have labels and I want to satisfy others because they often roll their eyes when I give an explanation in terms of stabilizing energy flows. I am not saying that you need to fold into line with what I am trying to do. I guess I am just trying to make sense of your experience together with mine. (...) As best I can make sense of this it is an example of the hegemony of mainstream thinking. (K. Tobin, personal communication, 8 May, 2015)

Accordingly, healing is framed as a holistic process with our mind (which is in a dialectical relationship with our body) playing an important role. Nourished by Jed's caring attention and encouragement, the mind is what helps one heal.

RIPPLE EFFECTS – A BRIEF CONVERSATION ABOUT HEALING

I consider myself a fairly compassionate person who is attuned with and responsive to the needs of people around me. As illustrated by Jambay Lhamo and her colleagues in Chapter 5 of this volume, altruistic dispositions (which have a particular significance in the highly relational field of education) may be developed and/or sharpened through engaging in mindfulness-based practices. As an academic, I have had a good fortune of working within a tradition of authentic inquiry which places on the researcher an ethical responsibility to share with other fellow beings any knowledge (she develops and/or acquires) that may be of benefit to them (see, for example, the Diabetes Type 2 work of Tobin and Ansari in Chapter 22 as well as mindfulness in teacher education undertaken by Linda Noble and I and reported in Chapter 8). The goal is to create ripple effects whereby we coparticipate in adopting and applying practices (whenever deemed appropriate and necessary) that may improve the quality of individual and collective lives. Admittedly, Jin Shin Jyutsu represents an extensive and complex epistemological system, which takes considerable amount of study and practice to master. Unlike Jed Schwartz, Ken Tobin, or Maria Miniello (all chapter authors in this volume), I have very rudimentary understanding of JSJ. At the same time, I have witnessed and experienced the benefits of the practice. Thus, whenever I am confronted with the suffering of people within my circle, I offer information about JSJ self-help, including application of the Main Central Flow (cf. Chapter 21 by Ferzileta Gjika) and finger holds for balancing the body and mind. Oftentimes, I reach out to Jed and Ken for a recommendation of more targeted and sophisticated holds and flows that may address a particular condition (i.e., high blood pressure, heel spur, allergies, or something as serious as ischemic stroke which was recently suffered by my best friend's sister). I'm always amazed with the speed and depth of a response I receive from Jed and Ken, which makes it possible for me to pass that information on to the person in question. It is then up to the recipient to elect to follow the suggestions or not. Not infrequently, the idea that placing hands on certain areas of the body may mediate wellbeing is met with a significant dose of skepticism. For example, my sister, whose health is far from being perfect, outright laughs or makes patronizing remarks whenever I try to make JSJ-based suggestions for her or someone in our family. I had to also accept that my ex-husband, whose story of mental health recovery through application of meditation practice I report elsewhere (Powietrzynska, 2016), refuses to even experiment with JSJ modalities. My partner, Alex, on the other hand, represents a category of people who embrace the practice (along with other complementary methods of healing) and they do so by accepting it at face value. I close this chapter with a brief conversation in which Alex shares his experiences related to ill health and healing.

Małgorzata: You have been seeing Jed for quite a while now. Do you recall your first encounter with JSJ?

Alex: I do, quite vividly. I remember talking to your advisor, Ken Tobin, at the party celebrating your successful doctoral defense back in June 2014. On that occasion, knowing that Ken had an interest in improving wellness through alternative methods, I mentioned to him that I was suffering from frequently occurring sharp, stabbing pains on the right side of my head. I added that while a laryngologist claimed that the pain was caused by sinus problems, a drug he prescribed did not appear to bring any relief. Indeed, the pain was so intense that I thought I had a brain tumor. Having listened to me attentively, Ken responded by asking whether I would consider Jin Shin Jyutsu self-help as an alternative. Intrigued I asked what he meant. Right there, in the middle of the party, he proceeded to teach me a relevant hold by demonstrating where on my body I needed to place my fingers. Subsequent to this event, I began applying the hold while lying in bed before going to sleep or when relaxing in front of the TV. However, I cannot say that initially I was very consistent with it, particularly because I was never certain whether I was doing it correctly.

Małgorzata: In addition to being an act of compassion, Ken empathizing with you and feeling the need to mediate your suffering by instantly demonstrating the hold may be framed as an example of following the principles of authentic inquiry. And, yes, your first encounters with JSJ were somewhat challenging, as you did not seem to be able to retain the exact location of SELs that were involved with this specific hold. Thus, you kept asking me for help with determining the proper positioning of your hands and, I must admit, sometimes it was quite entertaining seeing you apply your own variation of the hold. At the time, you had no formal knowledge about JSJ. For example, you did not know that the target spots were associated with what JSJ refers to as Safety Energy Locks. Of course that knowledge is not necessary because each hold may be explained through descriptive demonstration, as was the case at the party. I wonder, however, why you weren't skeptical about a healing potential of self-help in the form of a simple touch. Many people react to the idea of JSJ with a huge dose of cynicism.

Alex: I have always been quite open to complementary methods of healing. Even though I'm not an academic, I enjoy self-study and learning. Accordingly, I have read quite a number of books that challenge conventional medicine, which is often driven by the interests of powerful pharmaceutical companies. I also saw some parallels between what people do "naturally" in their daily lives as they place their hands on various parts of the body (i.e., sitting on hands to calm oneself). JSJ just provided meaning to the holds I observed people engaging in. Furthermore, long before I met Ken, I was a witness to a family member benefitting from alternative medicine. My brother-in law,

Adam, who resides in Poland, suffered two serious strokes and was able to return to nearly normal functioning by undergoing treatment by a Russian-educated medical doctor who practiced iridology and homeopathy.

Małgorzata: Indeed, it's hard to tell that Adam had ever been affected by paralysis of his entire right side; his recovery is quite remarkable considering that he relied on alternative methods almost exclusively. I remember you referring to the practitioner who was assisting your brother-in-law as "a man who peered into people's eyes." At the time, I did not quite understand what you meant by it. It was not until much later that one of the research squad members introduced me along with other doctoral students to the concept of iridology. After I studied some recommended iridology-related sources, I was finally able to determine that the Russian-trained healer practiced an ages-old art in which eyes are said to serve as "windows of the soul." Marion "Micki" Jones, an American nutritionist, herbologist, iridologist, and an author of an Iridology.com website, explains:

By means of this art/science, an iridologist (one who studies the coloration and fiber structure of the eye) can tell an individual his/her inherited and acquired tendencies towards health and disease, his/her current condition in general, and the state of every organ in particular. (Jones, n.d.)

As I comment elsewhere (Powietrzynska, Tobin, & Alexakos, 2015), when it comes to unconventional ways of healing, I try to seek some evidence of its legitimacy. In your case, it took a close call to entrust your wellbeing to the wisdom based in the Eastern knowledge system.

Alex: That's right. On October 2015, I suffered a heart attack and underwent a stent insertion surgery. It was quite a shock to me as I lead what I considered a healthy life style: I watched my diet, I exercised, and I never smoked or overused alcohol. My only "vice" was a highly stressful life as an owner of a relatively small business.

Małgorzata: Well, our biology is such that living in a constant state of anxiety and other negative emotions catalyzed by stress poses serious health risks. In her *Beginner's Guide to Polyvagal Theory*, Deborah Dana (2015) notes:

Our sympathetic branch of the autonomic nervous systems activates when we feel a stirring of unease, when something triggers a neuroception of danger. We go into action. Fight and flight happens here. In this state our heart rate speeds up, our breath is short and shallow, we scan our environment looking for danger, we are "on the move." I might describe myself as anxious or angry and feel the rush of adrenaline that makes it hard for me to be still. I am listening for sounds of danger and don't hear the sounds of friendly voices. (...) Health consequences [of frequently experiencing this state] can include heart disease, high blood pressure, high cholesterol, sleep problems, weight gain, memory

impairment, headache, chronic neck, shoulder, and back tension, stomach problems, and increased vulnerability to illness.

In chapter 22, Ken provides a more detailed account of polyvagal theory as a potential framework for understanding and treating health projects such as Diabetes Type 2. Similarly, the polyvagal theory serves as a theoretical framework for Liat Zitron and Yu Gao (Chapter 24) who present research that explores a connection between engagement in mindfulness practices and physiological regulation. Suffice to say, repeated stress, or what Richard Davidson and colleagues (MLERN, 2012) refer to as *allostatic load*, makes it impossible for one's system to return to and/or maintain equilibrium.

Alex: Indeed, learning this lesson nearly cost me my life. This turn of events gave me pause and upon release from the hospital, I began following the recommendations of Western medicine, which included having to take several pharmaceutical drugs such as blood thinners as well as medication to decrease cholesterol level. Within a few weeks of embarking on this regimen, however, I noticed that my short-term memory got negatively impacted. In addition, soon after, I developed a nagging, dry cough. When my doctor sent me for an X-ray, it revealed changes on my lungs. As various additional symptoms were developing, I began to study the side effects of the drugs being prescribed for me. I discovered, for example, that one of the medications was responsible for causing increased levels of cholesterol. I found it quite puzzling that I was prescribed another medication to lower my cholesterol level. It became very clear that the combination of drugs prescribed by my doctors, which was meant to help one condition (my weakened heart), was at the same time causing quite another set of health problems. I also noticed that the specialists I was being referred to were working in isolation each seemingly treating the side effects of drugs prescribed by their colleague. What's more, each visit seemed to boil down to 15 minutes of face time with a doctor followed by a steep bill to the insurance company. It was then that I decided to turn to alternative modalities. I started seeing Jed three months after the heart attack. So it has been over a year since I embarked on a journey of diligently following the recommended diet and taking all the prescribed herbs and supplements. I have also been doing my JSJ "homework," i.e., applying a daily dose of self-help holds. At my recent visit, having examined my eyes, Jed explained that the changes in diet, together with my adherence to herbs and supplements appeared to be complementing JSJ to produce changes in the iris. He suggested (and I complied) that I discuss with my cardiologist the health improvements I was experiencing, along with the intervention I had adhered to, in relation to his diagnoses of my current condition. I'm determined to stay the course and deepen my commitment to healthy living. To that end, I'm currently reading a book by Sandy C. Newbigging: *Body Calm: The Modern-Day Meditation Technique that Gives You the Best from Your Body for Life* which introduces the

TAKING CHARGE OF OUR OWN WELLNESS THROUGH COMPLEMENTARY APPROACHES

reader to “a powerful way to use the mind-body connection to help your body heal and stay healthy” (Newbigging, 2016). Undoubtedly, Western medicine saved my life. It is now my turn to take charge of my own wellness.

CREATING HEALTH 101 – FROM A SCIENCE OF TREATING DISEASE TO A SCIENCE OF HEALTH

We desperately need to change the way we approach wellness and there is some encouraging work emerging from progressive healthcare professionals. In a recent interview (Tippett, 2015), three visionaries (Penny Pilgrim George, James Gordon, & Mark Hyman), who are at the forefront of a major paradigm shift, discuss their respective approaches (i.e., integrative medicine, mind-body medicine, and functional medicine) to aligning medicine with a 21st-century grasp of human wholeness. They promote a systems view of health based on dealing with the causes and not just the symptoms, treating the body as ecosystem, and looking at the whole organism, not just the organs. They acknowledge that disease arises from an imbalance in the system and they see their role as that of “soil farmers” (as opposed to an industrial agriculturist putting chemicals on the plant) taking care of the soil so disease can’t occur, or it goes away as a side effect of creating health. Simple ingredients, including the right food, the right nutrients, the right balance of hormones, light, air, water, connection, sleep, movement, love, community, meaning, purpose is what makes for healthy humans. And the paradigm shift (which may be as big as accepting that the Earth is not flat, or the Earth is not the center of the universe) lies in dismantling our Western concepts of disease including our deepest assumption that there’s a pill for every ill and we just have to figure out what it is. In their view, health, which is a piece of wellbeing, doesn’t happen in the doctor’s office. Rather, it happens in our kitchens, grocery stores, communities, workplaces and schools and it rests on individuals taking charge of their own wellness, going back to what’s basic, and integrating the wisdom of ancient systems of healing. One solution to shifting our way of thinking about wellbeing is through education of not only our physicians but most importantly of all our children, and teaching skill sets that we currently don’t teach. Chapter authors in this volume are doing just that; by sharing their knowledge and practices, they educate others about possible ways of living healthy lives.

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M. POWIETRZYŃSKA

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FERZILETA GJIKA

21. BEING AND BECOMING MINDFUL

ABSTRACT

In this chapter I explore personal ways of knowing and experiencing mindfulness. I address the significance and implications of mindfulness and breathing meditation in cultivation of self-awareness, reflexivity, compassion, increased attention, and the amelioration of emotions. Questions of what it means to be and become mindful are explored through personal life stories in which I have selected various experiences and events where I identify patterns of sameness and difference. I bring into focus small, continuous, divergent and convergent moments from my experiences with breathing meditation and the enactment of mindfulness in self and others. Jin Shin Jyutsu's framework is unique to each individual and each event and results in an increase in awareness while unblocking stoppages in the flow of energy in the body. I present small glimpses from my experiences as they have been lived within a dynamic, and complex social life. I describe in detail the meanings of embodied experiences of mindful breathing, insights, thoughts, and emotions. Finally, mindful meditation is seen as a framework that contributes to increased awareness, reflexivity, emotion regulation, compassion, and acceptance. Realizing the potential of meditation practice I have come to appreciate more the multidimensionality of life. I present the patterns of coherence and contradictions across these personal stories, captured in the midst of the complexities of social life, as they unfold unpredictably.

Keywords: mindfulness, wellbeing, reflexivity, awareness, self-help

THE PLASTIC BRAIN

The overlap between wellbeing, mindfulness and neuroplasticity led me to my journey of exploring, experiencing and living with mindful awareness. To be aware means to live to the fullest with our inner experiences and to be immersed completely in our lives (Siegel, 2007). Being mindful and acting with a sense of awareness brings happiness and transforms life collectively as well as individually. Self-aware people are conscious of their thoughts and feelings, and are able to feel and to understand what others are feeling (Davidson & Begley, 2012).

Mindfulness, often defined as “paying attention in a particular way, on purpose, in the present moment, and non-judgmentally” (Kabat-Zinn, 1994, p. 4), embodies different qualities that are valued differently by many people. For some people

mindfulness leads to greater sensitivity to context, and greater flexibility of mind (Langer, 2000). Sensitivity to context is an important component of emotional style because it reflects how attuned one is to the social environment (Davidson & Begley, 2012). Being fully present in the moment means consistently attending to one's moment-to-moment experience without being swept away by past or future (Bryan & Ryan, 2003). Non-judgmental awareness is cultivated through breathing meditation practices while being receptive to our thoughts, and feelings without judgment, we bring the attention back to breathing, as the object of focused attention. While negative emotions and high levels of stress and anxiety lead to becoming mindless, and out of touch with the present moment, Kenneth Tobin (2013) suggests that to be mindful means to “become unstuck, that is becoming less attached to emotions” (p. 11). Tobin (2016) shares his experiences of how enacting breathing meditation helped him to enhance mindfulness, remove attachments, and stay in the moment. He continues:

My reading on meditation led me to breathing meditation and I adopt a practice of using mala beads to alert me to the end of one (108 breaths) or two (216 breaths) cycles of abdominal breaths, and thereby to allow me to maintain focus on breath rather than counting. (Tobin, 2016, p. 15)

Acquiring some knowledge of myself was a way to understand and evaluate the different situations I was in, asking myself “why am I struggling?” “why am I anxious?” and “what are my feelings in the moment?” All of these reactions were part of my reflection on my wellbeing and how I was perceiving myself and/or how I was thinking others were perceiving my reactions and emotions. I started to build self-confidence and to be open-minded about how different paths that embraced mindfulness merged together.

Mindfulness characteristics such as intention, attention, and attitude are interwoven processes, which occur simultaneously in mindfulness (Shapiro et al., 2008). “Your intentions set the stage for what is possible. They remind you moment to moment of why you are practicing in the first place” (Kabat Zinn, 1990, p. 32). It was this inner dialogue with myself that I started to appreciate during my own journey to become mindful. I was not walking away from the difficult situations I was in. Despite the circumstances, which conveyed me to this practice, every moment spent in peace and breathing meditation was a beautiful, profound, and uplifting experience. I embraced every moment I spent with myself to mindfully restructure my own emotional and physical wellbeing.

Benefits of mindfulness are seen through the lenses of neuroscience, which is grounded in principles of the neuroplasticity of the brain. Mindful meditation practices have the power to change the brain's structure and function (Davidson & Begley, 2012). Mindfulness affords change and transformation, which leads to positive results (Bishop, 2002). Over the past century, mindfulness has contributed to the development of neuroplasticity, which is derivative from the combination of the words *neuron* and *plasticity*, and employs the brain's capacity to change and

contribute toward one's greater wellbeing. The revolutionary idea that we can change our brains with exercise is powerful and promising because it offers the potential to change our lives. Neuroplasticity is the brain's ability to create new neural connections and grow new neurons through experience (Siegel, 2010). This holistic view of neuroplasticity embraces the power of neurons (the nerve cells in our brain) to modify, adapt, and create new pathways well beyond childhood and youth. Neuroscientific findings show that the human brain can be changed and reshaped with new experiences, which impact neural circuitry, emotion regulations, and produce changes to one's emotional styles (Davidson & Begley, 2012).

Matthieu Ricard, Antoine Lutz and Richard Davidson (2014) have linked mindfulness meditation to the neuroplasticity of the brain, supporting the idea that it has the effect of changing the shape of the brain once mindfulness meditation is enacted. Daniel Siegel (2010) sees *mindsight* as a lens that helps us increase mindful awareness, increase empathy, examine ourselves closely, and redirect our inner experiences so that we have more power to act in the world and make better choices.

Mindfulness, for many people is considered a construct that involves different ways of being in the world. Malgorzata Powietrzynska and Kenneth Tobin (2014) referred to mindfulness as a way to enact social life, ameliorate the intensity of emotions, and heighten awareness. Likewise, breathing meditation is linked to health and overall wellbeing. In his book *Mindsight*, Siegel (2010) argued that breathing meditation is central to the improvement of physical wellbeing, meditation brings with it an awareness and reflexivity upon what is happening in the moment.

My experience affirms that breathing meditation can rapidly bring the mind to the present moment, and synergistically enhance compassion for self and others. Similarly, Powietrzynska, Tobin, and Konstantinos Alexakos (2015) found that mindfulness and meditation promote self-regulation of emotions and self-healing while achieving high levels of self-awareness. My own practice with breathing meditation involves sitting in a comfortable position in a chair or lying down. Once I close my eyes I begin to scan my own body feelings and sensations, acknowledge them and bring my attention back to the outbreath as the focused object of my meditation. Breathing meditation and mindfulness are enacted at the same time. I carry elements of awareness outside the meditation moment to the real world, and every time I feel I am not mindful, I focus my awareness back to the present moment.

BECOMING AWARE OF THE UNAWARE

Self-care is not selfish.
 Do not sacrifice yourself to a cause
 – no matter how noble –
 piece by piece,
 for you will soon have nothing left to give.
 Instead, give from a place of your highest being.

F. GJIKA

A healthy spirit and body can give so much more than one that has become worn down.

Christine Galib and Kelly Soubrette (<http://bewellteachwell.com>).

During my childhood days, my mother's advice to "take care of yourself first, otherwise you will not be able to take care of others" served as a forewarning to an unexpected life situation I encountered. One day, just after 10 pm in a quiet room, my two-month old daughter – Faith – became very sick. At that moment, I thought instinctively that it was probably a virus that would go away. From across the room, my son's voice invited me to calm down, as everything would be fine. When Faith's condition escalated day-by-day and month-by-month, I struggled to understand when it would be normalized. I became unproductive and unable to concentrate on my lived experiences. I was becoming somebody I never was. I questioned my motherhood identity, and my self-identity. While becoming aware of my daughter's needs, I experienced a compassionate desire to help her and alleviate the suffering she experienced. My feelings and emotions resonated empathetically with the feelings and sufferings of my daughter, my son, and my husband; but this was more than love and compassion. Life became an emotional rollercoaster on my part linked to distress, high levels of anxiety, sleepless nights, and physical exhaustion. Showing compassion and love for others doesn't necessarily mean you are showing compassion and love for yourself. The analogy of the heart sending blood to itself before it gets distributed to the body in order for us to be alive is similar to the instruction regarding the airplane oxygen mask – that, in order to save your child, you need to position the mask on yourself first, then your child. By nature, or instinct, we actually do the opposite. We (mothers) tend to take care of our child (children) first. I nurtured my child with love and care; I gave her soothing comfort, reassurance, loving thoughts, wishes, and prayers. I showed a lot of compassion and love for her. In the meantime, I was not taking care of myself; my own feelings of frustration, anger, and exhaustion, often times were projected on to others, undeserved. I was not able to be in touch with my own feelings, understand my self, my emotions, or my health. Likewise, I was experiencing low-levels of self-awareness as "disembodied perception of self" (Powietrzynska, Tobin, & Alexakos, 2015, p. 75). My daughter's health deteriorated drastically and I began to lose hope and patience. The way I was taking care of myself was indeed defining how I was able to take care of others around me, including my daughter.

Night and day became the same for me. I couldn't tell the difference. Time seemed to be stuck in one place, and I couldn't connect time with anything else, rather than taking care of my daughter. I was up all night and on my feet all day. I became exhausted, overstressed, and consumed coffee excessively. The caffeine helped me to be awake, even when I was in need of deep sleep. I felt guilty for not keeping up with my doctoral work at The Graduate Center, and although I had weekly meetings with my advisor (Ken Tobin – later referred to as Ken), I felt ashamed to meet him with no work in progress. I was disappointed with myself,

and I was disappointing others at the same time. Negative emotions such as anxiety, anger, frustration, became part of the journey to better my daughter's health. These negative emotions were associated with changes in my physiological, and overall wellbeing. Angelo Compare and his colleagues (2014) outline potential links between negative emotions and physical wellbeing. The authors demonstrate that dysfunctional emotion regulation is linked to depression and, if not taken care of, can lead to long-term health problems.

Tobin (2015) suggests that, "by enacting reflexive practices, social actors become aware of aspects of their conduct that they may not have been aware of previously" (p. 8). In addition, Alexakos (2015) concluded, "critical self-reflexivity is part of becoming accountable and must be subject to transformative practices and to change" (p. 44). The experience of taking care of my sick daughter and being able to work with Ken and his research squad opened the door to discovering and enacting breathing meditation practice in my life. William Sewell's (2005) idea that "structures are structuring" seems relevant to the events that were unfolding. It was Ken who introduced breathing meditation as a way to ameliorate emotions and be more present in my daily life routines. Practicing breathing meditation at the beginning of each doctoral class session and getting immersed in the study of materials and resources from the Brooklyn College Study, I became interested in knowing to what extent breathing meditation ameliorated emotions at the individual and collective levels. At the same time, as a science educator, I wondered if researching breathing meditation and emotions could be considered legitimate research. The Brooklyn College Study (hereafter BC study), which took place in Spring 2012, was a collaborative study involving Ken and Konstantinos, the research squad, which consisted of Ph.D. and master's level students, and visiting scholars from Brazil and New Zealand. The research foci of the BC Study included: emotional climate in the classroom; mindfulness in education; breathing meditation as an intervention to ameliorate emotion; heuristics as tools for enhancing teaching and learning, and much more. In the BC Study, breathing meditation was used as an intervention (at the beginning of the class and during coteaching activity) to ameliorate emotions. While embracing authentic inquiry, Alexakos shares his tale from the field in his recent publication *Being a Teacher | Researcher*: "Many of the participants began using breathing meditation personally, while many inservice teachers began introducing it to their students and their classes" (Alexakos, 2015, p. 102).

THE EMOTIONAL ROLLERCOASTER AND BECOMING AWARE OF THE UNAWARE!

At first, I considered breathing meditation as a practice, which could easily be enacted in life, and I was open to trying this new practice. On my way to and from school, I would practice 5 min of the breathing meditation. In the meantime, back home my daughter's health worsened to a point that I couldn't even think about school, research, or what was going on in my daily life. Faith suffered

from what is called projectile vomiting. She began to lose weight; she was weak, dehydrated, constantly hungry, had dry mouth, and sleeplessness. There were no pills or medication that could improve her symptoms. Faith's doctor explained that there is a muscle in the lower part of the stomach, called pylorus, which builds up and blocks the flow of food into the small intestine. The doctors suggested this problem could only be fixed with surgery by making a single cut in the pyloric muscle in order to relax the valve so it behaves normally. I wanted to avoid surgery on a two-month-old baby any way I could. There was hope that with age her symptoms would improve because the muscle might strengthen. I courageously took the option to not give her the surgery. I knew I needed some strength to carry through this journey.

I was very late to realize that my daughter's health situation became an emotional roller coaster and a source of physical exhaustion for me. I was not aware of my own health and emotions. I was focused on restoring my daughter's health to return to normal. My mind wandered a lot to different places and spaces, and my physical body couldn't be in sync with my wanderings. I was meeting with Ken once a week. This was the time when I could be away from my daughter. Getting off the train at 34th Street Penn Station, I felt liberated as I walked down to 5th Avenue. I felt liberated, because I felt I was fully breathing, getting enough air in my lungs. It was a 'getaway' moment from the stress and the anxiety that was built in my body. But I was always rushing to get there on time, in a busy street like 34th Street, it seemed as if people were coming into my physical space from all directions. I was becoming like a robot. My physical body was walking, running, and my mind was always worried, complaining; both mind and body existing in many different spaces at the same time. I couldn't feel the reality in which I was living.

I became overwhelmed with doctors' visits, daily stress, anxiety, and endless worries. Also, I became less productive because I was overly stressed, and physically exhausted. I began more regular breathing exercises, timing myself for five minutes, then ten minutes, then more. In the beginning, I was doubtful about starting this practice because I questioned whether Buddhist oriented contemplative practices contradicted my Christian beliefs. I drew similarities between breathing meditation and my prayers to God, in the sense that both contributed to ameliorating emotions and bringing some calmness into my life. These doubtful thoughts added more to my dilemma of how these meditative practices could be tolerated in teaching as part of a school curriculum. I questioned whether students who might have different religious beliefs could be open to this idea of contemplative practices. What I came to discover, however, was that many schools across New York City had already enacted breathing meditation and other practices as part of mindfulness in their education curriculum. To my surprise I learned from my colleague Cristina Trowbridge, who is an educator, that she was using breathing meditation in her daily work routine and introduced it to current NYC teachers during professional development events. It slowly began to sink in, the idea of acceptance, considering a secular type of meditation.

In the midst of my situation at home dealing with my daughter's health projects, and being involved in mindfulness research at the Graduate Center, I further expanded my use of daily breathing meditation. Through breathing meditation I was able to examine my aches and pains, feelings, emotions and focus, and be transformed in the process.

During my meditation, the face of my daughter continued to be part of my visual thinking process. I started to investigate my own stress level, and my own body aches. While scanning my own body, my head felt heavy on my shoulders, my neck was stiff. I dropped my shoulders down into a relaxed position and placed my feet flat on the floor. I slowly began to accept everything that was happening in my mind and body: thoughts, emotions, sensations, so I could come back to increasing my inner experiences through awareness of the present moment, and focusing my attention on breathing in and breathing out. Focusing on the breath provided me with a space to return to when my mind wandered. When I meditated, I had a lot of thoughts passing through, but I accepted them and I slowed my mind to bring order from the speedy motion and the messiness. I welcomed my thoughts, feelings, and sensations into my awareness mode, appreciating every one of them then focusing back on breathing. I acknowledged my pains and aches, relaxed every muscle of my body, and got my focus back to the out breath. Progressively, I became aware of my breathing patterns. I recognized that every time my emotions dominated my thinking, it seemed as if breathing stopped. I regained the momentum by bringing the focus back to my breathing.

JIN SHIN JYUTSU: HARMONIZING BODY AND MIND

The truth is that within each of us lies the power to cast all misery aside and to KNOW complete Peace and Oneness to BE that beautiful creation of perfect harmony to truly KNOW (Help) MYSELF. (Mary Burmeister)

Mary Burmeister's invitation to "Know Myself" goes beyond my understanding of what it means to know self. Burmeister's appeal to become aware of one's mind and body in order to harmonize and balance one's life is essential to carrying ourselves through the complexity and unpredictability of social life. Jin Shin Jyutsu (JSJ), which is considered an ancient art to harmonize the energy in our body, was brought to light in the 1900s by Jiro Murai who survived a lengthy illness in Japan. Jiro Murai was only 26 years old when he became very ill. He went to the mountains and practiced fasting, mudras, and meditation for seven days. He experienced inward-outward levels of consciousness and became aware of certain energy flows in his body. He took notes of all energy flows and his own experiences and extended the existing knowledge of JSJ, a knowledge system that made its entrance to the United States in 1950s through the work of Murai's student, Mary Burmeister. The JSJ knowledge system is grounded in a framework that our bodies contain numerous energy pathways that feed life into all cells

distributed throughout the human body. In our daily life, many tensions that we feel in our body are caused by a blockage in one or more of these pathways, which leads to discomfort or pain (Higgins, 1998).

JSJ is considered an art, not a technique. An art involves hermeneutic interpretation and application, and a technique is a set of known rules or skills applied to everyone in a similar manner. “There is awareness in JSJ that is deeper than a technique,” says Burmeister (cited in Higgins, 1998, p. 24). In Martin Heidegger’s view every form of human awareness is interpretative and every description is always a form of interpretation (1962). To interpret what is an art | JSJ I need to bring the variety of perspectives, experiences and voices to make meanings through a hermeneutic voyage. I use the Sheffer stroke, the vertical bar ($\bar{}$), to indicate a dialectical relationship between different constructs. The emphasis of a hermeneutic phenomenological framework is the interpretation of the world as it is lived by a person; lived experiences or the lifeworld (van Manen, 1997). The ‘lifeworld’ is comprehended as what we experience through reflexivity, uncovering new or forgotten meanings (Husserl, 1970). In JSJ, according to Burmeister, there is no “diagnosing, healing, or curing” (Higgins, 1998, p. 26). It involves harmonizing the whole person, which considers multiple ways of ameliorating emotions, harmonizing the mind and the energy in the body.

There are 26 pairs of safety energy locks on each side of the body. JSJ utilizes light touch using our hands as “jumper cables,” allowing us to unlock the flow of energy along its pathways. Tobin (2015) observed, “JSJ holds in everyday life, are pervasive in diverse contexts and appear to be used to ameliorate changes in emotion and physical disharmonies as they arise” (p. 28). [Figure 21.1](#) shows the locations of the safety energy locks in the body. The power of touch lies in the understanding of how the ‘flow of energy’ works through a series of combinations of energy locks by harmonizing energy pathways and thereby unblocking particular pathways, and restoring energy back to the body (Sempell, 2000). “There are 12 main energy pathways (known as flows) and these intersect three major flows. When SELs block, one or more flows are disrupted and associated disharmonies manifest in symptoms or vulnerabilities to disease/injury” (Tobin, 2015, p. 21).

JSJ utilizes the same principles and benefits as breathing meditation, both contributing to mindfulness and wellness. “As we have learned more about the relationships between emotions and physiology we have used JSJ to restore harmony to unbalanced/asynchronous universal pulses” (Tobin, 2016, p. 15). In one of the courses Ken and Konstantinos cotaught, and where I was a student, breathing meditation was complemented with the use of different JSJ holds to ameliorate emotions, increase compassion for self and others, reduce tension in the body, and clear the mind. In addition, JSJ meditation practices were often led by doctoral students, and sometimes by our professors. These JSJ holds and touches were enacted in the moment, as a way to enhance teaching and learning, through attainment of higher levels of mindfulness in a doctoral level Urban Education class. As a result, I started using JSJ finger holds (explained later in this chapter),

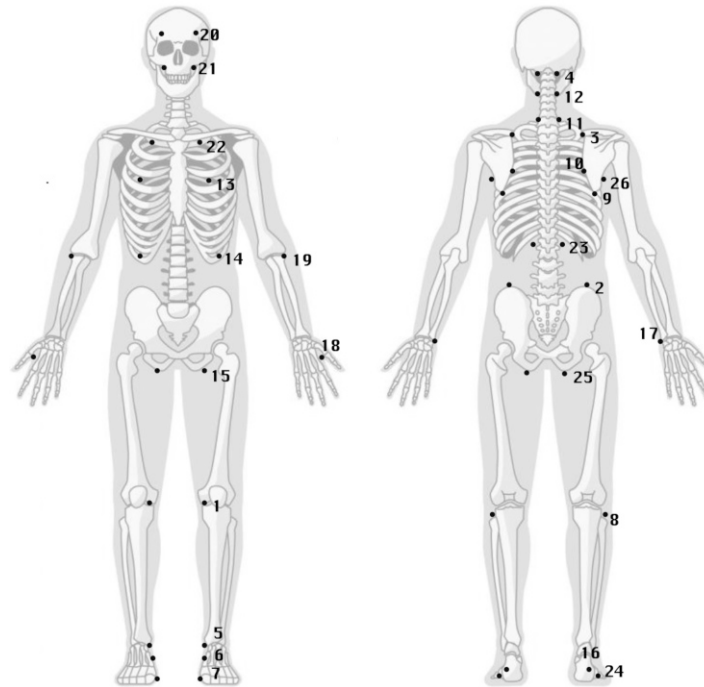


Figure 21.1. Jin Shin Jyutsu's 26 safety energy locks copyright for skeletal sketches:
https://www.123rf.com/profile_elenabsl (elenabsl/123RF Stock Photo)

as a day-to-day practice to improve my own wellbeing, and rediscover physical and emotional wellbeing projects that needed my attention.

JSJ promotes balance and healing through simple touches and synchronizing pulses. Focusing on the pulses is similar to focusing on the out breath in breathing meditation. Disharmony and pain in our bodies is experienced when energy is blocked from flowing into and throughout our bodies through certain pathways. JSJ helps to properly restore the energy flows through light touches or holds. During meditation the focus tends to be on particular holds in the pulses that arise from nearby safety energy locks. For example, I could place my hands on the SEL 4 s during meditation and reap the benefits that come from harmonizing the 4 s. These benefits include headache relief, and restfulness for myself and my fourteen year old son and the stopping of nosebleeding for my three year old daughter. This is consistent with Tobin's (2015) idea that "each flow can be restored, or harmonized, through a sequence of light touches using fingers, hands, and other parts of the body" (p. 21). To bring harmony and balance to our body, we harmonize particular safety energy locks following a sequence known as flows. Tobin, Alexakos, Anna Malyukova, and Karim Gangji (2016) suggest that "prevalence [in everyday life] of

F. GJIKA

JSJ-like touches, holds, and flows are consistent with an assertion that emotions and wellbeing are controlled intuitively, in an ongoing manner that harmonizes universal energy flow and contributes to maintaining good health” (p. 1).

Below I describe small projects and how the JSJ knowledge system has been enacted to harmonize some of these health projects.

Nose Bleeding and JSJ Holds/Flows

Nosebleeding has been an ongoing body imbalance for my daughter, mostly at night, but oftentimes during the day. When nosebleeding occurs I simply hold 4 s close to the spine, in the back of her head or I hold her index finger for a few minutes until the nosebleeding has abated. These have been practical when riding the LIRR train or in other public places. If bleeding continues, I begin holding with a light touch her left little toe with my right hand and place my left hand on her pubic bone for approximately three to five minutes. Then I reverse the sequence for the other side placing my right hand on the pubic bone while my left hand holds her right little toe. These practices not only heighten awareness for myself but for my daughter “it enables the flow of energy to be redirected, unblocked, and recharged along energy pathways” (Tobin, 2015, p. 21). In the process, I become calm and I increase my focus to concentrate on the issue to harmonize her project rather than become agitated, confused or stressed.

Main Central Flow

Main Central Flow (MCF) has become my daily emotional, and physical wellbeing tune-up. At times, after main central flow, my headaches vanish and I fall asleep. At other times, especially in the morning, it calms me down, and it energizes my day. The way this flow works is that universal energy runs down the center of the front of the body and back up the spine. I love to do this flow in the evening before I go to sleep and in the morning before I get out of bed. The MCF has helped me to balance and become aware of my emotions when in distress and maintain balance in my body. I have lightheaded headaches at times, which MCF seems to mitigate or eliminate, especially in the morning. A few years ago I was diagnosed with hyperthyroid. At that time, doctors prescribed medication and suggested surgery. I opted out of taking medication or having surgery since doctors had opposing views, and I was not convinced regarding their decisions. According to Western medicine hyperthyroid causes rapid heartbeat and feeling too hot in normal temperatures (which oftentimes I experience). Taking medication for life was not an option for me and neither was surgery. My exposure to the JSJ self-help framework has assisted me in realizing that other ways of knowing, such as JSJ, are more beneficial for me than the quick fixes of Western medicine. The power of self-help to harmonize my thyroid with daily practice of the Main Central Flow has been an amazing experience. I feel energized and centered, instead of feeling weak.

It eases headaches, helps me to be in the moment and tune in with my mind and body. It normalizes my blood pressure, which oftentimes is low. When I enact MCF, I lie down on the bed, place my right hand on top of my head and keep it there until the last step. In the meantime I place my left hand between my eyebrows. With a light touch, I feel the pulses like a pressured water flow and keep my hands there until the pulses are harmonized in usually three to five minutes. While keeping my right hand on the top of my head, I move the left hand on the tip of my nose. Then, I continue moving left to “V” of the throat. After a three-minute period, I move my left hand to the top of the sternum. I stay there for another three minutes or until pulses feel like the breeze of spring. After three to five minutes I move my left hand to the base of sternum, then on to the umbilicus. The last step follows with the left hand placed on the pubic bone, while the right hand comes down from the top of my head and is placed on the base of the coccyx. I give about three to five minutes for each step until all pulses are harmonized. These steps are well described in the *Health is in your hands* JSJ cards by Waltraud Riegger-Krause (2014). I use these cards when I travel and at my job, as a way to quickly refer to guided steps for certain projects.

Failure, Disappointment and Headache

Burmeister noted that “as we abuse our bodies in our daily routines, mentally, emotionally, digestively, or physically, our safety energy locking system becomes activated” (cited in Higgins, 1988, p. 26). Stress, physical or emotional state, and the environment produce further stress and imbalance in our body, blocking the energy flow in our cells.

Latest research has indicated that the JSJ is an effective way to address many health issues. Karen Searls and Jacqueline Fawcett’s (2011) research concluded that JSJ has been used as an effective intervention for women with breast cancer. Research revealed that at the conclusion of 10 weeks of treatment using JSJ, women had higher levels of adaptation and performance of daily life activities and found a better balance emotionally and physically. Jennifer Bradley (2011), who is a JSJ practitioner at the Markey Cancer Center in Kentucky, used fifteen minute to one hour sessions of JSJ to treat cancer patients with uncomfortable symptoms of pain, stress, and nausea. The findings included significant decreases in, and relief of stress, pain, and nausea. Some of these symptoms were the result of chemotherapy the women were undergoing. JSJ assisted with the physical effects from chemotherapy and radiation while decreasing stress and enhancing a sense of emotional wellbeing.

I was introduced to the JSJ framework during research squad meetings with Ken. Then during the course that Ken cotaught with Konstantinos during Spring 2015, JSJ holds were practiced as a way to meditate. During JSJ practice sessions I learned how to be mindful of my own body, thus becoming aware of certain conditions that I had. I started to grow familiar by reading more books and using JSJ information cards (Riegger-Krause, 2014) as guides to practice certain flows regarding any pain

or discomfort I had. As time progressed, I decided to share this knowledge system with my students. Soon enough they too engaged in using JSJ finger holds in the classroom and in their daily work.

JSJ finger holds can be used as a sort of quick toolkit to learn about basic emotions related to each finger. In the JSJ knowledge system, each finger corresponds to a specific emotion or attitude: thumb-worry; index finger-fear; middle finger-anger; ring finger-sadness; little finger-trying to/pretense. To move through these emotions in a more gentle, peaceful manner I wrap the fingers of the opposite hand gently around the indicated finger. In the meantime, I breathe deeply and feel the distress melt away and harmony/balance to return. JSJ finger hold practice, where students held softly each finger to feel a gentle rhythmic pulse, was attended with deep and relaxed breathing, dropping shoulders, and focused attention.

After a JSJ session with Ken and his research squad at the Graduate Center, I arrived home at 9:30 pm to find my 14-year-old son complaining of a terrible headache. I was somewhat worried so I started talking to him, asking how his day was. I learned that his soccer game didn't go well, and he was very disappointed with himself and his teammates. I recognized that his regrets had built up inside of him, causing unhappiness and disharmonies in his body. His headache was a sign of emotional imbalances in mind and body. All he could say was, "I am tired, I am trying to sleep, but I have a terrible headache and I cannot sleep." Having practiced the headache flow on myself, and during JSJ sessions guided by Ken and the research squad, it became much easier to perform that flow on my son. I touched both energy locks #4 located behind his neck (see [Figure 21.1](#)) and held them for 10–15 minutes. I reminded my son to breathe and relax his mind, and as thoughts came, to acknowledge them, and let them go by concentrating back on his breathing. It was one of these moments when you wait for a miracle to happen because you want it to happen. Soon enough, my son fell asleep. I don't know if his headache was gone, I don't know if his regrets were gone. All I know is that my son went to sleep and he didn't wake up until the next morning. I didn't look for an Advil as a quick and easy way to stop my son's headache. I thought, let me try JSJ holds for headache and I believed that it was going to work. I became aware of choices I had to make at that particular moment, to consider other ways of knowing, such as JSJ, a complementary knowledge system to improve our health and overall wellbeing. JSJ became part of a contemplative framework to empower my decisions about healing of self and others. It was a memorable feeling to experience how all my son's negative emotions about himself and others, and his headache melted away without a trace.

MY JOURNEY CONTINUES...

I consider my story of becoming mindful, and being mindful an unfinished journey. My knowledge of JSJ and other ways of knowing and being in the world is renewing and changing while I am being transformed and am transforming others around me. As a parent, a teacher-educator, and a citizen who is part of the world we all live in, I

feel I have an ethical obligation to continue this journey to address different projects through interventions and mindful ways of being, and to expand possibilities to assist others in improving wellness and heightening awareness of different ways of knowing and being in the world for the benefit of improving health and overall wellbeing.

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F. GJIK

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KENNETH TOBIN AND NICK ANSARI

22. COMPLEMENTARY PERSPECTIVES ON THE ENIGMA OF DIABETES MELLITUS

ABSTRACT

In this chapter we describe what we learned from a two-year, ongoing study of Diabetes Type 2 and its potential treatment using Jin Shin Jyutsu as a complement to Western medicine. We investigated physiological changes as Jin Shin Jyutsu was administered and directly after. In particular, we identified Jin Shin Jyutsu flows that consistently reduced blood sugar concentration and we studied associated changes in blood oxygen saturation and pulse rate. Consistent with Jin Shin Jyutsu being an art rather than a system of techniques, we learned that the most appropriate flows used in a session were based on what was observed in a pre-treatment reading of the pulses and the signs of the body (e.g., blockages of universal energy, torques in the body, and visible regions of excess and deficiency of energy in the body).

We learned that the flows we used often were associated with reduction of blood sugar concentration, frequently between 20% and 30%. We learned that “less is more” in that it is preferable to use fewer flows in a shorter time than to complete more flows or increase treatment time. We also learned that when Jin Shin Jyutsu flows are used in a treatment of Diabetes Type 2, blood oxygen concentration drops into the low 90% region – that is, Jin Shin Jyutsu flows seem to put oxygen to work and thereby to reduce blood oxygen concentrations.

Keywords: Diabetes Type 2, Jin Shin Jyutsu, complementary medicine, blood sugar, Qi, pancreas, liver

Diabetes Mellitus Type 2 is an international problem that proves costly in terms of economic and human suffering. The International Diabetes Foundation (2015) noted that 415 million people had Diabetes, an enormous figure that is accelerating toward a projected 642 million, or 1 in 10 adults, by 2040. The economic costs are huge, estimated to be \$673 billion per year – equivalent to 12% of global expenditure on healthcare. Although 75% of those with Diabetes are from countries classified as low and middle income, almost 30 million Americans have Diabetes and nearly 3 times that many are prediabetic. Two additional concerns are that approximately 25% of seniors are diabetic and among those aged 65 years and over, there are diagnoses of an additional 1.4 million cases a year. In the United States, Diabetes is the seventh leading cause of death. Alarming, among the population that is older than 20 years, approximately 60% of lower-limb amputations occur in those diagnosed with Diabetes.

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Statistics and trends like these raise questions regarding the role of science education in educating the public about wellness, as it relates to Diabetes Type 2. It seems desirable for people across the age spectrum to be aware of Diabetes Type 2 and its relationship to lifestyle – especially maintaining appropriate practices relating to diet and exercise. Also, in terms of preventative medicine, it is likely there are practices that can be taught and learned so that causes and symptoms associated with the onset of Diabetes Type 2 can be successfully addressed and ameliorated before prediabetic conditions are even diagnosed. In this chapter, we address becoming aware of Diabetes Type 2 and monitoring and adjusting lifestyles to avoid Diabetes Type 2 entirely or to diminish its harmful effects.

We regard it as a goal to identify knowledge, including practices, that can be adopted by those who are already diagnosed as prediabetic or diabetic. We embrace the hope expressed by Anja Bettina Hell that Diabetes Type 2 can be decelerated, stopped, and reversed, “as long as there are pancreatic cells delivering insulin” (2014, p. 9). Accordingly, in 2014 Ken and Nick commenced research associated with the use of Jin Shin Jyutsu to ascertain whether it could assist a body diagnosed with Diabetes Type 2 to heal and diminish the symptoms while addressing the causes of Diabetes Type 2. Readers who have not done so already can read more about the history and applications of Jin Shin Jyutsu in chapters 17–21 – authored by Maria Miniello, Pamela Proscia, Jed Schwartz, Małgorzata Powietrzyńska, and Ferzileta Gjika.

Nick: My Diabetes Type 2 started 20 years ago in Townsville, when I was eating breakfast. I had swelling on my face – like bumps. I went to the doctor but he could not diagnose the problem. Then, one day I went to see another doctor who was doing whole body bloodwork. On this occasion the doctor found out I had high morning sugar levels. So, that was when I was diagnosed – in the year 2000. I was in my 40 s.

Since the initial diagnosis of Diabetes Type 2, Nick’s treatment by Western doctors has involved office visits during which the doctors reviewed medication dosages in relation to physiological indicators. As is evident in Nick’s descriptions of his history with Diabetes Type 2, the doctors appear to accept that the disease will continue with little or no possibility of freeing the body of Diabetes Type 2 and assuming medication-free, good health. The pancreas, liver, other organs, glands, and neural networks are considered to be beyond repair and wellness can be sustained pharmaceutically, supported by changes in lifestyle.

Diabetes Type 1 occurs when the body’s defense system attacks the cells that produce insulin – it is an auto-immune reaction. Unlike Diabetes Type 2 which tends to develop in mature aged adults (i.e., 40 plus years of age), Diabetes Type 1 usually develops in children or younger adults. Although conventional wisdom in Western medicine considers Diabetes Type 1 as beyond cure, recent advances in stem cell research offer some hope of a cure. Hell (2014), reviewed some interesting developments in the treatment of Diabetes Type 1, involving pre-programming of

stem cells to produce insulin. She suggests that Jin Shin Jyutsu may have a promising role in harmonizing the immune system through the use of flows such as the Spleen Flow. In this chapter, we do not address treatments of Diabetes Type 1.

Comments on the Remainder of this Chapter

Nick, who has reviewed, edited, and contributed to the entire text, approached Ken in December 2014 with the idea of doing a study on the uses of Jin Shin Jyutsu to treat Diabetes Type 2. As a person diagnosed with Diabetes Type 2, who has lived with the disease for almost two decades, Nick was highly committed to the research and has received treatment from and continuously interacted with Ken face-to-face, as well as through the use of text messaging, telephone, and email. In writing this text, personal pronouns, I and me, are reserved for Ken, who wrote the manuscript. The text is unambiguously labeled when Nick presents information.

In terms of using Jin Shin Jyutsu to address Nick's wellness, there are advantages and disadvantages in knowing and using labels associated with a diagnosed health project. Basically, the Jin Shin Jyutsu philosophy is to focus on Qi flow, identifying disharmonies and irregularities in flow – associated with misdirection, accumulation, deficiency, etc. For these reasons, rather than labeling on the basis of symptoms or a prescribed disease, the Jin Shin Jyutsu approach is to consider disharmonies as projects, where treatments address energy blockages and flows in an in-the-moment manner. The chief advantage of the Diabetes Type 2 label is that it affords me preparing thoroughly, compiling a list of approaches that have been used by Jin Shin Jyutsu practitioners to successfully treat Diabetes Type 2, including faculty from the Mary Burmeister Jin Shin Jyutsu Institute. Similarly, the Diabetes Type 2 label allows for computer searches for others who have published what they learned about uses of Jin Shin Jyutsu in relation to Diabetes Type 2 projects. In this vein, a significant contribution to the literature is Hell (2014) – a review paper that addresses Diabetes Type 2 from the perspectives of Western medicine and Jin Shin Jyutsu.

In the remainder of this chapter we address: complementary medical practices; polyvagal theory, Diabetes Type 2; Diabetes Type 1; uses of Jin Shin Jyutsu; self-help; and research and practice for the road ahead. Since education, change, and beneficence are central to this research, our ongoing work continues to embrace multilogicality and includes different medical knowledge systems that can be used to change lifestyles, increase harmony, and improve wellness.

DIABETES TYPE 2

In this section, we address polyvagal theory as a potential framework for understanding and treating Diabetes Type 2, disharmonies that lead to Diabetes Type 2, and prescription drugs used to control Nick's Diabetes Type 2.

The Polyvagal Theory

When we eat food, digestion breaks down carbohydrates into glucose molecules and proteins into amino acids, which are absorbed into the bloodstream. The body needs to store nutrients and release energy as necessary throughout the day. The pancreas and liver are central organs in the control of blood sugar concentration and Diabetes Type 2, controlling metabolic functions that supply energy to the cells. The vagus nerve connects to the pancreas and liver, controlling these organs autonomically.

Two major categories of nerves are the central nervous system (brain and spinal cord) and the peripheral nervous system, the latter connecting the brain and spinal cord with sensory receptors, muscles, and glands. The autonomic nervous system (ANS), which is considered involuntary (i.e., without conscious effort), conducts impulses from the brain and spinal cord to smooth muscle tissue, cardiac muscle, and glands. The ANS affords the human body dealing with emergencies, emotions, and physical activities. There are two parts – sympathetic and parasympathetic.

The fibers for the sympathetic nervous system (SNS) arise from the thoracic and lumbar regions of the spinal cord. The SNS addresses fight or flight situations, stressful times when the body requires energy. The response will usually increase heartbeat and breathing rate. Physiological indicators include dilation of respiratory pathways, and increases in blood pressure, heartbeat rate, and sweating. In contrast, the parasympathetic nervous system (PNS) operates under normal, non-stressful conditions. PNS can restore the body to a restful state after a stressful experience. To some degree the PNS is a counterbalance to the SNS. The nerve fibers for the PNS arise in the brainstem (e.g., the cranial nerves, especially the vagus) and the sacral region of the spine. The PNS stimulates processes such as digestion, urination, and defecation. Physiological indicators of the PNS functioning are slower heartbeat, lower blood pressure, and slower breathing rate.

Although both branches of the vagus nerve are part of the parasympathetic nervous system (PNS), the left and right branches of the vagus nerve are asymmetrical in terms of structure and function. According to polyvagal theory (Porges, 2011) the left vagus is much older and slower in an evolutionary sense and is often referred to as the reptilian vagus. In mammals, the left vagus is primitive, non-myelinated, and slow compared to the right vagus, which is myelinated.

Neuroception is a feedback system from the organs to a monitoring system controlled by the vagus. Neuroception monitors levels of social and physical risk, changing levels of activity to afford appropriate bodily responses to stress, altering the activity of the branches of the vagus nerve and its homeostasis with the splanchnic nerve, which is part of the SNS. Two modes of risk involve different physiological responses. When neuroception assesses less extreme situations, (right) vagal activity diminishes and the splanchnic nerve mobilizes muscles and glands for flight or fight actions. When this occurs, social communication functions of the body are shut down – that is, the right vagus is suppressed in relation to the left vagus and there is a limitation in the functioning of the voice, facial expression of emotions,

and differentiating different types of sound (e.g., human voices from other sources of noise). If heightened danger is perceived, the left vagus is activated in a shutdown process – feigning death, conserving energy by shutting down many of the body’s functions. Humans might associate this condition with a giddy sensation, fainting, and in extreme cases, death. Vagal control of organs is direct, and pulse rate and oxygenation can be directly changed based on the assessment of risk (Porges, 2009).

Central to our work in this chapter is the role of the vagus nerve in relation to concentrations of glucose in the blood. Our work is consistent with a conclusion offered by Karen Teff that, “the vagus nerve ... plays a critical role in the regulation of blood glucose levels and is an often overlooked factor contributing to glucose homeostasis” (2008, p. 569). The pancreas functions as two glands in one, each modulated by a separate vagal circuit – a digestive gland and a hormone producing endocrine gland. Enzymes released by the digestive gland break down proteins, lipids, carbohydrates, and nucleic acids in foods. The endocrine functions produce insulin and glucagon, which are necessary for the control of blood sugar. Electrical stimulations of the pancreatic and gastric branches of the vagus are solely responsible for insulin and glucagon secretion, which regulate blood glucose levels.

Kathy Abascal (2011) provides a clear description of an insulin/glucagon seesaw. As the concentration of glucose in the blood rises above normal, the pancreas secretes insulin. In a context of increasing insulin concentrations, the liver then begins to remove excess blood sugar, which is converted to glycogen and stored in the liver. This process harmonizes blood sugar levels in the normal range and insulin release ceases.

The liver is the organ that controls storage and release of nutrients. As the body burns fuel or glucose to make energy available, blood sugar levels drop and the pancreas secretes glucagon, a signal to the liver to convert glycogen to glucose, which is released into the bloodstream. M. Clement Hall (2011, p. 96) notes:

When the glycogen in the liver is completely converted to glucose, glucagon continues as the hyperglycemic hormone by setting in process mechanisms to convert amino acids to glucose.

As blood sugar levels rise, glucagon secretion decreases. When the body is functioning normally, glucose levels in blood plasma are relatively constant (i.e., harmonized in the range from 70–100 mg/dL).

Disharmonies Lead to Diabetes Type 2

Diabetes Type 2 is characterized by high blood sugar levels and possibly sugar in the urine. Abascal (2011) notes that, “due to sugar spikes, over eating, and eating too often, our muscles and liver cells become saturated with glycogen ... liver and muscle cells quit responding to insulin and do not absorb glucose from the blood” (p. 133). When this condition (i.e., insulin resistance) occurs, fat cells absorb excess glucose and store it as fat. Diabetes Type 2 can occur when the pancreas does not provide sufficient insulin to prevent an increase in the concentration of glucose in the blood or

insulin is no longer effective in this role because cells that need energy become insulin resistant – i.e., when cells that normally take in glucose for further transformation cease doing so. Accordingly, only some glucose gets into cells, leaving most of the glucose and insulin in the blood, a disharmony that can lead to health projects associated with the heart and kidneys. With high levels of blood sugar, the pancreas endeavors to produce more insulin, which is ineffective in reducing glucose levels. As concentrations of insulin in the blood increase the potential for insulin resistance increases. If the blood sugar levels are too low, cells shut down their function. If the levels are too high, some organs can suffer long-term damage.

Prescription Drugs to Control Nick's Diabetes Type 2

Nick: Initially my Diabetes Type 2 was controlled by the food I was eating, then slowly medication was introduced during the first five years. The medication encouraged the pancreas to produce more insulin. That went on for four or five years and then I asked my doctor to prescribe insulin to assist the pancreas to sustain appropriate insulin levels – to allow the pancreas to get some rest. The doctor hoped this would permit the pancreas to recover. Since then I have taken two medications – insulin and metformin. My dosages are as follows:

Metformin 1000 mg (breakfast) + 1000 mg (dinner)

Insulin short acting (Novolog) 12 units: Breakfast, lunch and dinner. Holds me for three hours in the sense that any sugar in the blood is handled by this insulin as if the pancreas was making it.

Insulin long acting (Lantus) 12 units: before going to bed; holds me for 24 hours.

Metformin combined with insulin provides greater glycemic control than insulin therapy alone. Metformin lowers glucose production in the liver and assists in making better use of the insulin in the body. Metformin also increases the sensitivity of cells to insulin, thereby increasing the amount of glucose taken into the cells. In addition, metformin reduces the amount of sugar absorbed by the intestines.

JIN SHIN JYUTSU AS A COMPLEMENTARY MEDICAL PRACTICE

Jin Shin Jyutsu originated in Japan and was built from a foundation of ancient Asian practices, including mudras documented by Tantric Buddhists, acupuncture, and intensive and extensive empirical research undertaken by Jiro Murai in the early 20th century (Burmeister, 2016a, 2016b). Jiro Murai undertook clinical research involving longitudinal self-study, case studies of people who were referred to him and others he sought, and research on human corpses in morgues and slaughtered animals in abattoirs. Master Murai entrusted what he learned to only a few selected

apprentices, one of whom was Mary (Burmeister), who agreed to disseminate Jin Shin Jyutsu to the United States and beyond.

Shoshana Katzman (2003, p. 137) describes Qi as vital energy – the force that animates life and all biological processes. Qi flows through every cell and body tissue. Importantly, Katzman notes that the source of Qi, after birth, is digestion of food, water, herbs, and inhalation of air. Jin Shin Jyutsu provides insights into the entry, flow, and exit of Qi from the body – especially focusing on the cycles that occur as Qi flows to the cells and tissues to sustain life. In [Figure 22.1](#) there is a depiction of the positions of 26 paired Safety Energy Locks in the human body. Qi flows through these regions of the body in the Trinity flows and organ flows. The diameter of the sphere representing each of the Safety Energy Locks is defined by the width of the palm of the person receiving Jin Shin Jyutsu treatment. When the body is in harmony, Qi flows through the Safety Energy Locks, in the correct direction, without blockages. However, damage to cells, tissues, nerves, and organs can catalyze blockages and/or divert Qi flow. Due to the empirical work of Mary Burmeister, Master Murai, and others, procedures have been developed and validated to remove blockages, correct divergences, and restore harmony to Qi flow. Chapters 16–20 in this book are resources for expanding knowledge of Jin Shin Jyutsu and the three introductory texts written by Mary Burmeister (1981, 1985, 1994) are excellent primers for building understandings of Jin Shin Jyutsu.

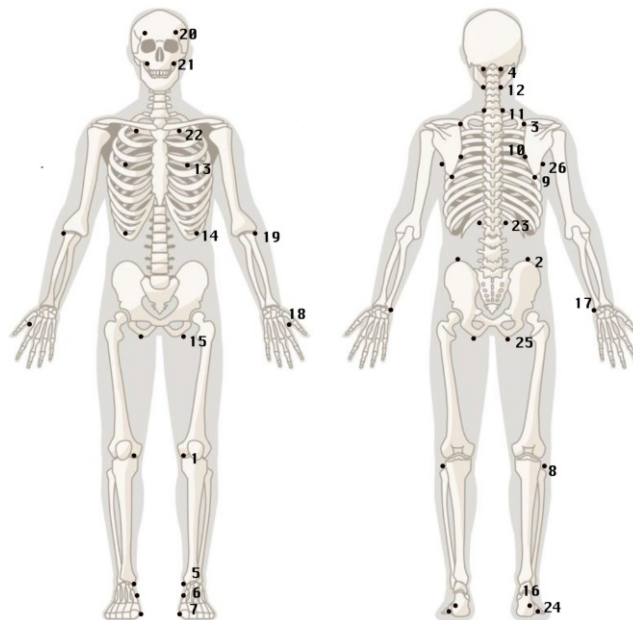


Figure 22.1. Jin Shin Jyutsu's 26 safety energy locks copyright for skeletal sketches:
https://www.123rf.com/profile_elenabsl (elenabsl/123RF Stock Photo)

The art of Jin Shin Jyutsu embraces a holistic vision of well-being – poor health initiating when there is disharmony in the body. Mary noted that:

... perfect harmony within and without the body ... may be interrupted by daily eating habits, working habits, hereditary characteristics, too dry or too damp living environments, weather conditions, mental and emotional anxieties, accidents causing bodily injuries, or by injection of poisonous matter into the body. (Burmeister, 2016b, p. 2)

Mary's stance is consistent with the theory and practice of Chinese medicine (Kaptchuk, 2000). Harriet Beinfield and Efraim Korngold (1991, p. 38) noted that:

Doctors as gardeners protect the Qi at the same time as they attack the disease. Simultaneous with the struggle to fight the disease, the doctor of Chinese medicine strives to restore the resilience and strength of the body. This adaptability and fortitude constitutes the condition of health. If in the process of attacking the disease the Qi is dissipated, this undermines our person's capacity to recover health.

Mary, the faculty of the Mary Burmeister Institute (<https://www.jsjinc.net/>), and numerous others around the world have used Jin Shin Jyutsu to successfully treat health projects of various types. When a health project becomes apparent, an individual can seek help from a qualified Jin Shin Jyutsu practitioner, and she can administer self-help practices she has learned. Ken has written about Jin Shin Jyutsu in a context of educating the public to address wellness proactively and agentically to avoid causes and symptoms, and to re-harmonize the body when disharmonies arise (Tobin, 2016). It is our hope that what we learn from this study can be packaged as a curriculum to teach others how to address Diabetes Type 2 or, better still, avoid its occurrence. We expect that what we learn will have relevance for those who teach Jin Shin Jyutsu, practice Jin Shin Jyutsu, receive Jin Shin Jyutsu from others, and use self-help.

There are numerous principles that guide Jin Shin Jyutsu practitioners – that is, many aspects of what is a complex knowledge system derived from a theory of Qi and derivative health traditions that include Acupuncture, Reflexology, Qi Gong, and Tai Chi. Additionally, there is an intensive and extensive empirical underpinning that emerges from the insightful and systematic research of Jiro Murai. Unfortunately, possibly because of the case-oriented, non-positivistic methodology Jiro Murai employed, his empirical work, that continued until his death, received scant attention outside of the Jin Shin Jyutsu community.

Jiro Murai's use of an apprentice model to disseminate what he learned is reminiscent of authentic inquiry (Tobin, 2015), the primary methodology for our study reported in this chapter. He taught many of those on whom he practiced and intensively tutored a few hand-selected apprentices, including Mary and her father.

Since Mary's return to the USA and her dissemination efforts, Jin Shin Jyutsu has been taught, documented, and spread internationally. Also, the Jin Shin Jyutsu knowledge system has continued to expand. In this process, interpretations and

adaptations have clarified and expanded the knowledge base, as have the practices of faculty at the Mary Burmeister Institute and those who have learned from the various courses they taught. Maria Miniello’s chapter in this volume (Chapter 17) lays out many of the central tenets of Jin Shin Jyutsu in clear detail. Because of the relevance of two key tenets to this chapter, I summarize them here. First, is the principle that universal energy flows up the back of the body and down the front in what is the Main Central Vertical Flow. Similarly, Right and Left Supervisor flows ascend vertically on the right and left of the spine and descend on the front of the body – either side of center. Finally, the mediator, which flows diagonally from left to right and right to left, is the third of the Trinity flows. Other flows, that we refer to as organ flows and safety energy lock flows, derive from and relate to the Trinity flows.

The arrangement of the Safety Energy Locks on the torso is used to identify which are Bustline, Waistline, and Hipline. On the torso, the Bustline Safety Energy Locks are 13,10; Waistline Safety Energy Locks are 14, 9; and Hipline Safety Energy Locks are 15, 25. Using the analogy of fractal relationships, the pattern of Bustline, Waistline, and Hipline is repeated on different parts of the body, including legs, feet, arms, hands, and the head/neck. Of significance to this chapter is the classification pertaining to the head/neck where Bustline Safety Energy Locks are 20, 4; Waistline are 21,12; and Hipline are 22,11.

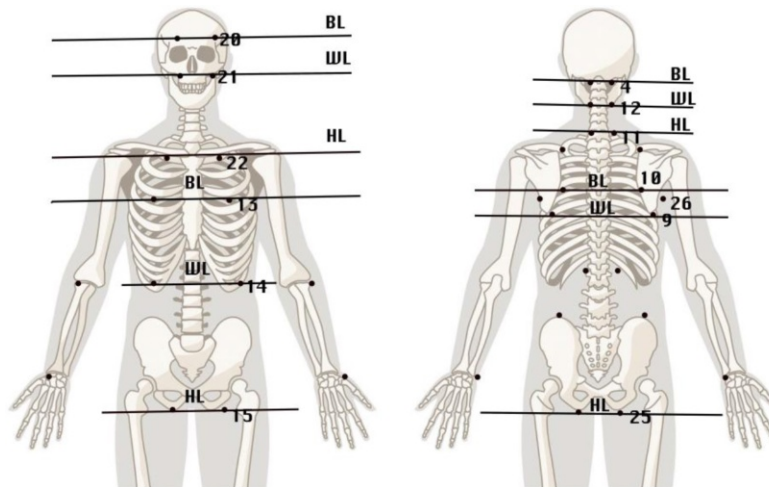


Figure 22.2. Safety energy lock classifications having a fractal relationship in head and torso parts of the body

... Diabetes is not just a pancreas affair. We need to look at the whole body with special interest for the waistline and potential burdens on it, the neck, and also look for long-term damage that might already have occurred, as well as help with lifestyle changes. (Hell, 2014, p. 10)

Billie Watkins (2014) provides a summary of uses of Jin Shin Jyutsu to address Diabetes Type 2, highlighting an association with Right shoulder congestion (of Qi) that produces a waistline health project. Hell (2014) provides a rationale for Spleen Function Energy being used in the treatment of Diabetes Type 2, since the Spleen Flow distributes energy throughout the body. In the *A and Q text: Know myself*, Mary Burmeister provides a connection between the Pancreas, Spleen, and Liver flows (A and Q refers to answers and question; Burmeister, 1990). The use of these flows makes sense given the physiology of Diabetes Type 2 and its relationship to the pancreas and the liver, which work together to harmonize metabolism. Hell recommends the following flows as useful in the treatment of Diabetes Type 2: Safety Energy Lock 14, Safety Energy Lock 9, Diaphragm and Umbilicus organ flows. Furthermore, Hell notes that for chronic conditions Safety Energy Lock 15 can block the energy flow, disharmonizing descending energy and affording a buildup at Safety Energy Lock 14. Similarly, Safety Energy Lock 10 (Bustline) can be blocked and this will cause ascending energy to accumulate at Safety Energy Lock 9.

Although it is beyond the scope of this chapter to describe the complexity of reading the energetic pulses (Walsh & King, 2008), it is possible to read them in many ways, including identifying disharmonies relating to ascending/descending and Bustline, Waistline, Hipline. The radial artery on each wrist is the primary site used by Jin Shin Jyutsu practitioners to interpret the pulses using three fingers (index, middle, ring) on each hand. The middle finger is placed at the base of the radial styloid process (a conical shaped projection of the radial bone – akin to a hill). The middle finger is placed at the base of the styloid process, away from the wrist crease. The other fingers fall into place adjacent to the middle finger. The radial artery is a peripheral artery that is proximate to the skin surface at the wrist and also to the radial bone, which facilitates detection of the palpated pulses. Each finger accesses a distinctive pulse which can be interpreted in terms of harmony of Qi and wellness. To take an example that is salient to this chapter, if I read from the pulses that there is disharmony at the Bustline level for ascending energy, then Safety Energy Lock 10 could be considered along with Safety Energy Lock 4. Other aspects of body reading and/or facts from the Jin Shin Jyutsu knowledge base would inform a decision of which of these Safety Energy Locks to harmonize. Interestingly, both of these Safety Energy Locks are Bustline, whereas it is widely agreed that Diabetes Type 2 is ultimately a Waistline project. To understand why Bustline flows are salient to a treatment we emphasize that if a Safety Energy Lock is locked, energy on the back of the body will not be able to ascend and energy on the front of the body will not be able to descend. Such understandings can factor into a selection of which Safety Energy Locks to harmonize when the pulse and other body signs indicate energy accumulation at the Bustline level.

OUR APPROACH TO RESEARCH

In this study, we used authentic inquiry as a methodology (Tobin, 2015). The approach is contingent and emergent, consisting of four overarching goal areas,

which are interrelated. The first focuses on learning from the research. In this case, Nick and I are the primary participants and we should learn as a result of being involved in the study. Importantly, whereas it is expected that each of us will expand our understandings in many ways, different perspectives are anticipated and respected. We regard it as a priority to understand each other's perspectives and also to become increasingly aware of diverse knowledge systems that have addressed Diabetes Type 2 (e.g., Western medicine, Jin Shin Jyutsu, iridology, acupuncture, and naturopathy).

The second goal area concerns education. As a result of being a participant in this study we should learn from one another, and to an increasing extent, understand each other's perspectives. Furthermore, those with whom we interact also should learn from what we have learned in the study. Because we have just two participants in this particular study, the third and fourth authenticity criteria reduce to just one set of priorities – changed practices. The goal is that participation in research should catalyze individual and collective changes in practice – along the lines of the goals of participants. Equity and social justice always are a concern – ensuring that the research seeks to ensure that all participants benefit from being involved in research, not just those who are best placed to take advantage of what we learn from the research.

Our approach stands in contrast to studies designed to have statistical generalizability. In authentic inquiry, participants are added serially, when and as necessary. Even though this study commenced more than two years ago, we continue to learn at a rapid pace. Given the intensive nature of the research we judge it as premature to add further participants or to switch to a different set of methodologies. We are learning a great deal and readers of this chapter will judge whether what we have learned can be applied to them. Our challenge is to clearly describe what we did, what we learned, and the context so that readers can decide whether and how to appropriate what we have learned and how to apply the knowledge in their social settings. It is important to note that we do not elevate the importance of theory over practice. Instead, what we learn includes the stories we provide in this chapter together with associated practices we employed. Those who decide there are benefits to be gained from what we have done, learned, and reported can adopt and adapt what they appropriate from their interactions with our text. Anticipated users are best placed to decide that, based on their settings and associated contingencies, specific changes are deemed worthwhile.

The kind of generalizability we seek resides in the intensive nature of the inquiry and its extensive, unfolding nature. We did not seek to control, just to understand and learn from what is happening in the present and our efforts to figure out why it is happening. We did not seek to be objective, but instead tried to maximize subjectivity, adopting what we refer to as critical subjectivity, whereby we seek to take our biases into account as we figure out what they are and how they are salient. We are guided by the mantra of doing as much good and as little harm as possible.

Over the two-year stretch in which the study was conducted, I was troubled when Nick came for a treatment with an extremely high blood sugar concentration. In

the moment, I may have experienced concern for Nick, apprehension of wanting to produce immediately successful outcomes, and challenge by a daunting health project. As I look back on those two years, I realize that having a relatively high glucose concentration in the blood is a risky disharmony that can set the stage for flows of universal energy being blocked and diverted. Furthermore, if the preferred state for the body is to have a blood sugar concentration below 100 mg/dL, then the implications of having blood sugar concentration in the 200 s might be potentially harmful. It is highly probable that the pulses would reflect the body's priorities – which might relate to harmonizing important flows rather than reducing blood sugar concentrations.

A second source of uneasiness was our tendency to judge the efficacy of Jin Shin Jyutsu flows based on short-term changes. For example, since Qi flows through the body on a 24-hour cycle, changes initiated in a one-hour session might not be apparent until one day later. Accordingly, it seems prudent to use multiple lenses to judge the efficacy of Jin Shin Jyutsu in relation to treating Diabetes Type 2. When large changes occur almost immediately, we should seek to learn from them, and when there appear to be few or even no changes immediately after treatment, we should try to figure out the what, why, and what-more questions, while remaining vigilant for signs of longer-term change. Given the importance of lifestyle to the emergence and retention of Diabetes Type 2, we should not expect quick fixes. That has certainly been our mindset for much of this study. To this point in time we are searching for different ways for Jin Shin Jyutsu and complementary approaches such as an anti-inflammatory diet and exercise, to harmonize and heal in ways that reduce dependence on pharmaceutical solutions and repair functioning of organs, cells, and other physiological entities such as nerves.

JIN SHIN JYUTSU TREATMENTS

When dealing with Diabetes Type 2, we need to be aware that, as long as there are pancreatic cells delivering insulin, it is in most cases a reversible process. (Hell, 2014, p. 9)

On December 21, 2014 Nick and I commenced our research on Diabetes Type 2. The purpose of the study was to use Jin Shin Jyutsu to complement Western treatments of Diabetes Type 2 that involve dietary restrictions (no use of high sugar or high carb foods) and medication (insulin and metformin). Nick laid out the parameters for what we would consider to be a successful study:

... To reduce insulin and metformin gradually and still maintain the same blood sugar range. If we can do that consistently, we will be able to eliminate insulin and metformin one day. That will be the optimal cure. Even if we can reduce the insulin and metformin by half, it will be a tremendous success as it will prove that the body has restarted making insulin that works and is effective.

I accept that I will need to continue to take medication because the Diabetes Type 2 is too advanced. Unless I do this, I may have to continue to increase

the medication to cope with deterioration of the pancreas and liver. In the past year, I had to increase dosage by 20% – perhaps even more. The reason for this increase is that I did not have the time to exercise and make my body more efficient. My lifestyle at home is too demanding. My body is telling me – don't get defeated by circumstances.

In this section, we include four vignettes selected to highlight some of the key ideas that emerged from our longitudinal study. The first part of each of the four analyses provides my edited notes to Nick following the treatment. In addition to correction of typos, material considered to be irrelevant to the study has been omitted. The second part is a critical analysis of what happened, when possible connecting to theory and the Jin Shin Jyutsu knowledge base.

As part of a multilevel methodology we employed in this research, we used video to capture the Jin Shin Jyutsu sessions in which we used oximeters to measure pulse rate and blood oxygenation. The video enabled us to look closely at the way in which Jin Shin Jyutsu was administered and received, timing each of the flows and using micro-analysis (i.e., frame by frame analysis) to better understand what was happening during a treatment. The microanalyses are part of ongoing research and were used in this study to provide details such as the time for each Flow, hence allowing us to review trends associated with blood oxygenation and pulse rate within and between Jin Shin Jyutsu flows.

A Typical Treatment

The Jin Shin Jyutsu treatment administered on April 4 at approximately 10 AM started with a blood sugar reading of 221 mg/dL. Nick let me know that he had breakfast about two hours before and had taken his medication. He also let me know he was experiencing high levels of stress.

The treatment lasted for approximately 1 hour 15 minutes, commencing with the Left-hand Flow for the Lung Function Energy. The pulses were relatively strong (i.e., powerful) on both wrists – supporting my initial decision to consider the Umbilicus, Lung, Liver, and Diaphragm flows.

The nine components to the treatment I administered were: Left Flow for Lung function energy; both sides of the Supervisor Flow; Right Flow for the Liver function energy; low and high holds on the spine from thoracic vertebra 1 to Thoracic Vertebra 12 (this included a conscious move of the hands to assume a central location proximate to Thoracic Vertebrae, 5–7); both sides of a mediator hold stretching from Right Safety Energy Lock 11 to Left Safety Energy Lock 16 and vice versa; Left Umbilicus function energy; Right Diaphragm function energy; Right Spleen function energy; and a wrap-up that included three separate components – both sides of the diagonal Safety Energy Locks 24 and 26; and “cross-hands” from the calves to the big toe, beginning at low Safety Energy Locks 8 and finishing at Safety Energy Locks 7; the head/neck, including Safety Energy Locks 3, 11, 12, and 4. The reduction in blood sugar was equivalent to 34%.

Insights gleaned from looking back. Reflecting on this vignette, the first issue that arises is Nick arriving for treatment with blood sugar concentration of 221 mg/dL. If the goal of medication is to sustain wellness by maintaining harmony in the glucose levels, then swings of more than 100 mg/dL are an indicator that the body may be under stress and it is likely that neuroception will assess a high level of risk and switch control of the body to the sympathetic, fight-flight mode of operation. Simultaneously, less control would be exercised through the parasympathetic component of the vagus nerve, affecting the production of insulin and glucagon. If a scenario like this occurs, then physical disharmony in blood chemicals may produce disharmonies in the flow of Qi – which can be addressed at least partially in a Jin Shin Jyutsu treatment like the nine-component treatment described in the vignette.

A second issue to be addressed concerns the Jin Shin Jyutsu flows used in this treatment. What I chose to do in the moment reflected my intuition, which is grounded in my relatively short, but intense learning of the art of Jin Shin Jyutsu. My decisions reflected my reading of Nick’s body as the treatment began and unfolded for an hour and a quarter. This included interpreting the pulses and feeling for blockages at the safety energy locks and in different regions of the body. I monitored Qi flow throughout the treatment and made in the moment decisions on what to do next. There were always good alternatives.

A third issue concerns the 34% decrease in blood sugar. This is a high percentage decrease – though not unusual in this study (see [Table 22.1](#)). It certainly exceeds the likely drop in blood sugar that might have occurred in one hour and 15 minutes (i.e., without any Jin Shin Jyutsu treatment). It is noteworthy that as Jin Shin Jyutsu was administered, the blood sugar dropped substantially. This begins to

Table 22.1. Blood sugar differences as they relate to 11 Jin Shin Jyutsu treatments

<i>Date (2014/2015)</i>	<i>Pre (mg/dL)</i>	<i>Post (mg/dL)</i>	<i>Difference (mg/dL)</i>
12/21	218	176	42
12/28	158	107	51
12/29	201	193	8
01/21	183	150	33
01/23	208	133	75
01/25	195	139	56
01/31	137	90	47
02/12	122	122	0
02/14	150	101	49
02/22	248	154	94
02/28	161	78	83
Averages	180	131	49 (27%)

address an issue of whether or not an intervention grounded in a theory concerning the energetic body makes a difference to harmony and wellness in the physical body. This result suggests that an excess of glucose in the body was reduced substantially during a treatment of 75 minutes. The resulting blood sugar was still higher than optimal. What is important to emphasize is that it is likely that decreases in blood sugar concentration and improvements in other indicators of harmony could continue for hours, days, and weeks after treatment. In this study, we have not, to this point in time, looked at blood sugar levels in a 24-hour cycle following treatment.

Finally, the treatment length is greater than the one-hour maximum recommended by Mary and most Jin Shin Jyutsu practitioners. We are not suggesting that treatments exceed one hour. The optimal time is contingent on the person receiving treatment and the condition of the body during the treatment. On this occasion, we decided to continue because it seemed beneficial to do so. On most other occasions, we sought to keep sessions to 45 minutes or less, mainly because of scarcity of time.

Follow-up Session Two Days Later

Nick ate breakfast at 7 AM and took his medication at 7 AM as well. In addition, he worked out in the gym for 30 minutes and jogged from his house to mine. Nick arrived at about 10:10 AM. Today I did not read the pulses because I had worked out what the treatment session would comprise. Nick's glucose level prior to starting the treatment was 95 mg/dL.

The normal range value obtained for blood sugar concentration allows me to make an important point regarding Jin Shin Jyutsu – as a practitioner, I am not targeting high blood sugar, which I regard as a symptom associated with disharmony in the flow of Qi. When harmony is restored to the Qi flow, the body can repair damage and restore appropriate functioning. In the case of a Diabetes mellitus project that has been ongoing for almost 20 years, repair and restoration are unlikely to be immediate and regular treatments (including self-help) may be necessary for days, weeks, months, and years ahead.

Based on my reading of notes from a class I took with one of the faculty from the Jin Shin Jyutsu Institute, I noticed that the Liver Flow was appropriate for increasing oxygen levels and holding the middle toes also would increase oxygen levels. I decided I would administer the Right and Left Liver flows and also hold the middle Left finger and Right toe and vice versa. Also, I would hold both middle toes (18 minutes).

I connected an oximeter so that I could review oxygen levels and pulse rate during the treatment. Just prior to the session starting, oxygenation of the blood was 95% and pulse rate was 94 bpm. Contrary to what we expected a trend in this study is that blood oxygenation dropped during the Jin Shin Jyutsu treatments.

In order to increase oxygenation of the blood I did the Diaphragm Right Flow, sitting on the Left-hand side (23 min and 10 sec).

I did the Right Flow for Safety Energy Lock 4. I consider this flow to be effective for treating Diabetes Type 2 because it consistently lowers blood sugar and is recommended by Jin Shin Jyutsu practitioners for harmonizing the vagus nerve.

At 35 minutes and 12 seconds I began the Left Umbilicus Flow.

At 45 minutes and 30 seconds the videotape stopped recording, just after I had announced that I would finish up with the Spleen Flow – “to re-energize the system.” My recollection is that I did the Right Flow, thereby implicating the Left Safety Energy Lock 14. After completing the relatively short Flow I closed with the Safety Energy Lock 26/Safety Energy Lock 24 Flow.

We watched the oxygenation and pulse rate data (the visual display) for approximately 1 minute after I had concluded the treatment. The oxygenation steadily increased to about 94% and the pulse rate decreased to 62 bpm.

Nick measured his blood glucose level and obtained a reading of 60 mg/dL – a 37% decrease.

Variation in blood oxygenation during Jin Shin Jyutsu treatment. The second vignette highlights the way in which technical interests can pervade a treatment. I had done my homework and prepared what I considered to be “the best” treatment for Diabetes Type 2 – designed to increase oxygen levels in the blood in an endeavor to promote energy release from the glucose dissolved in the blood. On this occasion the treatment followed the plan and the outcomes were similar to the previous treatment – a decrease in blood sugar by 37%. However, absent was the artistic approach that characterized the treatment described in the first vignette. On this occasion the treatment was not reliant on body scanning and pulse listening. In hindsight, this was a shortcoming even though the blood sugar decreased and was relatively low. Interestingly, a text message I sent to Nick after communicating the results from this session noted: “Need to take pulses after every Flow. Should not just follow a recipe. Have to listen carefully to pulses and make sense of them.”

We had used finger pulse oximeters in our ongoing research on expressed emotion while teaching (Tobin, King, Henderson, Bellocchi, & Ritchie, 2016). Accordingly, the connection between emotion and physiological change was central to our ongoing scholarship and permeated our thinking about Jin Shin Jyutsu being utilized to re-harmonize Qi flows that had been disrupted by malfunctions in the physical body. On this occasion, the concentration of oxygen in the blood ranged from 82% to 94% (standard deviation 1.6%). The pulse rate varied from 62 bpm to 85 bpm (standard deviation 3.7 bpm).

Interestingly, during administration of Jin Shin Jyutsu, the blood oxygenation levels dropped appreciably. We wondered whether this might be due to heightened chemical activity associated with a 37% reduction in blood sugar. As can be seen from the results reported above, the minimum blood oxygen was 82%, well below the maximum of 94% – which is appreciably lower than approximately 98% associated with relaxed every day activity.

The glucose level of 60 mg/dL, obtained immediately after the treatment, is at the lower limit of what is considered normal glucose concentration, and above the level used to signal hypoglycemia. Of course, the critical question to be addressed in follow-up studies is what happens to the blood sugar in the hours and days after treatment. We regard addressing this question as a priority for our ongoing research.

Jin Shin Jyutsu in a Limited Time Interval

What we did today is not so different from what we did previously, except, I rushed. Next time we definitely should do less to achieve more.

Nick had no medication today. He had lunch at 11:30 am approx. and we began the Jin Shin Jyutsu session at 15:37 and finished at 16:15.

Here are the flows we performed and the data associated with the session. The total time spent doing Jin Shin Jyutsu was 32 min and 36 sec.

10 Flow Left (13 min 32 sec)

23/25 Flow Left (5 min 03 sec)

Spleen energy Flow Left (2:43)

Spleen Flow Right (1:45)

Liver Flow Left (3:09)

Umbilicus Left Flow (4:43)

Wrap up (1:41)

During treatment, the mean heart rate was 66 bpm (range from 59 bpm to 89 bpm; standard deviation 4.0 bpm) and the mean oxygenation was 93% (range from 90% to 98%; standard deviation 1.6%).

Prior to treatment blood pressure was 140/88 and after treatment it was 129/79.

Pulse rate prior to treatment was 86 bpm and after treatment it was 77 bpm.

Blood sugar was 164 mg/dL prior to treatment and 144 mg/dL after treatment. A reduction of 20 mg/dL occurred (i.e., 12%).

Looking more deeply. In the third vignette, it seems evident that my approach was more technical than artistic. I base this claim on the comment of rushing through – when to move the hands during a Flow should not be governed by “trying to” accomplish a pre-planned schedule. More important is the feeling of the pulses. When the pulses in the left and right hands are harmonized, it is a sign that the Flow could be advanced to the next step. Judging from the decreasing time allocated to the final flows, this vignette serves as a reminder to do less and do it well.

A second issue to address is Nick not having medication with his lunch. As was the case in vignette 1, the glucose concentration was very high and the treatment

Table 22.2. Blood oxygenation and pulse rate during Jin Shin Jyutsu flows

Time	Treatment	Oxygenation				Heart Rate			
		min	max	mean	s.d	min	max	mean	s.d
18 m	Overall	90	98	93.2	1.6	59	89	65.6	4.0
1.9 m	Pre Flow 1	95	98	96.7	0.7	68	89	75.1	5.4
13.5 m	10 Left	90	98	93.4	2.0	59	78	65.0	3.4
0.3 m	Pre Flow 2	91	93	92.2	0.5	63	67	64.5	0.9
5.1 m	23/25 Left	91	94	92.4	0.7	60	70	63.6	1.8
0.9 m	Pre Flow 3	92	94	93.0	0.4	61	66	62.9	1.4
2.7 m	Spleen Left	92	94	92.8	0.5	61	67	63.2	1.5
0.3 m	Pre Flow 4	92	92	92	0.0	63	65	64.2	0.7
1.6 m	Spleen Right	92	93	92.4	0.5	61	68	63.5	1.6
0.9 m	Pre Flow 5	92	93	92.7	0.5	64	70	65.9	1.8
3.2 m	Liver Left	92	94	92.9	0.6	61	74	65.4	2.8
0.8 m	Pre Flow 6	93	94	93	0.2	62	79	67.5	4.6
4.7 m	Umbilicus Left	92	95	93.4	0.6	63	76	66.5	2.8
0.3 m	Pre closing	92	94	92.7	0.6	66	79	70.6	3.4
1.7 m	Closing	93	95	94.1	0.6	64	81	68.1	3.9
0.2 m	Post treatment	92	94	92.8	0.8	66	69	68	1.1

reduced it by 12%. This level was well above normal range of 70–100 mg/dL. Once again, the question to be answered is whether blood sugar continues to drop in the hours and days after the Jin Shin Jyutsu treatment.

Allowing the blood sugar to spike to the point that it reached 164 mg/dL was likely associated with numerous disharmonies in the body – including the functioning of the vagus nerve, and hence the pancreas and liver. Malfunctioning in these areas of the physical body might disrupt Qi flows that pass through this region of the body, including Spleen, Umbilicus, Diaphragm, and Liver flows. Safety energy locks in the region also might be locked, in which case more organ flows might be disrupted and other regions of the body such as neck, shoulder, eyes, and toes might be adversely impacted. These implications draw attention to the long-term consequences of Diabetes Type 2 that can cause damage to the physical body, especially in the regions of the body I just mentioned.

When we use the finger pulse oximeter we obtain three data sets – blood oxygenation, pulse rate, and plethysmograph. Although we have not reported the analyses of the plethysmograph data in this chapter – they are analogous to blood pressure data. Typically, we find the range between high pressure and low (similar to systolic and diastolic) decreases as the treatment progresses. In this treatment, we

also measured blood pressure before and after the treatment and showed a decrease from 140/88 to 129/79. That is, the Jin Shin Jyutsu treatment was associated with a reduction in blood pressure from high to almost normal.

In this treatment, the blood oxygen concentration decreased from normal (98%) to 90% – once again reflecting a potentially higher level of chemical activity as glucose was converted to energy and glycogen. It is possible that the oxygenation of the blood did not drop to the same level as in the previous vignette because there was less insulin available and insufficient metformin to increase the cellular absorption of glucose. Pulse rate dropped from 86 bpm to 77 bpm from beginning to end of treatment and during the treatment a relaxing average of 66 bpm was maintained. It is possible that such conditions would signal that the body was safe and would support the functioning of both the pancreas and liver.

Through the Lenses of Polyvagal Theory

Nick: Can you please make a note of all flows u worked on me yesterday. They were very effective. My sugar went very low. I needed to eat after I came home. Great job.

Ken: Terrific. We did Left 9, Left 23/25, and Right 4.

Less Is More

We included this final vignette as an example of less is more when it comes to Jin Shin Jyutsu treatments. There is no need to squeeze in all the flows that have proved to be effective in the past, and as a treatment unfolds, it is important to continuously scan and listen to the body. The inclusion of the Right Safety Energy Lock 4 Flow is an example of theory informing the selection of a Flow based on the pulses, in this case indicating a Bustline Flow – ascending energy. Whereas I might have selected a 10 Flow (also Bustline and ascending), my recent review of polyvagal theory and the importance of harmony in the vagal nerve (physical body) prompted me to think about the salience of either the Left or Right Safety Energy Lock 4 Flow. On this occasion, the quiet pulses were on the left-hand side and so I opted to do the Right Flow, which focused on the region in which the right vagus exits the cranium.

Harmonizing Right Safety Energy Lock 4 raises the possibility that blockages in this region could be associated with problems in the functioning of the right vagus. Given that the vagus is the longest nerve in the body, disharmony in any of the Safety Energy Locks could signal danger to the vagus nerve and catalyze physiological changes such as in blood oxygenation and pulse rate. If the physical risk is assessed as high, neuroception could initiate fight-flight routines. Administering a Right Safety Energy Lock 4 Flow appeals as a component of a treatment regimen for Diabetes Type 2 because of the importance of the right vagus to the production of the key hormones involved in harmonizing the concentration of glucose in the body.

Left Safety Energy Lock 9, which is a waistline safety energy lock, is ideal for Diabetes Type 2 treatment because it addresses congestion of energy in the right shoulder, and blockages in Safety Energy Locks on the left side of the body (below the waist) that are proximate to critical parts of the physical body responsible for controlling blood sugar. Similarly, Left Safety Energy Lock 23/25 Flow has a role in blood circulation and composition, as well as regeneration. The regenerative potential of the 23/25 Flow has considerable significance for Nick, who has been living with Diabetes Type 2 for almost 20 years. The Left Flow focuses on the left side of the physical body in the region of organs and associated nerves that are salient to Diabetes Type 2. It too can be considered a waistline project that can move energy to promote harmonious flow of Qi.

Nick was excited when we finished this Flow; and, as has been true every time we engaged in a Jin Shin Jyutsu treatment, the pulses were harmonized at the conclusion of this relatively short duration treatment of approximately 45 minutes.

SELF-HELP

The first time I suggested self-help to Nick I had in mind around about 30 minutes in the morning and another 30 minutes at night. To my surprise, this was completely unrealistic. If Nick was to do self-help, the most that might be expected was 10–15 minutes a day. In fact, Nick indicated that the time for Jin Shin Jyutsu homework would be taken from his daily allotment to physical exercise. Hence, it is necessary to prioritize what is most important to recommend – otherwise, my suggestions are futile (i.e., not practical).

The following is an example of suggestions I provided, via email or text message, after each session.

Homework should include deep breathing while completing the Main Central Flow, both sides of the Mediator Flow, and both Supervisor Flows. Please do your homework for at least 30 minutes in the morning and in the evening.

Over the duration of the project my focus was to assign self-help suggestions based on what we had learned from the most recent treatment. Often this involved suggesting that Nick try the first two holds for several flows we had used during a treatment. However, as we were writing, editing, and rewriting this chapter it occurred to me that maintaining harmony in the energetic and physical bodies ought to be a priority reflected in the use of pharmaceuticals, Jin Shin Jyutsu, diet, and exercise. From the point of view of Jin Shin Jyutsu, I concluded that initially we should keep it simple. For example, holding each finger for 2 minutes while focusing attention on the out breath would be one example of assisting the body to harmonize all safety energy locks and organ function energy flows. To hold each of the five fingers and palm center on both hands would take a total of 24 minutes, which is much more manageable than the activities I prescribed as homework on most occasions. Of course, the holds could be for 1 minute rather than 2. If time restrictions preclude

this happening in one sitting, the activity could be spread across time and still would be beneficial. Another advantage of the finger and palm holds is simplicity. It is not difficult to do and is relatively inconspicuous – hence it can be done in public, while commuting (for example).

WELLNESS AND THE ROAD AHEAD

In order to prepare to administer the treatments in this study, I pored through my notes from Jin Shin Jyutsu classes I had taken with faculty from the Mary Burmeister Jin Shin Jyutsu Institute, and Jin Shin Jyutsu resources, especially Watkins' (2014) *26 Keys to Unlock my Inner Treasure* and Waltraud Riegger-Krausse's (2014) *Health is in your hands*. In this study, Nick used Riegger-Krausse's flash cards as a resource for self-help for his family and himself. The cards provided information on the key flows for Safety Energy Locks and organ flows. Also, the article written by Hell (2014) was invaluable in our preparation of this chapter. Because of the centrality of Mary Burmeister's work to the Jin Shin Jyutsu Knowledge Base, the texts she wrote were foundational.

To a marked extent the critical label of Diabetes Type 2 framed my preparation and my determination to succeed focused attention rather than the art of reading Nick's body to learn what it was communicating about disharmonies in the Qi flow. Throughout this chapter we have made note of the importance of being in the moment during a Flow and following intuition artistically, rather than technically. Central to Jin Shin Jyutsu practice is reading and interpreting the body – making sense of Qi flows and blockages in terms of texture and qualities of harmony/disharmony.

Complements in the Treatment of Diabetes Type 2

We are well aware that Jin Shin Jyutsu alone is unlikely to cure Diabetes Type 2 as quickly or as well as a treatment regimen that includes Jin Shin Jyutsu, dietary consideration, and physical activity. Also, we are intrigued by Jed Schwartz's use of iridology as a window into health projects in the physical body and uses of herbs and dietary supplements to remediate emerging, present, and chronic health projects (Schwartz, Chapter 18). For example, the presence of sulfur in the iris can contribute a brown coloration to regions corresponding to the intestines, stomach, and lymph system. If the color is observed, it can be removed through diet – for example, by eliminating added sugar (even in fruit) and alcohol.

Kathy Abascal warns that “healing the body and restoring full liver function may take time” (Abascal, 2011, p. 137). With goals of maintaining the insulin/glucagon equilibrium and assisting the liver to respond to glucagon, Abascal recommends increasing the amount of green vegetables in the diet – to assist the cells to increase their sensitivity and responsiveness to insulin. Contrary to a widely accepted mantra that a piece of fruit is good for you, Abascal cautions that fruits do not assist in

overcoming insulin resistance and fruit juices should be avoided because they can contribute to insulin resistance. To overcome insulin resistance and assist the liver to sustain acceptable blood sugar levels, people with Diabetes Type 2 should eat meals and snacks at regular times – taking care to avoid food that triggers insulin resistance. Abascal cautions against snacking between the five mealtimes (breakfast–snack 1 – lunch – snack 2 – dinner) and advocates an overnight fast by not eating three hours before going to bed. Similarly, by avoiding bread, cheese, and sulfites, the growth of *Candida albicans*, a fungus, can be checked. In addition, there are herbs that can be taken (e.g., asparagus root) to eliminate *Candida albicans* and diets designed to eliminate problems related to invasive *Candida* (Sichel & Sichel, 1990). In relation to this study it is salient to note that the growth of *Candida albicans* can be fueled by high blood sugar levels and is often associated with Diabetes Type 2 (Zomorodian, Kavooosi, Pishdad, Mehriar, Ebrahimi, Bandegani, & Pakshir, 2016). Consequently, it seems like a high priority to check for the presence of *Candida albicans* and its potential impact on functioning of the lymph nodes, digestion, and elimination.

There is little point in prescribing a diet change if the person receiving treatment is unable to change his lifestyle to conform. Nick emphasized this point:

Nick: Dietary restriction for a long time impacts the quality of life and thus becomes a distraction. My food intake is tuned for gaining control of my Diabetes Type 2. I don't use any high sugar or high carb in my diet. All food intakes eventually lead to a rise in blood sugar if it contains any calories. There are some foods that shoot the sugar level up very quickly before the body can neutralize and some foods do it slowly. I do look at what I eat. If I am within my 3-hour window, then it is less of a problem. That is why I resist to nibble in between my meals and target more of the low glycemic foods. Also, I quit eating 2–3 hours before going to bed, including all beverages that have possible sugar. I have minimal dependency on artificial sweeteners.

The biggest challenge for chronic patients suffering from Diabetes Type 2 is that such folks want to lead as normal a life as possible. Dietary restriction for a long time impacts the quality of life and thus becomes a distraction.

As was noted by Schwartz, herbs and supplements can be considered part of a diet that complements something like Abascal's anti-inflammation recommendations. Eric Yarnell, Kathy Abascal, and Robert Rountree (2009) provided an extensive compilation of alternative and complementary herbs for a number of diseases, including Diabetes Type 2. They listed several herbs that have significantly reduced blood sugar levels. Those that seem most promising for uses in our ongoing research are: devil's club (*Oplopanax horridum*), prickly pear (*Opuntia* spp.), cinnamon bark (*Cinnamomum cassia*), prodigiosa (*Brickellia grandiflora*), tronadora (*Tecoma stans*), and matarique root (*Psacalium decompositum*).

Skeptics

This study suggests that the use of Jin Shin Jyutsu over a two-year period can harmonize Qi flow and also address disharmonies in the physical body. Most notably, use of particular organ and safety energy lock flows appreciably reduce the concentration of blood sugar. Similarly, during Jin Shin Jyutsu flows oxygenation of blood, pulse rate, and blood pressure all seem to decrease. We assume that the reduction in oxygen saturation is related to the chemistry of reducing blood sugar. The reduction in pulse rate and blood pressure reflects a peaceful/relaxing body – potentially a physical environment in which the vagus nerve is harmonized, allowing it to support effective functioning of the liver and pancreas.

Finally, there are skeptics who do not believe in Qi and the efficacy of knowledge systems such as Jin Shin Jyutsu, that have Chinese medicine as a foundation. The results of our study may serve as encouragement for such people to consider the potential of complementary aspects of Jin Shin Jyutsu in the treatment of Diabetes Type 2. For example, engaging self-help activities, such as holding fingers and palms, even when critical labels such as Diabetes Type 2 apply, can help to restore harmony and wellness.

As for our studies of Diabetes Type 2? They are ongoing. We have much more to accomplish. We acknowledge that Jin Shin Jyutsu treatment must be contextualized in relation to lifestyle and caution that bodies should be regarded holistically – we do not consider it wise to assume that what we learned about specific Jin Shin Jyutsu flows will apply in an analogous way to all bodies in all circumstances. A strong focus on finding a cure for Diabetes Type 2, that is to some extent universally generalizable, fails to account for the body in its social context. Taking the larger view is a deterrent to overgeneralizing and it also is a reminder that the purposes of authentic inquiry relate to wellbeing of all participants. Hence, a focus on harmony in the body as a whole is a good place to begin and a good place to finish each Jin Shin Jyutsu treatment.

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K. TOBIN & N. ANSARI

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Before Tobin became a university science educator in Australia in 1974, he taught high school physics, chemistry, biology general science, and mathematics for 10 years. He began a program of research in 1973 that continues to the present day – teaching and learning of science and learning to teach science.

COMPLEMENTARY PERSPECTIVES ON THE ENIGMA OF DIABETES MELLITUS



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ELISABETH TAYLOR

23. RECOVERY FROM EATING DISORDERS AND CHILD SEXUAL ABUSE

*Enhancing Personal Sustainability through Mindfulness-Based,
Transpersonal Art Therapy*

ABSTRACT

In this chapter I present a case study in which a client uses transpersonal art therapy to address personal issues such as depression to re-build resilience and personal sustainability. I describe how transpersonal art therapy, which incorporates mindfulness and mask-making activities, uncovers and addresses issues associated with self-image, eating disorders, and obesity. Child sex abuse also emerges as an underlying trauma that was suppressed for decades, serving as an invisible wound that fractures self-sustainability and impacts lifestyles.

Keywords: mindfulness, eating, disorders, transpersonal art therapy, mask making, archetypes, resilience

*For many of us the consequences of leading an unhealthy lifestyle aren't good.
The effects lie deep beneath the surface in the form of toxic fat.*

(LiveLighter, 2016)

Obesity has become one of the top priorities in public health in many nations. The *LiveLighter* Campaign TV-ads in Australia – such as the one quoted above – regularly flash across television screens confronting viewers with graphic images of toxic fat showing organs embedded in a yellow, gooey mass. Toxic fat has been shown to greatly enhance the risk of heart disease and Type 2 Diabetes. The ads build on the ‘gross’ factor and on ‘shaming’ audiences out of overeating. Similar strategies are used in TV-shows popular in the US and in Australia such as *The Biggest Loser*. The *LiveLighter* ads are correct inasmuch as weight problems bring with them a real danger to one’s life. What they tend to overlook however is that not every overweight person is an inactive couch potato who just mindlessly puts food in his mouth because he does not know what else to do in his lives. For many people struggling with being overweight, it is not just the effects of overeating that lie ‘deep inside’ in the form of toxic fat but also the reasons – traumatic experiences in many cases due to neglect and/or sexual abuse dating back to childhood tend to reside deep in a person’s psyche. In those cases, it is the trauma that has caused

E. TAYLOR

people to be out of touch with themselves. Eating has become a strategy for self-soothing. Trauma is unlikely to be overcome by yet more shaming and rigorous dieting – victims of trauma are usually already really good at having a negative self image without outside help. Rigorous dieting that fails is bound to make sufferers feel even more inadequate. Dealing with eating disorders requires approaches that help people work through the underlying trauma, reconnect with their strengths and re-build resilience, thereby enhancing personal sustainability and overcoming a major public health problem without shaming and dieting. In this chapter I illustrate how mindfulness-based art therapy can support the recovery of sufferers of eating disorders by inviting the reader to engage with the case study of ‘Mary’ – a semi-fictional character.

I wear two hats in my professional life: a part-time, university academic in education, and a part-time counselor and art therapist in both private practice and an agency. In my latter role I have encountered several clients – male and female – who indicated to me that child sexual abuse was an issue for them. These clients came to see me for other reasons such as depression, lack of self-confidence and self-worth or relationship problems. For some, over time, the focus of the therapy shifted to body image and weight issues in addition to low self-esteem and depression. For some clients it has become increasingly clear that maybe, underneath the surface problems, an existing eating disorder may have been lurking in the dark all along using up enormous amounts of their personal energy that could be used for dealing with everyday life.

PERSONAL SUSTAINABILITY AND A HEALTHY BODY IMAGE THROUGH MINDFULNESS

An easy definition of sustainability is “the ability to meet your present needs without compromising your ability to meet your future needs at that time.” [...] Personal sustainability, or, one’s ability to maintain an even or positive balance of personal energy is the critical starting point for people making a difference in the world. (Center for Nature & Leadership, n.d.)

Keeping in mind the above definition of personal sustainability it becomes obvious that for many people struggling with weight issues, unwanted kilos and imperfect body shape have taken on an unsustainable level of importance in their lives. When a person is in the grip of an eating disorder there is not enough energy left to ‘make a difference in the world because much of it is used up to maintain basic emotional balance. Margaret Hunter (2012) explains that even for people not suffering from an eating disorder *per se* maintaining a healthy body image has become difficult with cultural norms and expectations weighing down on us. The external pressure on individuals in relation to weight, body size and body image has become unsustainable for many. Most women, according to Christine Northrup in her book *Women’s Bodies, Women’s Wisdom* (1998), have been brainwashed about how much they should weigh and what they should look like. There are now even

so-called ‘pro-anorexia websites’ that actively promote an unhealthy thin image as desirable. Add to the media pressures the enormous internal pressures of people who have experienced trauma in the past and it becomes clear that for some overweight persons a happy life becomes unsustainable without receiving support in dealing with the underlying issues.

Mindfulness has been praised as a panacea for many mental ailments and has also been embraced by mainstream psychology. It is to the credit of John Kabat-Zinn (2003) and others that we now have access to mindfulness-based therapies that were originally developed drawing on ancient Buddhist meditation practices. Practicing mindfulness is reported to help clients with grounding themselves in non-judgmental attention to the experience in the present moment (Hunter, 2012). Mindfulness has been shown to enhance resilience – the ability to bounce back from life’s knocks and setbacks. It is what makes people ‘hardy’ and able to deal with stress (Williams & Penman, 2011). Whilst we could argue that trauma survivors have already proven to be resilient because they have survived an onslaught on their mental health, existing maladaptive coping mechanisms (e.g., eating disorders) may need refocusing on healthier strategies. One such unhelpful coping mechanism is going on ‘autopilot’ or ‘tuning out.’ Geneen Roth (2002) describes what it is like ‘being on a binge’:

I feel so insane when I binge, as if there is no reality but the loud pounding voice inside my head screaming at me to eat. At that moment nothing exists; yet, because I am so aware that everything in fact does exist, the contrast and craziness of what I am doing make the insanity even sharper. I know I am destroying myself but I can’t stop [...] the darkness is so pervasive that it is as if I have descended into another realm. (p. 15)

Research indicates that through mindfulness training we can re-learn to get ourselves out of the autopilot state and become more fully present (Williams & Penman, 2011). Working with clients using mindfulness-based transpersonal art therapy I have witnessed how mindful art making can help peel away layers of pain to reveal old traumas that keep clients ‘stuck’: in order to live with their trauma, they have become fundamentally out of touch with themselves, with their strengths (Hinz, 2009) and resilience. Aaron Antonovsky, in his research on Holocaust survivors, identified three traits that help rebuild resilience for survivors of traumatic events: comprehensibility, manageability and meaningfulness which together help a person rebuild a sense of coherence (Williams & Penman, 2011). Coherence tends to be affected in people living with a traumatic past. Art therapy is particularly suitable for helping rebuild a sense of coherence allowing clients to view fresh images of old ideas about the self. Clients are invited to re-write their old – usually negative and self-critical narratives about themselves. Art helps bring old inner conflicts to the surface, puts a face on fear and enlivens the process of change (Hinz, 2009). Clients are encouraged to “use symbols and metaphors to describe a traveler who has lost her/his way out on the waters of life” (Hunter, 2012, p. 27). Art therapy and mindfulness go hand-in hand: in the chapter *Mindfulness and Flow*

E. TAYLOR

in Transpersonal Art Therapy: An Excavation of Creativity published in the book “*Mindfulness and Educating Citizens for Everyday Life*” edited by Ken Tobin and Malgorzata Powietrzynska, I described the transpersonal art therapy process and wrote about how transpersonal art therapy embodies mindfulness at every step of the way (Taylor, 2016).

In this chapter I build on the experiences and the therapy process of Mary, a fifty-five year-old Australian woman who came to see me for help with depression and low self-esteem. For several years Mary had been struggling with low moods, sleeplessness, low self-esteem, and a sense of ‘being invisible’ in social situations leading to anxiety. I have Mary’s permission to tell her story, however, due to the highly personal nature of Mary’s experiences I have created a semi-fictional character to ensure that Mary’s identity is protected. I have therefore – with her permission – made some ‘creative’ changes to her case. Mary has read the final draft of this chapter and her feedback has been woven into the chapter. The following pages are based on my case study notes. I describe several transpersonal art therapy processes Mary engaged in over a period of several weeks. She also kept a journal during her therapy, which she brought along to our sessions.

INTRODUCING MARY

Mary is a fifty-five-year-old lawyer working for a government-organization. Mary divorced in her thirties and is now happily re-married to John, also a lawyer, who is sixty-three years old. Her adult children (Vivienne aged, 27; Nigel, 31) from her first marriage have left home. She thinks that her life should be getting easier now – but alas it is not. For the past few years she has been experiencing low moods over long periods of time paired with sleeplessness, bouts of anxiety, and pain in the lower back and shoulders. Mary saw a doctor who prescribed anti-depressants that also deal with the anxiety. The female doctor, in her thirties, told her that, “all of your symptoms are due to menopause – you better get used to it!” Mary begrudgingly accepted that menopause might be involved whilst she was not fully convinced that all her issues could be explained away with it. She dislikes taking medication due to the side effects she is experiencing. She came to therapy after John had convinced her that counseling might be a good idea.

When Mary first came to see me I suspected that some of her issues might be related to middle age, one of the existential transition phases in life that often create problems for both genders. Some women experience what is commonly known as the ‘Empty Nest Syndrome’ when their children leave home and they have to reinvent themselves, re-arrange their post-motherhood lives and re-negotiate their marriages. Monica McGoldrick, Betty Carter, and Nydia Garcia-Preto describe this life transition as a “time of depression for women” (2011, p. 55). Mary, however, expressed relief that her childbearing years were behind her and she stated how much she enjoyed the increased intimacy and freedom with John. Despite that freedom she found it difficult to “relate to herself” as if she “was pretending to be happy and

balanced and supportive for everybody else – but myself!” She felt psychologically unwell when, really, she felt that she had many reasons to be happy.

Consulting Body, Mind, Heart, Soul and Spirit: First Doubts

We started therapy by using a transpersonal art therapy process during which I asked her to envisage a difficult situation in her life – something she would like to change. Subsequently she created a set of symbolic images on five small cards (A6) representing body, mind, soul, spirit, and heart respectively. I then asked her to dialogue with the cards asking each one in turn the question, “What does . . . , e.g., the body know about this issue?” Following each dialogue she was to create an image using oil or chalk pastels (her choice) representing the message she had ‘received.’ Mary informed me that the issue that immediately popped into her head was, “I want to lose weight and I don’t seem to be able to!”

Mary decided to ask her mind first what it knew about the issue. The image that emerged after that first dialogue was that of an obese, ridiculously overweight woman with yellow/greenish skin in a bikini that was much too small for her. Mary was shocked to learn that her mind saw her body in a very different light from actual reality. She explained that the image was pretty much the epitome of who she never wanted to be – ever! “But how can my mind have such a different view of my body than what I look like in reality?” she asked. Mary was adamant whilst ‘chubby’ that she had never been obese. That insight was definitely food for thought and Mary left in a somber mood.

Unflattering Reflections

On contemplating the matter further Mary realized that her weight had increased slowly but steadily over a number of years. That was why she “did not notice at first . . .” She is convinced that since starting the antidepressants her weight has increased “quite a lot!” Mary thinks that she might have gained about ten kilos in the past two years for which she blames the medication and stress. Her doctor does not believe that the antidepressants have caused her weight gain – she instead suggested dieting and taking out a gym membership. She admitted to herself that she had times when she was overeating – even bingeing – feeling bad about herself afterwards. She admitted that she had tried to “make up for those binges by eating hardly anything over the next few days.” Mary commented, “This was quite an earth-shaking revelation for me since I had never viewed myself as having an eating disorder like overeating. I thought to myself. . . I know of others – yes, sure! But me? No way!”

For the next month she was working on identifying where this negative self-image might have come from. Facing the issue head-on for the first time in her life she could suddenly see that food had always played a central role in her life. When Mary was little and had no control, her mother would often force her to eat up. She learned to maintain control by storing food in her cheeks only to get rid of

E. TAYLOR

it later by spitting it out into the toilet. Rewards were food-based. ‘Happy family times’ were always linked to feasts and lots of good food. As a teenager Mary would control her food intake rigorously by eating little and by using laxatives to help control weight. For most of her adolescence and for many of her adult years Mary was at the low end of BMI scale bordering on being underweight. That changed when her first marriage started to go downhill and she not only started to wear baggy clothes but also to add additional kilos. Now, at fifty-five and happily married, the weight issue has raised its ugly head again especially after finding out that she (once again) more than anything wanted to shed unwanted kilos whilst finding it very difficult to do so: she also admitted to herself that when she starts ‘snacking’ she cannot seem to stop herself. This insight made her realize that in reality she was fretting about food and her weight all the time – to the point of obsession. Mary now (temporarily) felt even more depressed since, “I am back to square one where I was during my teenage years just in a different form – I have replaced self-starvation with overeating. I am obviously still dealing with something I have not yet managed to come to terms with.” We had touched on something deep-seated during our therapy sessions.

EATING DISORDERS

When in 2008, Mission Australia conducted a national survey of over 45,000 young Australians aged between 11–24 years. [...], the research participants identified ‘an issue that concerned them the most.’ Body image turned out to be the number one problem for young Australians – far above drugs, family problems, bullying, depression, and environmental problems (Touyz, Hay, & Rieger, 2012). Body dissatisfaction has been known to be a key factor in developing maladaptive eating habits (Touyz, Hay, & Rieger, 2012). Eating disorders, according to the *Diagnostic-and-Statistical-Manual-of-Mental-Health-Disorders-IV* (American Psychological Association, APA, 2000), are characterized by repeated thoughts and behaviors about food, weight, and body image. APA distinguishes four main categories of eating disorders: anorexia nervosa, bulimia nervosa, binge eating disorder, and eating disorder not otherwise specified. Whilst the causes for their development are varied and still subject to research (Touyz, Hay, & Rieger, 2012), some eating disorders develop following traumatization, which can be regarded as maladaptive – even self-destructive – strategies for dealing with trauma. The question has been raised whether it is the trauma itself or pre-existing vulnerabilities that cause maladaptive responses such as overeating: it appears that the reaction to trauma as a process of adaptation over time is dependent on predispositions and vulnerabilities. Furthermore, there appears to be a link to the age of a person at the time when the traumatic event occurred (van der Kolk, McFarlane, & Weisaeth, 2007). Most sufferers seem to be young females with the numbers of young males with the disorders being on the increase. The percentage of middle-aged women diagnosed with eating disorders for the first time has also increased significantly (Hinz, 2009; citing Herzog & Delinski). Coming from a divorced family or having experienced

RECOVERY FROM EATING DISORDERS AND CHILD SEXUAL ABUSE

childhood psychological, physical or sexual abuse can make people more vulnerable to developing maladaptive eating habits (Hinz, 2009, p. 25).

WORKING THROUGH EATING DISORDERS

In mainstream psychology there are several recommended approaches to dealing with eating disorders: Cognitive-Behavior Therapy (CBT), Motivational Enhancement Therapies (MET), Interpersonal Therapy (IPT), Behavioral Weight Loss (BWL) treatments and medication rank highly in mainstream psychological practice (Touyz, Hay, & Rieger, 2012). Many of these approaches focus on working with the cognitive mind to better control behavior. On the other side of the spectrum there are therapies, such as art therapy, that tend to focus on the emotional aspects, imagery and bodily manifestations of eating disorders. Transpersonal approaches also include spiritual considerations. Geneen Roth in her book *Breaking Free from Emotional Eating* (2004) writes that,

most of the time we eat in response to our minds. Most of the time we feed our bodies without consulting our bodies. Most of the time when we eat has little to do with what we are eating for – physical nourishment, satisfaction, a healthy body. (p. 5)

This statement highlights the complexity of the issue and underlines the need for an approach that supports somebody concerned about his/her weight from varied angles: rather than adding additional shame and guilt – as well-meaning as the intent may be, art therapy and mindfulness bring together thinking, feeling, dreams, and imagination of a different life. Transpersonal, mindfulness-based art therapy therefore can be viewed as an approach that goes beyond behavior control, checklists and medication to include the whole person. I would like to stress that there is nothing wrong with the ‘other’ approaches – they just seem to be limited.

MARY ENCOUNTERS DREAM WORK

Mary had not been able to see me for a fortnight due to work commitments. Nothing much seemed to ‘bubble up’ from her Unconscious: no new insights, thoughts or ideas. The night before she was due for her next appointment she had a dream that jolted her wide-awake. She suddenly ‘remembered’ that she had been molested by a neighbor when she was a child. Mary had known for along time that one of her neighbors whom she had adopted as a quasi granddad had one day invited her down into the cellar of his high rise building to ‘show her something.’ Mary was only six or seven years at the time and very trusting. She had no reason to distrust the man since her parents seemed to trust him too. They did not mind that he would often walk home with her from school, that he bought Mary ice cream ever so often and that he coincidentally finished his shopping always at the time when she was on her way back home from school. Her parents thought he was a really nice guy. It is interesting to

E. TAYLOR

note that child sex offenders often groom the family/parents before the actual abuse takes place (Network of Community Activities, n.d.).

Mary's memory of 'the' day in question had been blurry – up to now. Mary had remembered that he unlocked the door of the cellar compartment and let her in – she remembered being thrilled to see what surprise he had in store for her. She remembered asking him what he wanted her to see since she recalls that there was nothing except for empty shelves. She remembered that his wife burst through the door of the compartment and started yelling at him whilst Mary ducked out of the cellar as quickly as possible and ran home. End of story – that was what Mary had consciously carried with her over all those years. The dream however, filled in the missing bits, which were: he had exposed himself and prevented Mary from leaving the cellar by blocking the door. He wanted her to touch his genitals when his wife burst in yelling at him, "What do you think you're doing!" Mary suddenly remembered that she was told by the wife to "get lost and go home, you little slut!"

Mary remembers running home as quickly she could. She also recalls being confused not understanding why the man's wife was angry at her. Mary concluded though she must have done something bad. Her mother's reaction probably did not help either – her mum was clearly shocked but Mary sensed that she was also embarrassed – Mary cannot recall her mother acting on the matter or creating a fuss about it. In fact her mother never mentioned it again – and neither did she. However, Mary recalls asking her mother what a 'slut' was, to which she only replied that this was a very bad thing to say about a female: Mary should not be using such language – ever. Mary, to this day, has no idea if her mum told her dad, whether they confronted the man – silence was what followed. Mary is pretty sure that they did not contact the police since the man continued living next door. She is upset because she cannot go back and ask for clarification since both her parents have passed away. She is convinced though that the event changed her life: she was more constrained than ever. Mary was not allowed to play with the other kids next door any longer. She was virtually homebound from then onwards. "For years," Mary says, "I knew something had not been right about the situation but I could never put my finger on it – I turned into Rapunzel."

CHILD SEX ABUSE IN THE AUSTRALIAN CONTEXT

It has taken many child sex abuse scandals rocking clerical and non-clerical institutions alike to bring child sexual abuse into the focus of public awareness. In Australia, projects such as the 'Safeguarding Project – Protecting Children in the Catholic Church,' and other protective initiatives have sprung up in recent years as a consequence of the widespread problem. Yet, despite the growing awareness and with numerous existing cultural taboos against incest already in place, complicity and silence about this offence has caused advances in this area to progress at a glacially slow pace (Goodman-Delahanty, 2014; citing Sacco). The Royal Commission into Institutional Response to Child Sexual Abuse which is

investigating how institutions such as schools, sports clubs, and public institutions in Australia have responded to allegations and proven instances of child sexual abuse has raised the nation's awareness of its epidemic proportions yet the real number of affected children and (now) adults is still anybody's best guess. Forty-one percent of Australian sexual assault victims are under the age of 15 years and only ten percent of child sexual abuse cases are perpetrated by strangers (Goodman-Delahanty, 2014; citing Australian Institute of Health and Welfare & Richards). The most disconcerting issue is that much child sex abuse occurs in the home where most perpetrators are male and known to the child, for example, the father, step-father, uncle, or family friend. In many cases, the family knew and trusted the offender (Leclerc & Cale, 2015). What has been a difficult issue to come to terms with for people working with clients who have suffered child sex abuse is the issue of suppressed memories rising to the surface years after the actual event. I was wondering if Mary's dream had indeed brought to the surface memories stored deep within for a long time.

The Power of Dissociation

Ellen Bass and Laura Davis in their seminal book for survivors of child sexual abuse *The Courage to Heal* (2008) write about the power of dissociation as a coping mechanism: "When our minds are overstimulated like this, we can become physiologically incapable of absorbing and storing information in a normal way. Instead, we may dissociate these experiences, splitting them off from conscious knowledge" (p. 75). Furthermore, they point out that traumatic amnesia in the case of child sex abuse can be viewed in relation to the child's age: if a child is very young she may not have the words to describe what has happened." There were several outcomes after Mary had the dream: (a) Mary came to accept that she had been sexually molested as a child upsetting as this insight may have been and (b) she realized that not only had she had an eating disorder as a teenager but she had an eating disorder now as a middle-aged woman. None of these insights came easily and their connections had been hidden from Mary's conscious awareness. On the other hand, Mary stated that now she can see how this suppressed material has caused her grief and has caused her to behave in negative ways.

MARY FACES HER MASKS

Many traumatized people have learned to 'show a brave face' despite how they feel on the inside. Mary worried that she was showing an inauthentic image of herself to her work colleagues, her husband and her adult children, "they have no idea what's going on the inside 'cause I never show." She added, "...I am worried they would hate me if they knew how f***ed up I really am on the inside!" When I heard this comment of Mary's, I decided to introduce her to the transpersonal art therapy strategy of mask work, which seemed appropriate at this stage.

E. TAYLOR

Masks in Transpersonal Art Therapy

The word *mask*, according to Glenda Needs (2012), is used in many contexts and usually refers to an object that conceals one face in order to denote another. Alternatively, the term may be used in the context of ‘masking off’ when one area in our psyche is concealed in order to protect it (p. 96). Whilst masks in terms of a psychological device are essential for successful social interactions, they can also represent unhealthy psychological habits when used to conceal one’s authentic traits and potential or when used in a self-limiting way that undermines self-worth, self-acceptance and fulfillment. In the context of art therapy, the goal of mask work is the integration of disowned parts of one’s personality (Needs, 2012). Furthermore, masks can enhance self-awareness, create symbols of protection, make concrete an experience of transformation and symbolize reparation and healing (Hyland Moon, 2010). The symbolic power of mask making in art therapy can be viewed as the artistic expression of powerful emotions that helps repair and transform feelings and eventually restore wholeness (Malchiodi, 2002). Mask making can be a confronting and powerful medium which is not advised to be used without having first established a healthy and solid therapeutic relationship between therapist and client (Needs, 2012). In short, masks are a powerful way of tapping into the subconscious to enhance self-knowledge and promote healing.

Making a Mask

I decided to ask Mary to create a mask representing that part of her self that had been hurt and that had had no voice for so many years. Masks can be made from a variety of materials including paper, paper-maché, plaster, gauze, etc. (Hyland Moon, 2010). Mary had only just found out about the issue of child molestation and I was worried she might get re-traumatized. She stated that she felt a lot of anger inside of her about the whole issue. Clay is often regarded as a suitable medium that allows anger to emerge that can be processed through the energy that needs to be expended in order to work with clay. On the other hand, according to Hyland Moon (2012), “clay can be more suggestive than a blank piece of paper because it requires visceral, sensual, and physical investment, allowing it to be inhabited by the client” (p. 16). Clay should therefore only be used with caution with somebody who may have been sexually abused since “clay can serve as a repository for intense feelings or a means for reparation through reconstruction” (Needs, 2012, p. 10). That is, clay might bring up unpleasant and traumatic memories. Given the recent revelation of child sex abuse in Mary’s case and my worries about potentially re-traumatizing her, I eventually decided on self-drying modeling material: it is easy to work with in terms of kneading and not as ‘suggestive’ as fresh, moist clay.

The Mask I Never Knew I Was Wearing ...

Mary created her mask and after meditating on the image for a while she commented that she had just created a version of Medusa, the Gorgon famous for her unspeakable ugliness with snakes for hair and a gaze that could turn men into stone when they foolishly made eye contact with her. “Great!” she said, “Medusa – that sounds just like my good luck – nobody likes her!” I reminded Mary that it was important to sit with the mask for a while – to take in what she was seeing without judgment – just noticing what feelings and thoughts came up for her. After meditating on her mask for a while, I asked her to meet her mask by holding it up to her face – while facing a small hand-held mirror, allowing her to contemplate what she saw in the mirror. Furthermore, I asked her to dialogue with the mask and to document the dialogue by writing in her journal reminding her that everything she might ‘hear’ as a response was coming from her Unconscious. Much of this happened without either of us speaking. Mary commented on what she saw when looking at her mask,

The face that has emerged is not smiling. It has hollow cheeks and looks straight at me with empty, wide-open eyes. I feel that I know this face – it looks strangely familiar and it looks sad. It reminds me of what I have felt like during those times in my life when I was in the grip of a depression – and there have been a few over the years. (From my case notes)



Figure 23.1. Mary's mask

E. TAYLOR

Before engaging in the dialogue with the unpainted mask, Mary took a few minutes to settle herself. Once she was ready, she commented that the mask took “its time to respond. It is almost like its messages are coming from somewhere far away.” It was the first time ever that Mary had a ‘conversation’ with a mask and she found talking to the mask really “unsettling.” When the mask eventually responded, its messages were direct, telling her how she had been repeatedly shamed and hurt as a young person by people close to her and how she had been carrying guilt around with her for many years. This burden was linked to her eating problems and the depression. Mary asked Medusa, the mask, what her role was in her life and she responded that she served as Mary’s “protector from hurt.” Medusa, the mask, talked to her about how building barriers against others and dissociating had become a strategy that had protected her from many hurtful situations. When Mary asked the mask what she/it needed to heal, the mask told her that she needed to accept what had happened. She also had to accept that the stories she had been told about herself were in reality stories about the people who had said those things. The mask also said that Mary was still vulnerable unless she worked through the issues.

Painting the Mask

At our next session I asked Mary if she wanted to paint the mask and she replied that she would like to do that. After ‘playing around’ with paint for a while, Mary ended up mixing blue and magenta to create a deep purple color that became the color of the Medusa’s skin. She painted the eyes red and with yellow irises and jagged pupils. The lips were painted yellow. Her hair was green and curly. She then outlined some features in black and after dialoguing with the mask added a third red eye in the middle of the forehead (see [Figure 23.2](#)). From an art therapy point of view, painting a mask adds yet another dimension: the sensuous, fluid quality of paint, according to Hyland Moon (2010), makes it possible to express emotions and thoughts spontaneously. Paints can help reach those hard-to-reach emotions with often surprising outcomes.

Dialoguing with the Painted Mask

The painted mask had some profound messages for Mary. Contrary to her first dialogue, the painted mask responded quickly and seemed to elaborate on points in the first dialogue. The painted mask explained to her that it was the image of her wounded self, the wounded woman. The mask said that she had scary-looking, red eyes because of the pain and suffering she had seen – the loneliness, the sadness, and the fury within. She urged Mary to use her newly found insights to acknowledge the things that have happened, to refuse to take on responsibility for the behavior of those adults who should have known better, and to move on from here building on that knowledge by treating herself well, in a caring and responsible manner instead of beating herself up and feeling guilty. It stressed that Mary needed to face



Figure 23.2. Mary's painted mask

these issues instead of avoiding them as she had done up to now – only then could she become whole and free. The mask also pointed out to her the link between her weight obsession and her need for protection from further hurt. It told Mary that her depressions had been due to “anger turned inwards” rather than against those who caused the problem in the first place.

Psychologist Doreen Virtue (2002), in her book *Losing your Pounds of Pain: Breaking the Link Between Abuse, Stress, and Overeating*, writes, “fear, anger, tension, and shame (FATS, or fattening feelings) are often symptoms of unresolved stress and tension” (Location, p. 281 – Kindle book). She adds that if somebody is chronically unhappy, something is wrong deep within. She emphasizes, though, “the healing of unhappiness does not require blaming the perpetrators or the past. Instead it involves acknowledging, understanding and learning from the past” (Location, p. 332 – Kindle book). Being aware that there is real grief work involved in overcoming the abusive events in the past by unleashing ourselves from feeling responsible for childhood pain, I shared these passages with Mary and she found them “like soothing medicine poured into an open wound.” In addition I did some background research on the Medusa myth to share with Mary.

Mary Meets Medusa: Making Sense of It All

Medusa is the stuff of nightmares (Bright, 2010). She was one of the three Gorgons – she was the only Gorgon sister who was mortal. She was famous for her beautiful

looks and especially for her hair. That was before the goddess Athena turned her into a monster with snakes replacing her locks as a punishment for having sex with Poseidon in one of Athena's temples. Some versions of the myth have it that Medusa was actually the victim of rape yet it was she who reaped the punishment and faced terrible disfigurement for the rest of her life making her the subject of terror and repulsion. One gaze of Medusa was enough to turn 'heroes' to stone. It was Perseus who tricked her and ultimately killed her by avoiding her direct gaze through looking into a mirror before slicing off her head (Brunel, 1996) after which Medusa's blood served as medicine that could raise the dead.

In archetypal terms, and unbeknownst to many, Medusa represents the wounded woman – the woman who has been abused and hurt and who has been victimized repeatedly. She represents women's sexuality, women's wild nature and intuition, whilst her counterpart, Athena, embodies female chastity, rational thinking, knowledge and warfare. One interpretation is that Athena cursed Medusa because she was scared of Medusa's power. Ultimately this terrible monster, Medusa, whom every man (and many women?) fears – and yet seeks – represents in fact the great Goddess Mother whose rites were concealed by the Gorgon's face in order to prevent men from getting knowledge of sacred ceremonies and mysteries revealed only to women in matriarchal societies (Brunel, 1996).

Bonnie Bright, in her paper, "Facing Medusa: Alchemical Transformation Through the Power of Surrender" (2010), argues that the Medusa myth is ultimately a story about the curse of self-inflicted paralysis caused by disregard and dissociation: by disregarding something to the point where we – consciously or unconsciously – decide to not acknowledge, to dismiss or to avoid completely an issue in order to protect ourselves. The term dissociation is used to describe this tendency to fail to acknowledge as a form of self-inflicted paralysis that allows us to feel safe by becoming numb. It cuts off emotion so we can tolerate certain behaviors, acts or mandates without being overly affected. Yet, this protection comes at a price: passive by-standing, watching without seeing, observing without engagement is a sort of self-mutilation, an amputation of our own sense of sight. It represents a severing of the self (Shulman, cited in Bright, 2010). The trauma scholar, Diana Taylor (cited in Bright, 2010), speaks of 'percepticide,' an act of self-blinding that avoids seeing and acknowledging the atrocities since that would endanger ourselves. It is interesting to note that Medusa's wounds made her also a perpetrator by giving her the ability to turn others to stone through controlling them and keeping them at a distance. This perpetrator is also a victim since by immobilizing herself in order not to feel hurt she ultimately victimizes herself. This is the profound ambiguity of the Medusa archetype.

In order to heal, we must 're-member' the parts of us which we have disregarded and dissociated from since without this act we will remain in a state of inertia. Re-membering thus is the act of bringing back together reworked memories or emotions so they can deliver something new such as new insights, changes in behavior and improved levels of functioning (Cavalli, cited in Bright, 2010). Bright believes that Medusa's death was ultimately an act of surrender to Perseus' sword

realizing that death meant release from stagnation and offered the prospects of a new life and healing. She explains that the Medusa story has many shamanic elements and especially her beheading matches the common image of ‘dismemberment’ described in many cultures as part of the process of becoming a shaman. Dismemberment as an initiation rite for shamans worldwide, represents, as Jung stated, the realization of the Self which leads to the defeat of the Ego which does not want to let go without a struggle.

USING MINDFULNESS-BASED, TRANSPERSONAL ART THERAPY FOR ENHANCING PERSONAL SUSTAINABILITY

Mary’s case seems to confirm how powerful – and yet gentle – mindfulness-based transpersonal art therapy can be. Judging by her feedback she seemed to have had profound shifts in consciousness during the course of the therapy, most importantly an increased awareness of what she really needs to work on and what are mainly surface issues. In the case of any trauma or abuse it is important to remember that visible wounds can be treated – child sexual abuse and other forms of abuse leave victims with invisible wounds that directly affect one’s personal sustainability and well-being leading to unhealthy coping mechanisms such as eating disorders. Mindfulness-based, transpersonal art therapy has been shown to help people work through their issues towards increased health and mental wellbeing.

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E. TAYLOR

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LIAT ZITRON AND YU GAO

24. THE EFFECTS OF MINDFULNESS-BASED INTERVENTIONS ON PHYSIOLOGICAL REGULATION

ABSTRACT

In this chapter, we discuss the effects of mindfulness-based practices on the autonomic nervous system (ANS) functioning, including alterations in cardiovascular activity and cortisol stress responses. We first introduce the polyvagal theory as a theoretical framework in which the roles of the subdivisions of the ANS in regulating emotion and behaviors are delineated. Next, the potential mechanisms by which mindfulness practices modulate ANS activity are discussed, and a select literature review is conducted of empirical studies in which the relationships between mindfulness practices and physiological activities are examined. Initial evidence has provided some support for using mindfulness-based practices to promote physical and psychological health, through improving vagal tone and corresponding emotional regulation. We argue that more systemic research using randomized controlled trials with larger sample sizes, in both adults and at-risk youths are needed to further understand the effects of mindfulness practices on physical and mental health.

Keywords: mindfulness, vagal tone, polyvagal theory, emotional regulation, physiological markers, autonomic nervous system

THE EFFECTS OF MINDFULNESS-BASED INTERVENTIONS ON PHYSIOLOGICAL REGULATION

In recent years, the effectiveness of various mindfulness-based intervention practices on psychological and physical well-being has been investigated by assessing autonomic nervous system (ANS) activities during or after the practices. To augment self-reports of perceived stress levels, various physiological measures, including heart rate, heart rate variability (HRV) or respiratory sinus arrhythmia (RSA), blood pressure, skin conductance, breathing patterns, and cortisol levels, have been employed in these studies. In this chapter, we conduct a selective literature review on studies focusing on physiological changes associated with mindfulness practices, and provide suggestions for future research to facilitate further understanding of the mechanisms contributing to the benefits of these practices. We start our chapter with a brief description of the polyvagal theory (Porges, 1995) as a unifying framework

for our review of the effects of mindfulness practices on emotion regulation and stress reactivity.

THE POLYVAGAL THEORY

The polyvagal theory offers a sophisticated and comprehensive understanding of the role of the ANS and its function in stress adaptation and emotion regulation. A key feature of the polyvagal theory is its hierarchical organizational structure. This theory compiles an additional layer, namely the social engagement response, to the already widely known stress-response mechanisms of fight/flight, directed by the sympathetic nervous system (SNS), and the more extreme and primitive reptilian immobilization response via the parasympathetic nervous system (PNS) (Van Der Kolk, 2014). According to this theory, when we are in a situation that we perceive as possibly threatening, we will first attempt to solve the problem through interactions and negotiations with others – social engagement. If this fails, we turn to fight/flight, and when all fail – the body begins disengaging, which can lead to a complete collapse or shutdown. When the social engagement system is working properly, the PNS is activated, and we do not have to be constantly on alert. This frees the SNS from the primary task of defense, and allows the body to move instead towards growth and wellness.

During a fight/flight response the SNS utilizes adrenaline, resulting in an aroused response as reflected by increased respiratory rate, heart rate, skin conductance, blood pressure, and dilated pupils. The body mobilizes for action, while the SNS activates body organs that are necessary for survival. When we receive a cue indicating that the environment is safe, our body down-regulates defense and moves away from the SNS-dominated fight/flight reaction and moves towards a PNS-dominated state – embracing its calming effects. The PNS secretes acetylcholine to aid in basic bodily functions such as digestion and healing, while deactivating body functions that are not necessary for the task at hand, in order to conserve energy and return the body to equilibrium. In the PNS-dominated state that corresponds to a relaxation response, breathing and heartbeats slow down, blood pressure drops, and heart rate variability increases (Dusek & Benson, 2009). The flight/fight system can sometimes be lifesaving when used sparingly at times of true emergency, as long as the nervous system has sufficient time to recover and recuperate between emergencies, that is, going back to baseline. However, when stress responses become chronic due to an ongoing stressful situation, or due to repeated false alarms, being in an elevated state for prolonged periods can exhaust and deplete our resources and lead to illness (Esch & Stefano, 2010).

When neither social engagement nor fight/flight responses can help us cope with impending danger, as a last resort, the PNS turns to immobilization, an involuntary reaction involving extreme slowing down of all body systems in preparation for an impending doom. It can be adaptive and life preserving, for instance, when staying frozen while being robbed (rather than objecting the attacker and risking more aggression), or when all is lost and the end is near, by minimizing the pain

that is experienced during those last moments. During immobilization, the body reduces oxygen intake, leading to bradycardia and apnea, which in extreme cases can result in death (Porges, 1995). In humans, a state of immobilization can translate to a psychological pathology, in the form of dissociative symptoms, or to physically passing out (<https://www.youtube.com/watch?v=4kgO3HOP8VQ>).

It is important to note that both mobilization and immobilization can be placed on a continuum. Mobilizing does not necessarily equate to a fight/flight reaction. A certain level of alertness is a prerequisite to healthy functioning and is an integral part of optimal daily activity. Likewise, while at its extreme end, immobilization translates to a complete shutdown of all body systems, when feeling calm and safe, it allows us to go to sleep without fear, or to stay still in the arms of a loved one. In a healthy individual, the PNS and SNS work in harmony to keep us healthy and balanced and regulate homeostasis (Van Der Kolk, 2014). For further information readers can refer to <https://www.youtube.com/watch?v=4kgO3HOP8VQ>

The polyvagal theory also distinguishes between the two branches of the vagus, the tenth cranial nerve: the more ancient, unmyelinated dorsal branch, and the more recently acquired ventral, myelinated branch. The unmyelinated branch oversees the function of the organs below the diaphragm, and is the executor of the “freeze” response in reptiles. In contrast, the myelinated branch is in charge of the organs above the diaphragm, and controls facial, head, voice box, and heart muscles that are involved in our interactions with others, reflecting the social engagement responses in mammals. Specifically, the ability to modulate facial expressions is unique to mammals, and is not seen in reptiles that primarily focus on survival behaviors (Porges, 1995). When we have a properly working ANS, and its subdivisions (e.g., SNS & PNS) are in harmony, vagal tone is moderately high, indicating a good ability to balance the SNS and PNS according to the demands of the situation, and the flexibility to transition from one response to another as needed. Vagal tone can be measured indirectly via the biological marker known as heart rate variability (HRV) or respiratory sinus arrhythmia (RSA) that factors in the impact of breathing on heart rate by computing the differences between the heart rate when breathing in and the heart rate when breathing out. Inhaling triggers the SNS and increases heart rate, while exhaling activates the PNS with a consequent decrease in heart rate. A higher level of HRV or RSA indicates a higher vagal tone, and a better capability to regulate emotions (Van Der Kolk, 2014).

According to the polyvagal theory, people with low vagal tone may exhibit a distorted stress response: They may either under-react when a situation is innocuous and a flight or fight reaction is not warranted. Given that the vagus nerve is the longest nerve in the body, and that it involves all major body organs, it is not surprising that it can create such havoc when it goes out of tune. A dysfunctional vagal muscle often leads to medical conditions including digestion problems, pelvic floor issues, fibromyalgia, cardiovascular disorders, inflammatory, and autoimmune conditions. The underlying role of vagal dysfunction has also been implicated in multiple mental illnesses, including mood and anxiety disorders, trauma and stress-related disorders,

autism spectrum disorders, disruptive behavioral disorders, borderline personality disorders, and schizophrenia (<https://www.youtube.com/watch?v=4kgO3HOP8VQ>).

Given the far-reaching ramifications of a vagal nerve dysfunction, improving vagal tone, and more “in sync” ANS has been a topic of interest for some time. Yet, it is only in recent years that empirical studies have been conducted to scientifically explore the various methods to achieve this goal, and the beneficial outcomes that they claim to have, in the form of improved physical and mental health. Although invasive interventions, such as vagal nerve stimulation via implant, have shown promise as a treatment modality for improving vagal tone among those with dangerously low levels of vagal tone, including human patients of epilepsy (Schachter & Saper, 1998), and animals with cardiac conditions (Li et al., 2004), attempts are being made to find less invasive ways for stimulating the vagal nerve. Mindfulness-based techniques have been gaining special interest as means of regulating the ANS function.

IMPACT OF MINDFULNESS-BASED PRACTICES: THEORETICAL UNDERSTANDING

Learning how to bring ANS activity under control can be very useful in promoting a calmer and less reactive nervous system, improving physical and psychological well-being, and reducing need for medications (Dusek & Benson, 2009). However, the mechanism by which mindfulness-based practices exert their effects on the ANS is not yet clear. A few possibilities have been proposed. First, although a relaxation response often follows a mindfulness practice, studies have suggested that the benefits of mindfulness are not simply due to the relaxing state (Tang et al., 2009). Specifically, it has been argued that if meditation were identical to relaxation, we would expect comparable physiological changes following meditation of novice and experienced meditators (Rubia, 2009). Instead, some evidence suggests that the effect of mindfulness practices on physiological and neurophysiological measures varies as a function of meditation experience. For example, although some studies have suggested that even short-term meditation may yield positive results (Hölzel et al., 2011; Tang et al., 2009), more experience with mindfulness practices may be required to achieve optimized outcomes (Rubia, 2009).

Many mindfulness practices incorporate deep breathing exercises that can serve as a trigger point for PNS activation, putting the “brake” on the SNS through slowing respiration and corresponding heart rate, thereby improving vagal tone, and restoring a feeling of safety and well-being. This appears to be a direct way in which mindfulness practice alters the ANS and the stress responses. Chris Streeter et al. (2012) point out the bidirectional relationship between emotional states and breathing, and state that by voluntarily changing breathing patterns, it is possible to impact the ANS. The authors also allude to Richard Brown and Patricia Gelberg’s neurophysiologic model, pointing out that breathing may be the sole component of the ANS that can be put under control. More importantly, since breathing is imperative for survival, vagal messages concerning changes in breathing rate or

patterns are regarded top priority by the brain, and help shape its interpretation and response to perceived threat (Brown & Gelbarg, 2005).

Yet, in some of the most studied mindfulness practices, such as Mindfulness Based Stress Reduction (MBSR, developed by Kabat-Zinn in 1979), no attempt is made to control breathing, which is only used as an anchor during meditation practice. Instead, components of meditation practices, such as the body scan, increase the experience of embodiment – our perception of bodily sensations and the state our body is in. We need an awareness of our own body and its responses to internal and external stimuli in order to make sense of our emotions and regulate them, as well as to cultivate a sense of empathy towards others (Hölzel et al., 2011). The attentional processes cultivated in mindfulness practices may be a prerequisite to developing such body awareness, which, in turn, is the foundation for the surfacing of emotions and their regulation (Hölzel et al., 2011).

As our thoughts, emotions, and memories of stressful events surface during the practice of mindfulness meditation, we come to view them in a new light and gain a new perspective on them. This cognitive process is called positive reappraisal (Garland, Gaylord, & Fredrickson, 2011). Bringing attention to distressing internal stimuli that may come into awareness during mindfulness practices, can be conceptualized as exposure (in a similar manner to exposure interventions used in behavioral therapy.) Such exposure eventually leads to habituation and extinction of conditioned fear responses. When we no longer avoid fear, and under the relaxed conditions that the mindfulness practice often fosters, the nervous system no longer reacts in an exaggerated way. The individual learns a more adaptive way of responding to stimuli. New learning and connections overwrite old ones, and a feeling of safety is restored and takes the place of fear (Hölzel et al., 2011).

Yet, unlike the cognitive behavioral therapy in which the goal is to stop ruminative and maladaptive thoughts or replace them via cognitive restructuring, in mindfulness practices the emphasis is on non-evaluative observation of all that come into our ‘radar’ during meditation, without an attempt to either change the thoughts and the feelings, suppress them, or hold on to them longer than necessary. Rather, the aim is to observe them with openness, curiosity, and kindness, recognize their transient nature, and gently bring the focus back to the breath or other ‘anchor’ used – at least in initial stages of training. Hence, rather than changing our internal landscape of thoughts, feelings and sensations, we change our relationship to them instead. This exposure without avoidance reduces reactivity, and through repeated practice, builds distress tolerance skills, which is key to emotional regulation (Metz et al., 2013). Similarly, Annette Mankus, Amelia Aldao, Caroline Kerns, Elena Wright Mayville and Douglas Mennin (2013) point out that in addition to reduced reactivity as a function of decreased limbic activity following meditation practices, the state of ‘being’ rather than ‘doing’ promoted in mindfulness practices allows for greater flexibility in emotional responses. The more objective observation of thoughts and emotions fostered in the meditative state enables a level of detachment, and the choice of a broader range of responses.

The important role that exposure to emotions plays in a well-functioning ANS can be seen in a study conducted by James Gross and Robert Levenson (1997). The authors demonstrated that merely giving students the instructions that they had to suppress their feelings, either positive or negative, while watching a video, had led to more SNS activation of the cardiovascular system. Although a certain level of emotional inhibition is necessary in order to function appropriately in the society, undue suppression leads to a stress response. Therefore, it is possible that turning towards whatever manifests during meditation is an indirect mechanism through which a brake is placed on the SNS, allowing for more PNS activity and greater relaxation and better emotional regulation. We are going to turn our attention next to a review of selected papers concerning the effects of mindfulness practices on physiological outcomes that relate to emotion regulation and stress responses.

EMPIRICAL EVIDENCE

Most of the studies on the effects of mindfulness practices to date have used subjective self-rating scales to assess beneficial outcomes, such as report of increased positive affect and quieter mind following mindfulness training (Rubia, 2009). Only a few had used objective measures – primarily physiological markers that index ANS activation, including changes in vagal tone (as reflected by HRV/RSA), systolic blood pressure, skin conductance, and cortisol levels. There is also some evidence concerning changes in brain function and structure following mindfulness practices, but these had been discussed extensively elsewhere (Chiesa, Serretti, & Jakobsen, 2013). To remain within the polyvagal theory framework, we will focus on the studies investigating the effects of mindfulness practices on physiological measures that are directly linked to emotion regulation and stress responses, e.g., HRV or RSA.

Although some of the proposed benefits of mindfulness practices include physiological, emotional, and cognitive improvement, comparing findings from various studies is nearly impossible due to lack of uniformity. For example, a broad range of mindfulness programs that are variations of the Mindfulness-Based Stress Reduction (MBSR) has been utilized, as well as mindfulness-based clinical interventions, such as Mindfulness-Based Cognitive Therapy, Dialectical Behavioral Therapy, and Acceptance and Commitment Therapy. These various approaches are often grouped together when discussing their outcomes, despite the different conceptualizations and mechanisms that underlie these approaches (Chiesa & Malinowski, 2011). Furthermore, some mindfulness approaches, such as the MBSR, contain multiple components, including formal meditation, mindfulness tools for daily living, psychoeducation, and group support, making it hard to pinpoint what element of the program is most helpful and contributes to the positive benefits.

Furthermore, participants of various studies have been drawn from different populations. Some studies have focused on people with medical conditions, such as cancer, hypertension, or migraine headaches, while others have utilized participants

with various psychological diagnoses including anxiety or mood disorders, or comorbid conditions. Yet still, some studies have been conducted with healthy individuals with no clinical diagnosis. In addition, studies may involve participants with varying levels of mindfulness practice experience, and are conducted in different settings (laboratory, work, etc.). Together, these factors make direct comparisons among studies unattainable.

Despite these challenges to the scientific inquiry of the effects of mindfulness practice on physiological markers, a sample review of current literature is the first step in attempting to capture the essence of this topic, and in proposing future directions to address some of its shortcomings. In the following section, we review studies of individuals with physical or mental health issues first, followed by research on healthy populations.

Studies in Adults

A fair amount of studies have been conducted to test if mindfulness practices can help alleviate the accompanying mood and anxiety symptoms in cancer patients, and the stress responses associated with the dealing with their serious illness. For example, in a study examining the impact of the MBSR program on 49 individuals afflicted with early stage breast cancer and 10 with prostate cancer (Carlson, Speca, Faris, & Patel, 2007), blood pressure, resting heart rate, and saliva cortisol levels were measured at the baseline prior to introducing an 8-week MBSR program, the program's completion, six months post program, and 12-month follow-up. It was found that both systolic blood pressure and heart rate were lowered – especially immediately following the program's intervention. Cortisol levels decreased as well when comparing pre- and post-intervention, and this downward trend had continued in a linear fashion through the follow-up year. However, changes in physiological markers were primarily noticed in those with a shorter duration and earlier stage of the illness. Continued mindfulness home practice, or its absence, following the completion of the program did not appear to interact with these improvements in autonomic nervous system functioning. However, lack of control group and multiple statistical comparisons utilized are notable limitations of this study.

Another study compared the physiological changes between the intervention group who had received an 8-week MBSR training ($n = 15$) and a control group who did not ($n = 17$) among early stage breast cancer survivors. The intervention group showed reduced blood pressure, heart rate, respiratory rate, and morning cortisol levels, although the effect on cortisol did not sustain at the 1-month follow-up (Matchim, Armer, & Stewart, 2011). Such effects were not found in the control group. However, findings are hard to interpret given that participants were not randomly assigned to the groups, and that the two groups were not matched on multiple factors, including age, duration of the illness, and comorbidities.

In a randomized controlled study conducted in India (Parswani, Sharma, & Iyengar, 2013), 30 coronary heart patients were assigned to either an 8-week MBSR

group or to a TAU (treatment as usual) control group. The MBSR group showed a significant reduction in perceived stress levels, depression and anxiety, and more importantly, had lower systolic blood pressure, both as compared with the TAU group, as well as compared to their baseline levels.

In a randomized controlled study done by Ravikiran Kisan et al. (2014), the frequency and intensity of migraine headaches were greatly reduced in the 30 patients who received both Yoga intervention and conventional treatment, as compared with 30 patients who received conventional treatment only. Additionally, only the Yoga group experienced vagal tone improvements following the intervention. This points to Yoga as a potential promising intervention for improving both migraine headaches and cardiovascular health.

Mindfulness practices are also effective in ameliorating psychiatric conditions, although very few studies have utilized physiological markers as outcome measures. In a pilot study (Bhatnagar et al., 2013), an 8-week MBSR training was administered to eight veterans to assess whether mindfulness practices would diminish their Post Traumatic Stress Disorder (PTSD) symptoms and improve their HRV. Only five of the eight veterans completed HRV assessment. At the one-month follow-up, a reduction in PTSD score and an increase in HRV were noted for all five participants. While these results are encouraging, randomized controlled trials with larger sample sizes are needed to draw conclusions regarding the utility of mindfulness interventions on PTSD and related PNS function.

Can healthy adults benefit from Mindfulness practice as well? In a study by Tetsuya Takahashi et al. (2005), 20 male undergraduate students who had no prior meditation experience were trained on a Zen meditation Su-soku task (i.e., silent counting of breaths to concentrate the mind). In a control condition, the same participants were trained to sustain their breath to the sound of a metronome. Electroencephalogram (EEG) and HRV were assessed during both conditions. Compared to the control condition, the meditation condition resulted in inhibition of the sympathetic tone and activation of the parasympathetic tone. More interestingly, the authors dissociated the two components in this Su-soku task: internalized attention and mindfulness (self-awareness). Specifically, enhanced internalized attention, as reflected by more slow-alpha EEG power in the frontal brain area, has an inhibitory effect on sympathetic activity. In contrast, mindfulness enhanced by meditation (characterized by fast-theta EEG power in the frontal area) accelerates parasympathetic activity. In another study exploring the impact of internalized attention on autonomic functioning in ten experienced Zen practitioners and ten individuals with no prior meditation experience, Shr-Da Wu and Pei-Chen Lu (2008) had also demonstrated that the Zen mindfulness practice that involves inward attention (on a certain chakra) can modulate HRV, inhibiting sympathetic activity and triggering a parasympathetic response via a mechanism other than slowed breathing.

Yi-Yuan Tang et al. (2009) randomly assigned 46 students to either an experimental group (integrative body-mind training (IBMT)) or a control (relaxation) group. They

found significant improvements in resting HRV among undergraduate participants who had no prior meditation experience after only five days of integrative body-mind training (IBMT), as compared with a control group engaged in relaxation training. Although both groups showed some improvements in physiological indices overall, the IBMT group exhibited significantly better physiological outcomes, including lower heart rate, chest respiratory rate, and skin conductance, and greater belly respiratory amplitude and HRV, reflecting enhanced ANS regulation. Similarly, Jonathan Krygier et al. (2013) found that a 10-day intensive Vipassana meditation training (focusing on objective observation of physical sensations in the body) improved well-being and resting HRV in 36 participants.

In one study, Blaine Ditto, Marie Eclache and Natalie Goldman (2006) randomly assigned 32 healthy adults to one of the three groups: body scan meditation, progressive muscular relaxation, or a wait-list control group. Each group participated in two laboratory sessions 4 weeks apart. It was found that although no blood pressure reductions were noted in any of the three groups, the meditation group displayed significantly greater increase in RSA while meditating than the other two groups, and that these RSA increases were larger in the second session, suggesting the effects of practice. The fact that higher RSA values were noted even after correcting for respiration rate supports the notion that increased vagal activity, but not slow breathing, may be a primary contributor to the noted cardiac improvements.

Finally, some studies have examined the effects of mindfulness practices on cortisol levels, a marker for stress response. Maryanna Klatt, Janet Buckwoth, and William Malarkey (2009) had adapted MBSR to the workplace, in order to overcome time and space constraints, with the goal of sustaining favorable program outcomes for stress reduction. Forty-eight healthy working adults who were not practicing yoga at that time were assigned to either the light dose 6-week MBSR or a wait-list control group. Although both groups reported lower stress and better quality of sleep after the training, no changes in cortisol levels were found. Rose Matousek, Patricia Dobkin, and Jens Pruessner (2010), in a review of mindfulness studies that used cortisol levels as outcome measures, suggest that failure to find significant changes in Klatt et al. (2009) study may be due to lack of control over potential confounding variables such as diet and exercise, which cortisol level is sensitive to. Another plausible explanation may be the abbreviated nature of the mindfulness program used – 6 vs. the original 8 weeks, thereby possibly compromising study results.

Studies in Children and Adolescents

Although the majority of mindfulness studies to date have focused on adults, a special group, meriting its own category in the discussion, is children and adolescents. Juveniles are especially susceptible to many sources of stress at home and at school, including maladaptive family dynamics, academic demands, and peer

pressure (Meiklejohn et al., 2012). Adolescence, in particular, is a time of heightened sensitivity and vulnerability to stress and emotional reactivity, due to swift hormonal and neurobiological changes (Broderick & Jennings, 2012). Mindfulness practices can act as a buffer against excessive stress that may harm the developing brain at this critical period (Meiklejohn et al., 2012). Additional potential benefits of mindfulness practices for youth include improvements in memory, attention, self-control, understanding themselves and the world around them (Hooker & FoDoR, 2008), and social, emotional, and behavioral development (Mendelson et al., 2010), as well as building resilience (Greenberg & Harris, 2012).

What is the optimal age for children to start benefiting from mindfulness practices? Miles Thompson and Jeremy Gauntlett-Gilbert (2008) pointed out that from a Piagetian perspective, children may have to reach the “formal operational” stage in order to benefit from it, although the authors contend that younger children who are still at the “concrete operational” stage, may be able to benefit too, if the practice is adjusted and modified based on their developmental stage. Shorter duration of practice at each session, adjusted instructions that are more detailed and using relevant metaphors from youth’s life, may be helpful in bringing mindfulness closer to children.

The need to intervene from a young age is especially paramount when it comes to populations of children at risk, such as those who exhibit aggressive behaviors. Theodore Beauchaine, Lisa Gatzke-Kopp, and Hilary Mead (2007) noted that vagal tone deficiencies in these children begin to emerge between preschool and middle school years, and may reflect “a failure in development for affected individuals, who do not acquire the self-regulatory, executive functioning, and attentional capabilities that are developing normally in their peers” (Beauchaine, Gatzke-Kopp, & Mead, 2007, p. 180). This often translates to difficulties with emotional regulation and subsequent disruptive behaviors. Angela Scarpa (2015) emphasizes the interrelated roles of genetic and epigenetic factors in predisposing children to difficulties with arousal regulation, which in turn lead to maladjustment and psychopathology, with stress and social adversity heightening children’s inherited susceptibility to unfavorable outcomes.

However, systematic study of the effects of mindfulness practices on physiological regulation in youth is rare. In a randomized controlled study of 97 fourth and fifth graders from Baltimore City public schools, children were randomized to a 12-week mindfulness intervention or a wait-list control condition (Mendelson et al., 2010). Researchers found that the intervention was successful in improving children’s ratings on their self-regulatory reactivity to social stresses. In particular, improvements were noted on several subcomponents, including Rumination, Intrusive Thoughts, and Emotional Arousal, with a trending effect on Impulsive Action and Physiologic Arousal. However, no direct assessment of physiological arousal was obtained, although these self-report measures have been associated with lab-assessed heart rate reactivity in another study (Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000).

THE EFFECTS OF MINDFULNESS BASED INTERVENTIONS ON PHYSIOLOGICAL

In one study of African American adolescents at risk for hypertension, significant cardiovascular improvements were found in the 3-month Breathing Awareness Meditation (BAM) intervention group (n = 53), as compared with the individuals in the Botvin LifeSkills training program (a substance abuse prevention program; n = 69) or those in the health education program (n = 44) (Gregoski, Barnes, Tingen, Harshfield, & Treiber, 2011). In another study, 35 youth with high risk for developing hypertension were randomly assigned to either two months practice of Transcendental Meditation (TM) or to a health education control group (Barnes, Treiber, & Davis, 2001). Following the intervention, the TM group showed greater reductions in blood pressure, heart rate and cardiac output, when measured at rest, as well as during a car driving stressor simulation task and a social stressor interview, as compared with a control group.

In a comprehensive meta-analysis of current mindfulness programs for K-12 students (Meiklejohn et al., 2012), despite some preliminary encouraging results, none of the mindfulness intervention programs reviewed had incorporated physiological measures to evaluate study outcomes. Adding physiological markers, such as HRV or blood pressure, to carefully designed randomized controlled trials of mindfulness studies in children and adolescents would be a step forward in establishing the efficacy of mindfulness programs in improving children and youth well-being.

FUTURE DIRECTIONS

In 2002, Scott Bishop had posed a question: “What do we really know about mindfulness-based stress reduction?” He concluded that while the MBSR had shown some promises, there had not been enough evidence to support it, and to possibly justify the resources invested in it as a form of intervention for a multitude of medical and psychiatric conditions. Since then, additional studies on various mindfulness practices and their potential outcomes were conducted, addressing some previously asked questions and posing new ones.

While initial evidence has provided some support for using mindfulness based practices to promote physical and psychological health through increasing vagal tone and corresponding emotional regulation, more systemic research is needed to better understand the mechanisms involved. In addition to more carefully designed studies with larger sample sizes, when evaluating outcomes, a clearer distinction among the various approaches to mindfulness is needed. Initial evidence suggests that the practices focusing on inward attention and those concerning self-awareness may have different neurobiological effects. Furthermore, explicit comparisons between novice and experienced meditators and between acute and long-term alterations in physiological markers are needed. Finally, more studies on at-risk children and adolescents will have important clinical implications in improving physical and mental health in these individuals at earlier ages, with the goal of reducing associated financial costs and societal burdens through prevention and early intervention.

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THE EFFECTS OF MINDFULNESS BASED INTERVENTIONS ON PHYSIOLOGICAL

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NAME INDEX

A

Abascal, Kathy, 349, 365, 366
Alexakos, Konstantinos, 3, 7, 63,
66, 68, 76, 98, 103, 112, 113,
133, 181, 215–234, 327,
333–335, 339
Aristotle, 44, 47, 63, 196, 232, 235, 250

B

Bai, Heesoon, 4, 8, 21–40
Batchelor, Stephen, 106
Bayne, Gillian, 172
Beatch, Michelle, 4, 21–40
Beck, Ulrich, 141
Beinfeld, Harriet, 352
Bellocchi, Alberto, 72, 119, 226, 360
Bernstein, Basil, 256, 257
Blairy, Sylvie, 7
Bourdieu, Pierre, 118
Brahm, Ajahn, 8
Buddha, 28, 30, 31, 104, 159, 161, 163,
246, 292
Burmeister, Mary, 11, 265, 267, 270,
271, 284, 285, 288, 298, 300,
305, 306, 309, 319, 337, 338,
341, 347, 350–354, 365

C

Chang, David, 4, 21–40
Chapelle, Gaëtane, 7
Chödrön, Pema, 80
Cohen, Avraham, 4, 21–40, 80
Collins, Randall, 64, 71, 116, 174
Csikszentmihalyi, Mihaly, 23

D

Dalai Lama, 104, 105
Darwin, Charles, 220, 231

Davidson, Richard, 7, 76, 91, 112, 113,
117, 328, 331–333

Dewey, John, 90
Doyle, Walter, 6

E

Eisenhart, Margaret, 9

F

Forbes, David, 8, 141, 145–158, 172
Freire, Paulo, 99, 177, 205

G

Gandhi, Mahatma, 42, 45
Geertz, Clifford, 8
Giroux, Henry, 148, 155
Gjika, Ferzileta, 7, 320, 325, 331–344
Guba, Egon, 89, 172

H

Hall, M. Clement, 349
Hawn Foundation, 24, 25
Hegel, Georg Wilhelm Friedrich, 43
Hell, Anja Bettina, 230, 236, 241, 244,
346, 347, 353, 354, 356, 365
Henderson, Senka, 72, 226, 360
Hippocrates, 294

J

Jung, Carl, 385

K

Kabat-Zinn, Jon, 80, 81, 83, 89, 103,
117, 137, 156, 173, 254, 255, 259,
261, 262, 331, 332, 373, 391
Kant, Immanuel, 51
Kaptchuk, Ted J., 11, 225, 352
Katzman, Shoshana, 351

NAME INDEX

Khng, Kiat Hui, 180, 253–262
Kincheloe, Joe L., 9, 58, 101, 105
King, Donna, 7, 226, 360
Korngold, Efraim, 352

L

Langer, Ellen, 113, 178, 187, 332
Lincoln, Yvonna, 89, 172

M

Marx, Karl, 220
Murai, Jiro, 11, 265, 267, 270–272,
274, 280, 306–308, 337, 350–352

N

Noble, Linda, 92, 109–129, 325

O

Obama, President Barack, 147
Oppenheimer, Robert, 240

P

Philippot, Pierre, 7
Porges, Stephen, 226, 285, 348, 349,
387, 389
Powietrzyńska, Malgorzata, 2, 7, 17,
47, 57, 58, 92, 103, 109–129, 132,
133, 172, 181, 223, 317–330,
346, 374
Proscia, Pamela, 291–303, 346
Purser, Ronald, 146, 147, 153

R

Rasmussen, Derek, 37

Riegger-Krausse, Waltraud, 14, 341,
365
Ritchie, Stephen, 5, 63, 70–72, 179,
226, 360
Roth, Wolff-Michael, 8, 66, 70, 71

S

Saladin, Kenneth, 61, 62
Schwartz, Jed, 16, 150, 305–317, 325,
346, 365, 366
Sheffer, Henry M., 112, 222, 338
Swidler, Ann, 8

T

Thich Nhat Hanh, 8, 29, 37, 80, 133,
302
Thoreau, Henry David, 142
Tippins, Deborah, 97–106
Tobin, Kenneth, 1–18, 47, 57, 58, 62,
63, 66, 70–73, 76, 79, 89, 98,
103, 112, 113, 119, 122, 124, 133,
172, 177, 179, 181, 187, 223,
226, 332–333, 338–340, 345–367
Trump, President Donald, 240, 244
Trungpa, Chögyam, 82

V

Varela, Francisco, 25
von Peczely, Ignatz, 310, 311

W

Walsh, Roger, 80, 354
Watkins, Billie, 354, 365
Wilber, Ken, 153

SUBJECT INDEX

- A**
Abdominal breathing, 61, 226, 332
Academic demands, 395
Action, impulsive, 396
Activism, 2, 29, 37, 100
Acupuncture, 297, 319, 324, 350, 352, 355
Addiction, 4, 10, 41, 44, 49, 137, 163, 215, 235–251, 294, 322, 326, 328, 347, 350, 376
Administrators, 24, 31, 89–95, 123, 163–165, 169
Adrenaline, 327, 388
Aesthetics, 3, 43, 50–53, 235
African American, 149, 397
Agency, 3–5, 10, 14, 15, 99–101, 103, 106, 120, 150, 153, 154, 177, 202, 296, 324, 372
Allopathic Medicine, 309, 311, 314
American Museum of Natural History, 171, 173, 174, 178
Amygdala, 25
Analysis, historical, 153
Anger, 3, 28, 36, 66, 69, 81, 83, 109, 110, 113, 141, 148–150, 153, 221, 226, 259, 273, 274, 283, 285, 299, 334, 335, 380, 383,
Anti-inflammation, 36
Anti-oppression pedagogy, 155
Anxiety, 25, 28, 29, 32, 44, 49, 82, 84, 100, 103, 122, 132, 137, 141, 153, 179, 228, 302, 309, 327, 332, 334–336, 352, 374, 389, 393, 394
Apnea, 389
Aristotle, 44, 47, 58, 63, 195, 196, 232, 235, 250
Art therapy, 371–385
Assessment practices, 187, 207
Attention, 2, 16, 23, 24, 33, 35, 41–43, 46–50, 52–54, 57–60, 63, 64, 70, 76, 79, 80, 82, 89, 90, 93, 94, 103, 105, 114, 116, 118, 131, 133–137, 141, 146, 149, 151, 152, 156, 163, 171–182, 191, 215, 225, 229, 231, 254, 255, 257–261, 276, 281, 282, 287, 299–301, 308, 319, 325, 331–333, 337, 339, 342, 352, 362, 364, 365, 373, 391, 392, 394, 396, 397
conscious, 41, 42, 46, 48–50, 52, 54
focus, 134, 137, 172, 174, 180, 181, 300
Attrition, 151
Authentic inquiry, 5, 6, 9, 76, 89, 112, 177, 325, 326, 335, 352, 354, 355, 367
Autism, 390
Autobiographical, 17, 110, 136, 204, 305
Autoimmune conditions, 389
Autonomic nervous system, 327, 348, 387–390, 392, 393, 395
Awareness, 1, 2, 7, 23, 24, 29, 34, 42, 45–49, 53, 57, 58, 69–74, 80–84, 89, 91, 93, 99, 106, 118–120, 124, 135–137, 145, 146, 149, 152–155, 166, 172, 173, 177, 178, 180, 181, 186–188, 221, 223, 226, 229, 231, 246, 254, 255, 257, 258, 260, 261, 267–270, 275, 280, 293, 296–298, 301, 306, 307, 311, 331–334, 337, 338, 340, 343, 378–380, 385, 391, 394, 397

SUBJECT INDEX

Axiology, 6, 58, 65, 116, 235
Āyurveda, 295, 297

B

Beginner's mind, 261, 262
Behavioral disorders, 390
Beneficence, 7, 28, 52, 71, 102, 124,
135, 155, 216, 218, 276, 340,
347, 359, 365, 390, 392
Bladder, 12, 13, 285–287, 319
Blood pressure, 11, 13, 301, 325, 327,
341, 348, 361–363, 367, 387,
388, 392–395, 397
Body
 awareness, 258, 391
 language, 70
Bottom-up, 256–258
Bradycardia, 389
Brain, 22–25, 57, 59–61, 76, 105, 112,
151, 152, 256, 259, 276, 277,
286, 287, 326, 331–333, 348,
391, 392, 394, 396
 tumor, 237, 326
Breathing, 7, 59–61, 74, 90, 93, 95,
105, 114–118, 120, 128, 215,
225–227, 230, 300, 308, 331,
332, 336, 337, 342, 348, 364,
387–391, 394, 395, 397
 deep, 61, 70, 92, 246, 275, 364, 390
 inhalation, 49, 61, 62, 351
 meditation, 6, 7, 57, 60–62, 65,
 76, 90, 112, 115, 172, 181, 269,
 331–333, 335–339
 patterns, 7, 59, 337, 387, 390
 rate, 348, 390, 391
 upper chest, 61
Bricolage, 188, 191, 291
Buddhism, 8, 21–23, 27–29
Buddhist, 8, 21–23, 27–33, 36, 37, 50,
98, 103–105, 112, 137, 138, 140,
141, 145, 146, 152, 159–169,
173, 235, 238, 246, 292, 300,
302, 336, 350, 373

Dharma, 31, 163, 165
 philosophy, 36, 159, 161, 163–165,
 169

Bullying, 2, 153, 155, 223, 376

C

Calmness, 29, 42, 66, 76, 89, 90, 93,
99, 102, 104, 140, 148, 151, 153,
165, 276, 283, 284, 299, 315,
320, 326, 334, 336, 340, 389
Cancer, 293, 296, 299–302, 321, 341,
392, 393
Candida, 110, 112, 114, 124, 134, 318,
366
Capitalism, 3, 146, 147
Carbon dioxide, 61, 62
Cardiac
 conditions, 390
 disorders, 389
 health, 394
 improvements, 395
 output, 397
 system, 392
Care, 2, 22, 30, 31, 61, 76, 90, 92, 93,
95, 111, 134, 162, 215, 221, 224,
237, 241, 247, 250, 282, 284,
286, 299, 309, 310, 312, 322,
324, 329, 334, 335, 366
Caretakers, 90
Cartesian, 58, 97
Chemotherapy, 341
Child sex abuse, 371, 378–380
Christian, 222, 336
Chronic, 30, 132, 267, 282, 313, 324,
328, 354, 365, 366, 383, 388
Chronic fatigue syndrome, 324
Circulatory system, 61, 62
Citizen education, 5, 98
Citizen
 good, 100, 168
 literacy, 97
Clarity, 23, 42, 43, 54, 79, 81, 92, 103,
140, 194

- Coaching, 94, 138, 139, 301
 Cogenerating, 110
 Cogenerative dialogue, 63, 72, 113, 120
 Cognitive behavioral therapy, 391
 Collaboration, 6, 11, 37, 41, 49, 58, 73, 76, 89, 109, 112, 113, 122, 287, 318, 335
 Collective, 6, 9, 29, 58, 66, 71, 100, 110, 112, 113, 115–118, 120, 121, 123, 133, 148, 190, 238, 325, 331, 335, 355
 effervescence, 6, 64
 Compassion, 2, 6, 21, 23, 29, 36, 37, 57–59, 62, 65, 66, 69, 72, 73, 76, 84, 85, 90–95, 100, 103, 105, 106, 109, 110, 116, 118, 123, 132, 138, 139, 145, 155, 156, 215, 228, 229, 238, 246, 265, 267, 268, 307, 321, 324–326, 331, 333, 334, 338
 Complementary
 approach, 1, 9–17, 305–329, 356
 healing, 306, 310, 317
 medicine, 1, 10, 265, 305, 345
 methods, 317, 325, 326
 perspectives, 345–367
 practice, 15, 16
 Conflict, 21, 22, 27, 44, 62, 65, 67, 72, 82, 89, 150, 215, 223, 231, 261, 293, 296, 373
 resolution, 150
 Consciousness, 21–23, 27–29, 34, 36, 37, 41–44, 46–50, 52, 54, 60, 71, 80, 83, 131, 133, 135, 136, 138, 141, 145, 152, 154, 156, 186, 190, 195, 197, 227, 257, 269, 270, 276, 283, 291, 292, 301, 311, 331, 337, 348, 357, 377–381, 384, 385
 Constitution, historical, 3
 Consumerism, 50, 132, 142
 Contemplation, 3, 4, 10, 21–23, 25, 26, 31, 36, 37, 42–44, 46, 50–53, 57, 58, 60, 61, 82, 102, 105, 111, 112, 116, 118, 132, 138, 153, 155, 171–174, 177, 181, 200, 205, 336, 342, 375, 381
 Contemplative-based, 155
 Contemplative
 inquiry, 3, 4, 10, 17, 37
 intervention, 172
 methodology, 22
 practice, 21
 Contingence, 5, 6, 9, 89, 90, 100, 113, 117, 179, 186, 189, 196, 199, 354, 355, 359
 Contradictions, 5, 7, 8, 75, 89, 231, 331
 Controlled trials, randomized, 387, 394
 Controversial issues, 58, 75
 Cortisol level, 177, 387, 392, 393, 395
 Cosmology, 291
 Coteaching, 62, 65, 66, 92, 109, 110, 112, 114, 117–123, 325
 Counseling, 10, 30, 152, 153, 297, 374
 Cranial nerve, 348, 389
 Critical pedagogy, 97, 99, 101, 151
 Critique, 4, 8, 9, 45, 51, 63, 94, 95, 145, 147, 150, 153, 155, 187, 189, 195, 198
 Culture, 5, 8, 46, 51, 64, 65, 90, 102, 112, 120, 148, 150, 151, 154, 159, 160, 162, 167–169, 177, 197, 198, 201, 204–206, 215, 216, 221, 224, 226, 272, 292, 295, 311, 385
 Curriculum, national, 46, 161, 162, 169
D
 Death, 1, 9, 43, 217, 219–221, 240, 272, 284, 291, 292, 295, 296, 302, 345, 349, 352, 384, 385, 389
 De-colonize, 155
 Decontextualized, 101, 104, 148
 Deliterization, 188
 Demoralization, 151

SUBJECT INDEX

- Depression, 14, 41, 42, 49, 83, 132, 137, 140, 221, 222, 335, 371, 372, 374, 376, 381–383, 394
- De-professionalization, 151
- Desire, 7, 50, 52, 53, 136, 181, 218, 228, 232, 235, 237–239, 241, 243–246, 250, 251, 258, 311, 334
- Despair, 37, 42, 148, 153, 242
- Detachment, 99, 120, 255, 281, 391
- Dharma, 31, 163, 165, 261
- Diabetes *Type 1*, 346, 347
- Diabetes *Type 2*, 325, 328, 345–367, 371
- Dialectical, 2, 5, 63, 66, 71, 89, 94, 110, 112, 113, 137, 185, 187, 216, 222, 250, 254, 325, 338, 392
- Dialogical, 154
- Dialogue, 29, 35, 36, 47, 50, 51, 53, 63, 72, 95, 105, 113, 120, 131, 177, 202, 260, 317, 323, 332, 375, 381, 382
inner, 332
- Diaphragm, 61, 354, 357, 359, 362, 389
- Diet, 15, 90, 220, 222, 243, 295, 297, 299, 301, 305, 306, 310–313, 315, 321, 327, 328, 346, 356, 364–366, 372, 375, 395
- Digestion, problems, 389
- Diorama, 171–179, 181
- Discourse, 8, 25, 27, 28, 36, 37, 63, 97–99, 101, 102, 104, 111, 150, 189–191, 198, 199, 204, 222, 223, 232
- Disease, 7, 97, 137, 265, 279, 280, 282, 293–295, 299–301, 318, 321, 323, 327, 329, 338, 346, 347, 352, 366, 371
- Disharmony, 10–13, 16, 266, 273, 274, 280, 281, 287, 306, 319–321, 338, 339, 342, 347, 349, 350, 352, 354, 356, 358, 359, 362, 363, 365, 367
- Disorder, 137, 220, 319, 323, 371–385, 389, 390, 393, 394
- Distress, tolerance, 82, 139, 391
- Diversity, 92
- DNA, 76, 271
- Drawing, 27, 52, 171–182, 208, 242, 253, 254, 257, 259, 261, 310, 373
- Dualism, 21, 194
- Dysfunction, 221, 230, 335, 389, 390
- E**
- Eastern, 11, 23, 56, 61, 137, 173, 186, 198, 203, 215, 223–225, 228, 231, 254, 297, 298, 308, 327
- Eastern Traditional Medicine, 308
- Eating disorder(s), 90, 93, 137, 139, 164, 220, 244, 257, 258, 315, 346, 349, 350, 352, 366, 371–385
- Ecojustice, 105, 106
- Economic, progress, 147
- Ecosystem, 4, 17, 54, 329
- Education, 2–5, 7, 8, 10, 21–38, 41–52, 54, 57–76, 90, 92, 93, 95, 97–106, 109–125, 134, 138, 145–156, 159–169, 171, 172, 185–208, 215, 216, 221, 223, 224, 228, 230–232, 244, 250, 254, 299, 306, 310, 312, 325, 329, 335, 336, 338, 346, 347, 355, 372, 397
achievement, 147, 148
poetics, 43
progressive, 145, 152
reform, 22, 146
research, 191
- Ego, 4, 21, 22, 26–28, 34, 118, 152, 240, 385
bound, 37
centric, 37, 153
consciousness, 21, 22, 27, 28
driven, 21
identity, 27, 35
self, 26, 35
- Eightfold Path, 28, 30, 31, 246

- Ejaculation, 223, 227, 230
 Electroencephalogram, 394
 Emancipation, 17, 204, 222
 Emergence, 3–5, 9, 10, 13, 23, 42, 48, 51, 60, 89–91, 98, 99, 101, 105, 109, 110, 117, 120, 122, 179, 191, 192, 195, 196, 204, 206–208, 215, 216, 228, 237, 241, 245, 249, 354, 356
 Emotion, 1, 3, 4, 6, 7, 23–27, 29, 31, 32, 49, 51, 57–59, 63, 65, 66, 69–76, 79–85, 90–92, 97–103, 105, 106, 112, 114–116, 119, 121, 124, 128, 129, 132, 135, 137, 139, 140, 148, 150, 153, 172, 174, 178–180, 215–217, 220, 222–224, 226–229, 231–233, 255, 256, 267, 268, 271, 273, 280, 281, 291, 293, 295, 296, 299, 302, 305, 306, 309–312, 318, 322, 323, 327, 331–342, 348, 352, 360, 372, 377, 380, 382, 384, 387–392, 396, 397
 arousal, 65, 396
 centering, 291
 climate, 59, 70, 72, 119, 335
 environment, 172
 expression, 7, 82
 positive, 81, 99, 103, 174
 reactivity, 98, 99, 396
 regulation, 23, 79, 81–84, 139, 150, 331, 333, 335, 387, 388, 391, 392, 396, 397
 state, 32, 153, 231, 273, 299, 322, 341, 390
 style, 332, 333
 unattaching, 3
 wellness, 216
 Empathy, 21, 24, 25, 29, 58, 84, 85, 89–92, 94, 95, 106, 110, 118, 156, 205, 246, 322, 326, 333, 334, 391
 Empowering, 94, 186, 187, 192, 228, 312
 Endocrine system, 277, 311, 349
 Energy
 blockage, 11, 12, 16, 223, 272, 306, 314, 320, 338, 345, 347, 351, 358, 363–365
 balancing, 291
 function, 13, 266, 274, 284–287, 319, 354, 357, 364
 English, 43, 48, 49, 54, 56, 62, 110, 111, 118, 123, 133, 238
 Enlightenment, 27, 30, 32, 36, 37, 83, 195, 196, 299
 Environments, complex, 177, 179
 Epilepsy, 294, 390
 Epistemology, 21, 24, 46, 57, 58, 61, 112, 186, 189, 192–194, 198, 201, 202, 325
 Equity, 6, 90, 155, 189, 355
 Ethics, 2, 6, 9, 21, 22, 29, 33, 50, 54, 57, 69, 103, 105, 106, 111, 138, 146, 153, 154, 160, 161, 164, 168, 200, 215, 232, 235, 244, 325, 343
 Etymology, 48
 Eugenics, 60, 218
 Evolution, 32, 50, 60, 65, 118, 217, 295, 296
 Exhale, 49, 61, 62, 242, 269, 270, 273, 278, 286, 389
 Exhaustion, 334, 336
 Exploitation, 4, 215, 217–224, 232, 236
F
 Facial expression, 63, 278, 348, 389
 Family, maladaptive, 395
 Fear, 62, 69, 81, 82, 94, 100, 103, 109, 110, 125, 139, 180, 206, 216, 221–223, 226, 230, 231, 237, 240, 245, 249, 259, 260, 273, 274, 281, 283–285, 291–303, 342, 373, 383, 384, 389, 391
 Feminism, 105, 106, 220
 Fibromyalgia, 389

SUBJECT INDEX

- Fiction, 52, 227, 235–251, 372, 374
Fight/flight, 388, 389
Flexibility, 91, 275, 332, 389, 391
Flow, 10–16, 23, 44, 49, 76, 105, 215,
223, 227, 229, 231, 265, 267,
270–273, 277, 279–281, 284–287,
297–301, 306–308, 320, 321, 324,
325, 331, 336–342, 345, 347, 351,
353, 354, 356–365, 367, 373
Four Immeasurables, 21, 29, 30, 37
Four Noble Truths, 30, 31, 238, 246
Free write, 119–121
Freeze, 25, 247, 389
Frustration, 24, 66, 69, 150, 153, 179,
185, 230, 260, 334, 335
- G**
Gall bladder, 13, 14, 16, 287, 319
Gender, 27, 57, 60, 217–219, 222,
225, 374
Generalizability, 8, 9, 237, 355, 367
Genes, 76, 191, 322
Genitalia, 215, 220, 221
Global warming, 4
Glucagon, 349, 358, 365
Glucose, 348–350, 356, 358–361, 363
Grit, 95
Guilt, 81, 222, 225, 229, 230, 232, 240,
334, 377, 382
- H**
Handstand, 258, 260, 261
Happiness, thirst for, 44, 45
Harmony, 10–14, 16, 36, 52, 83, 95,
140, 156, 159, 160, 162, 165, 169,
215, 230, 266, 268–271, 273, 274,
277–282, 284, 285, 287, 288, 294,
298, 301, 305–309, 315, 319–321,
337–342, 347, 349–352, 354, 356,
358–365, 367, 389
Headache, 10, 272, 298, 328, 339–342,
392, 394
migraine, 392, 394
Headstand, 253, 258, 260
Healing, 36, 68, 98, 99, 154, 217, 230,
232, 233, 265, 291, 293–303,
305, 306, 310–312, 315, 317,
318, 320, 321, 324–327, 329,
333, 338, 339, 342, 365, 380,
383, 385, 388
Health, 1, 4, 7, 10–12, 14, 26,
30–32, 41, 58, 76, 81, 84, 90,
97, 98, 124, 132, 135, 139,
147, 152, 154, 155, 162, 164,
187, 191, 215, 216, 218–220,
223–225, 227, 228, 230, 232,
233, 265, 275, 281, 291–297,
299, 301, 302, 305–310, 312,
314, 317–319, 321, 324, 325,
327–329, 333–337, 340–343,
346, 347, 350, 352, 354, 356,
365, 371–373, 377, 380, 385,
387, 389, 390, 393–395, 397
Heart, 4, 13, 26, 29, 83, 91, 93, 98, 100,
110, 128, 132, 197, 204, 229, 262,
287, 288, 299, 319, 322, 327, 328,
334, 340, 348, 350, 361, 362, 371,
375, 387–390, 393, 395–397
attack, 327, 328
disease, 327, 371
rate, 229, 319, 327, 361, 362,
387–390, 392–397
Heart rate, resting, 393
Hegemony, 10, 186, 189, 191, 192, 195,
198, 203, 205, 207, 232, 324
Herbalist, 310, 317
Herbs, 295, 305, 306, 310–315, 321,
328, 351, 365, 366
Hermeneutic, 6, 8, 58, 112, 216, 248,
250, 338
Hermeneutic phenomenology, 6, 8, 58,
112, 248, 250, 338
Heuristic, 6, 58, 59, 65, 69, 72–76, 92,
109, 112–114, 119, 120, 122, 128,
133, 172, 181, 261, 335
High school, public, 89

- Hinduism, 60, 295
 Hippocratic model, 294
 Holism, 22, 28, 29, 47, 76, 90, 106, 120, 150, 185, 191–195, 197, 198, 201, 202, 204, 206, 208, 287, 310, 317, 321, 325, 333, 352, 367
 Homeostasis, 348, 349, 389
 Homophobia, 153–155
 Homosexuality, 219
 Human
 condition, 43, 52, 98
 consciousness, 27, 29
 experience, 32, 98, 235
 sexuality, 217
 Humanism, 50
 Hypertension, 392, 397
- I**
 Identity, 3, 4, 27, 35, 61, 66, 81, 100, 103, 113, 124, 177, 192, 215, 334, 374
 Ideology, 2, 3, 58, 147, 148, 185, 186, 188, 191–193, 196, 198, 208, 216, 220
 Immobilization, 388, 389
 Immune system, 293, 299, 302, 347
 Impotence, 150, 215, 228
 Inclusion, 5, 46, 154, 160, 163, 185–193, 195, 197, 202, 205, 206, 208, 277, 278, 363
 Incontinence, 215
 Individual, 1, 2, 5, 7, 9, 10, 21, 22, 25, 29, 31, 45, 53, 58, 64, 66, 68, 70, 79–82, 100, 101, 105, 111–113, 116, 118–123, 133, 135, 136, 141, 142, 145–150, 152–154, 174, 179, 181, 192, 215, 219, 225, 226, 231, 232, 251, 253, 254, 267, 271, 272, 276, 280, 285, 291, 297, 317, 323, 325, 327, 329, 331, 335, 352, 355, 372, 389, 391, 393, 394, 396, 397
 dialectical with collective, 66, 120, 121
 Individualism, 2, 53, 100, 101, 122, 141, 146, 148–150, 152–154, 267, 271, 285, 307, 312
 Indoctrination, 4
 Inequality, 4, 41, 53, 76
 Inflammatory, 312, 356, 389
 Insulin, 346, 347, 349, 350, 356, 358, 363, 365
 resistance, 349, 350, 366
 Integral education, 152, 154
 Integral theory, 29, 31, 145, 152–155, 294, 389
 Interaction ritual, 71, 116, 174, 250
 Interdependence, 83, 119, 154
 Intervention, 6, 7, 9, 24, 48–50, 57, 58, 61, 73, 75, 112, 120, 123, 150, 172, 179, 181, 237, 239, 282, 287, 293, 294, 328, 335, 341, 343, 359, 387–397
 Intoxication, 164, 249
 Inversion, 253, 254, 258, 260, 261
 Iridology, 305, 306, 310, 311, 316, 317, 320, 327, 355, 365
 Iris, 310, 311, 313, 317, 318, 328, 365, 382
- J**
 Jewish, 67, 219
 Jin Shin Jyutsu, 1, 10–17, 223, 227, 265–288, 298–301, 303, 305–310, 312–321, 324–326, 328, 331, 337–342, 345–347, 350–365, 367
 Joy, 21, 23, 29, 32, 37, 80, 200, 301
 Judgment, 9, 46–48, 57, 58, 71, 72, 83, 84, 109, 118, 166, 180, 181, 206, 225, 255, 257–259, 278–281, 332, 355, 356, 361, 373, 381, 385
 no, 57, 60, 83, 89, 103, 109, 119, 121, 123, 146, 156, 173, 179–181, 228, 254, 255, 331, 332, 373

SUBJECT INDEX

K

Kidney, 13, 245, 287, 300
Kindness, 21, 29, 36, 37, 82–84, 103,
161, 164, 226, 231, 391
loving, 82–84, 103, 161, 164

L

Laughter, 64, 174, 285, 350
Learning environment, 3, 6, 7, 120,
171, 181, 185
informal, 171, 181
Liberatory
pedagogy, 29
potential, 3
Lifestyle, 1, 3, 4, 7, 10, 16, 17, 141,
271, 281, 306, 311, 346, 347, 353,
356, 357, 366, 367, 371
Lifeworld, 3, 5, 7, 9, 203–205, 207,
208, 338
Listening, 2, 12, 45, 57, 58, 63–65,
71, 76, 81, 89, 93–95, 110,
120, 122, 131, 165, 172, 174,
272, 288, 298, 300, 308, 319,
327, 360
committed, 92, 93
Lived experience, 101, 112, 178, 179,
193, 215, 334, 338
Liver, 16, 300, 313, 319, 345, 346,
348–350, 354, 357, 359, 361–363,
365–367
Logics, conventional, 185
Lymph, 311, 318, 365, 366

M

Main Central Vertical flow, 277–279,
286, 298, 299, 307, 325, 340,
341, 353, 364
Mammals, 174, 176, 348, 389
Management, of others, 137
Market
based, 146
value, 146, 147
Martial arts, 221, 227, 231

Marx, Karl, 219, 220, 231
Mask, 90, 111, 148, 334, 371,
379–385
Materialism, 153, 291
Mathematics education, 3, 185–208
Mediator flow, 307, 364
Meditation, 1, 3, 6–8, 10, 17, 21–24,
26, 29–35, 37, 41–43, 45, 46,
48, 52–54, 57, 58, 60–62, 65,
76, 79–84, 90–93, 99, 101–104,
106, 111, 112, 115, 118, 131–133,
136, 138, 140, 148, 151, 153,
163–166, 171, 172, 174, 178,
181, 227, 246, 250, 255, 269,
271, 300, 325, 328, 331–333,
335–339, 373, 390–392, 394,
395, 397
practice, 61, 83, 99, 102, 104, 138,
325, 331, 335, 391
techniques, 41, 42, 48, 80, 136, 328
Medusa, 381–385
Mentality, 51, 148, 159, 163, 165, 230
Meso-level, 8
Metalogue, 317
Metaphor, 11, 185–188, 191, 192,
194–196, 200–205, 235, 247,
261, 265, 306, 373, 396
Metformin, 350, 356, 363
Methodology, 9, 17, 22, 112, 113, 123,
185, 186, 188, 192–194, 208,
235, 352, 354, 355, 357
Micro-management, 151
Migrant, 159, 165, 168
Mind-body, 97, 98, 111, 191, 268, 291,
293, 297, 329
Mind, game, 185
Mindful, 2, 5, 6, 8, 29–38, 57, 58,
60–62, 68, 72, 74–76, 79, 80,
89–95, 97, 109, 110, 112–114,
116–118, 120, 122, 124, 131–137,
139, 140, 146, 150, 152–155,
164–166, 168, 169, 178, 185–208,
215, 224, 227–230, 235–251,

- 253–255, 257–261, 300, 322,
324, 331–343, 373
- breathing, 116, 117, 120, 215, 300,
331
- education, 57, 60
- inquiry, 97, 185–208
- learning, 113, 178
- meditation, 228, 331, 332
- non, 135
- performativity, 185, 186
- practice, 61, 89, 92, 94, 95, 112, 113,
116, 117, 215, 228, 230
- sobriety, 235–251
- Mindfulness, 1–17, 21–38, 41–54,
57–76, 79–85, 89–106, 109–125,
128, 131–142, 145–156, 159–169,
171–174, 177–181, 185–187,
215–233, 235, 246, 250, 251,
253–262, 291, 301, 322, 325, 328,
331–333, 335–338, 371–385,
387–397
- based, 24, 26, 30–32, 82–84, 123,
132, 137, 139, 155, 235, 254,
325, 371–385, 387–397
- heuristic, 6, 65, 69, 73, 75, 120, 133,
181
- Integral, 152–155
- meditation, 26, 30–33, 54, 58,
79–84, 132, 148, 151, 333, 391
- practice, 21, 22, 24–26, 28, 29,
33–36, 57, 72, 81–85, 91–93,
95, 97–106, 117, 123, 138, 145,
148–150, 152, 153, 155, 172,
225, 253, 255, 259, 262, 322,
328, 387, 388, 390–397
- Mindless, 109, 187, 253, 257, 258, 261,
262, 332, 371
- MindUP, 24, 31, 254
- Misconceptions, 22, 25, 26, 60
- Monastic system, 23, 101, 159
- Monogamy, 217–219, 226
- Mood, 6, 58, 65, 70, 137, 200, 251, 374,
375, 389, 393
- Morality, 29, 44, 103, 105, 146,
147, 149, 152, 153, 159–161,
163, 165, 167–169, 219,
220, 222, 232, 235, 236,
238, 246
- Mudras, 29, 227, 271, 299, 337, 350
- Multidimensional, 115, 202, 206, 331
- Multilevel, 8, 357
- Multilogical, 5, 317, 324, 347
- Multi-perspectival, 189, 190
- Multi-textualities, 191
- Museum, 5, 171–174, 177, 178, 181,
Museum, education, 172, 177
- Myth, 44, 97, 98, 146, 147, 151, 154,
203, 207, 224, 238, 383, 384
- N**
- Narrative, 8, 33, 58, 69, 75, 76, 84, 106,
185–188, 199, 208, 215–233,
235–251, 317–329, 373
- Narrator, 235
- Naturopathy, 355
- Neoliberalism, 3, 99, 100, 141,
145–156
- Nepal, 185–188, 190–193, 195,
197–199, 201–207
- Neurobiology, 29, 396, 397
- Neuroception, 327, 348, 358, 363
- Neurons, 76, 332, 333
- Neurophysiological, 390
- Neuroplasticity, 7, 76, 112, 331–333
- Neuroscience, 22–25, 32, 92, 102, 112,
117, 151, 152, 332, 333
- Neuroscientism, 152
- Nirvana, 32, 83
- Noble Eightfold Path, 246
- No Child Left Behind, 147, 149
- Nonattachment, 255
- Non-dominant, 179–181
- Non-native speaker, 62
- Non-positivistic, 352
- Non-violence, 41–44, 52, 54, 163
- Nutrition, 296, 297, 299, 310–313

SUBJECT INDEX

O

Obesity, 236, 281, 371, 372, 375
Objectivism, 58
Obsessive, 122, 219, 235, 236,
376, 383
Ontological, 6, 21, 146, 173, 192–194,
235, 250
Oppression, 21, 105, 106, 155, 215,
217–221, 223, 224, 232
Organ function energy, 265–267, 364
Orgasm, 221, 223, 227, 228, 230
Oxygen concentration of blood, 61,
62, 345, 349, 357, 359–363,
367, 389
Oxygen, intake, 389

P

Pain, 12, 13, 15, 16, 32, 35, 66, 68,
90, 132, 150, 201, 216, 232,
237, 239, 240, 244, 245, 249,
265, 267, 272, 281, 287, 292,
300, 309, 312–315, 323, 326,
338, 339, 341, 373, 374, 382,
383, 388
sources, 150
Pali, 30, 48, 49
Pancreas, 345, 346, 348–350, 353, 354,
357, 362, 363, 367
Parasympathetic
nervous system, 226, 348, 358,
388–390, 392, 394
tone, 394
Pathology, psychological, 389
Patriarchal, 153, 219, 220, 222, 223, 302
family, 220
Patterns of coherence, 331
Pedagogy, 24, 29, 57, 58, 60–62, 75, 89,
97, 101, 102, 106, 109, 110, 122,
131, 134, 135, 149, 151, 155,
185, 186, 188–195, 198–200,
202–206, 208
Peer pressure, 395, 396
Pelvic floor, 227, 389

Perception, 25, 36, 41, 45, 80, 83, 95,
102, 103, 105, 121, 136, 173,
181, 248, 251, 253, 256–261,
292, 334, 391
Performativity, 185, 186
Personality disorders, 137, 390
Perspectives, multiple, 174, 177, 179,
291
Pharmaceuticals, 220, 294, 321, 326,
328, 346, 356, 364
Phenomenology, 6, 8, 58, 112, 248,
250, 251, 338
Philosophy, 4, 5, 9, 23, 32, 36, 37, 42,
46, 47, 50, 51, 61–63, 72, 89,
95, 111, 113, 114, 136, 159, 161,
163–165, 169, 195, 215, 223,
225, 229, 231, 272, 273, 295,
305, 347
Physical and mental health, 387, 390,
397
Physiological, 10, 22, 23–25, 60, 61,
103, 105, 114, 226, 231, 300, 328,
335, 345, 346, 348, 356, 360,
363, 379, 387–397
activities, 387
arousal, 396
changes, 10, 23, 345, 360, 363, 387,
390, 393
markers, 387, 392–394
regulation, 328, 387–397
Physiologic, arousal, 396
Physiology, 7, 47, 232, 294, 305, 338,
354
Piagetian perspective, 396
Place-based, 159–169
Plasticity, 332
Platonic, 207, 269
Pleasurable, 136
Plethysmograph, 362
Poetic, 43, 51, 52, 185, 187, 188,
194–196, 198, 202
Polish, 131–142, 322, 327
context, 131–142

- Polyphonia, 122, 177
 Polysemy, 89, 95, 110
 Polyvagal theory, 226, 328, 347–349, 363, 387–390, 392
 Post Traumatic Stress Disorder, 394
 Post-egoic, 37
 Power, 29, 60, 75, 93, 101, 114, 115, 121–123, 155, 189, 200, 216, 217, 219, 231, 232, 240, 241, 249, 259, 261, 281, 294, 296, 297, 305, 313, 323, 332, 333, 337, 338, 340, 379, 380, 384, 394
 discursive, 189
 Practice, professional, 36, 119, 136, 306
 Present in the moment, 181, 332
 Pre-Socratics, 47
 Pressure, 4, 11, 13, 21, 22, 26, 91, 102, 141, 149–151, 221, 227, 228, 256, 269, 301, 306, 320, 325, 327, 341, 348, 361–363, 367, 372, 373, 387, 388, 392–397
 Privilege, 6, 8, 25, 68, 98, 99, 150, 153–155, 186, 189, 191, 194, 202, 203, 206, 208, 216, 218, 235, 248
 Progressive, 113, 145–147, 149, 152, 154, 190, 287, 329, 337, 395
 Protective self, 35, 36, 123
 Psychopathology, 396
 Psychosomatic illness, 323
 Psychotherapy, 30, 33, 34, 36, 37, 84, 136, 138, 139, 312
 Pulse, 288, 319, 320, 342, 345, 349, 354, 357, 359–363, 367
 listening, 288, 308, 319, 360
 rate, 59, 345, 349, 357, 359–363, 367
 Pupils, dilated, 388
 Purpose, common, 4, 7, 10, 17, 21, 23, 26–29, 42, 47, 49, 51, 58, 62–64, 68–85, 89, 92, 93, 98, 103, 110, 118, 135, 146, 148, 156, 161, 164, 165, 173, 193, 199, 223, 224, 247, 250, 254, 261, 287, 291, 292, 309, 311, 329, 331, 356, 367
 Pushback, 93
 Pythagoras, 47, 195
Q
 Qi, 10–12, 14–16, 231, 345, 347, 351, 352, 354, 356, 358–360, 362, 364, 365, 367
 Qi Gong, 33, 352
R
 Race, 60, 65–69, 97, 147, 150, 155, 217, 218, 220, 225, 232
 segregation, 66, 67, 75, 217
 Radial artery, 354
 Radial bone, 354
 Radial styloid process, 354
 Radical listening, 57, 58, 63–65, 76
 Reductionism, 16, 22, 25, 53, 99, 100, 111, 135, 139, 185–208, 254, 345, 357, 360, 361, 363, 367, 394, 395, 397
 Reflection, 5, 9, 13, 31, 36, 43, 50, 51, 53, 54, 57, 59, 60, 62, 64, 65, 69, 71, 72, 76, 79, 83, 98–100, 105, 110, 113–115, 119–122, 128, 131, 133, 136, 137, 141, 146, 147, 153, 159, 165, 166, 168, 169, 172, 173, 177–181, 185, 187, 188, 191, 192, 194, 199, 203–205, 207, 216, 217, 221, 231, 235, 248–251, 274, 280, 311, 332, 356, 358, 363, 364, 367, 375, 376, 388, 389, 392, 394–396
 Reflective, 65, 75, 119, 120, 153, 177, 180, 185, 187, 188, 192, 235, 251
 genres, 188
 practice, 146, 147
 thinking, 187
 Reflexivity, 118, 119, 331, 333, 335, 338
 Reflexology, 352
 Religion, 7, 8, 27, 30, 50, 57, 61, 80, 160, 161, 167, 169, 217, 222, 294, 295

SUBJECT INDEX

- Representation, 5, 8, 9, 48, 177, 178,
187, 195–197, 199, 207, 225,
244, 249, 254, 256, 259
crisis of, 5
Reptilian, 348, 388
Research priorities, 1, 3
Resilience, 24, 76, 83, 95, 98, 99, 117,
352, 371–373, 396
Respect, 2, 9, 28, 44, 58, 62, 64, 71, 72,
90, 93, 95, 111, 116, 123, 124,
152, 154, 159–161, 164, 165,
215, 225, 226, 230
Respiratory rate, 388, 393, 395
Respiratory sinus arrhythmia, 387, 389,
392, 395
Responsive, 6, 27, 91, 94, 117, 120,
141, 325, 365
Retribution, 94
Revolution, 23, 45, 46, 48, 54, 146,
155, 189, 196, 217, 225, 333
Right-side up, 254, 257–259, 261
Ripple effects, 9, 76, 117, 325–329
Risk, 25, 48, 49, 54, 93, 106, 113, 121,
122, 140, 141, 217, 285, 287,
301, 327, 348, 349, 358, 363,
371, 387, 396, 397
effects, 287
society, 141
high, 49, 106, 397
Ritual, 14, 71, 116, 174, 198, 228, 231,
250, 322
Rote-memorising, 185
Royal virtues, 163, 164, 168
Russian, 65, 254, 327
- S**
Sadness, 81, 135, 247, 259, 273, 274,
342, 382
Safety energy locks, 11–15, 17, 265,
266, 269, 270, 272, 273, 275–277,
280, 284, 287, 298, 306, 308, 314,
318, 326, 338, 339, 341, 351, 353,
354, 357, 358, 360, 362–365, 367
Saliva cortisol levels, 393
Sample size, 394, 397
Samsara, 83, 140
Sanskrit, 30, 43, 48, 49, 104, 133, 164,
261, 271
Schizophrenia, 390
School
administrators, 89–91, 163–165
climate, 89, 93, 95
environment, 90, 91, 150, 159, 163,
165, 171, 173
inner-city, 150
Science, identity, 61
Science learning, 64, 162
Science teacher induction, 171
Science, Technology, Engineering and
Mathematics, 99, 100, 166, 167
Scientism, 4, 195
Secular, 7, 8, 26, 30, 45, 48–50, 61, 82,
91, 101, 145, 146, 156, 159, 254,
336
Segregation, 66, 67, 75, 217
Self
awareness, 42, 93, 109, 118,
134, 136, 137, 145, 152, 153,
155, 306, 331, 333, 334, 380,
394, 397
blame, 154
care, 89–95, 111, 116, 147,
309, 333
compassion, 100, 105
consciousness, 136
control, 25, 26, 396
development, 138, 145, 148,
152–154, 160
discipline, 34, 100, 104, 136, 147,
150, 160, 163, 269, 321
discovery, 34, 100, 104, 136, 147,
150, 160, 163, 269, 321
feeling, 35
hatred, 155
help, 1, 10, 12–15, 17, 131,
147, 265, 269, 275, 277, 298,

- 300, 305–307, 309, 312–315,
 317, 321, 325, 326, 328, 331,
 340, 347, 352, 359, 364,
 365, 367
 image, 194, 371, 372, 375
 knowledge, 136, 380
 loathing, 26
 lost, 35
 mastery, 152
 reflexivity, 335
 regulation, 21, 22, 24–26, 80,
 105, 148–150, 172, 254,
 333, 396
 understanding, 100, 152, 269, 291,
 292
 worth, 372, 380
 Selfishness, 155
 Setting, natural, 178
 Sex education, 215, 228, 230
 Sexual
 abuse, 218, 223, 371–385
 anatomy, 221
 bondage, 223
 energy, 228, 229, 231
 misconduct, 164
 trauma, 217, 222
 wellness, 215–233
 Sexuality, 10, 215–233, 384
 Shame, 81, 222, 225, 229, 232, 293,
 377, 383
 Shaming, 225, 371, 372
 Silence, 37, 42, 44–49, 52–54, 61, 62,
 65, 67, 98–100, 102, 115, 117,
 124, 171–174, 178, 181, 200,
 242, 246, 286, 378, 397
 internal, 49
 Sketching, 12, 131, 171–174, 176–181,
 189, 197, 339, 351
 Skin
 color, 65
 conductance, 387, 388, 392, 395
 Social
 bonds, 112
 cohesion, 168
 control, 145, 149, 150
 inequality, 41, 76
 injustices, 76, 150
 justice, 6, 69, 99, 155, 204, 355
 practice, 17
 Sociocentric, 153
 Sociocultural, 3, 58, 66, 97, 98, 112,
 119, 172, 189, 205, 221
 contexts, 97, 98
 theories, 172
 Sociology of emotions, 116
 Solidarity, 6, 64, 116, 134, 191, 217
 Spanish-speaking, 43
 Speech, false, 164
 Spiritual, 23, 30, 44, 83, 99, 104–106,
 141, 161, 187, 223, 248, 251,
 272, 291, 293, 299, 300, 302,
 318, 322, 377
 autobiography, 248, 251
 path, 104
 Spleen, 237, 300, 354, 357, 362
 flow, 13, 347, 360, 361
 Stillness, 98, 99, 260, 275
 Stories, personal, 99, 104, 331
 Storyteller, 187, 191, 198, 250
 Stress, 1, 4, 15, 21, 23–25, 27, 28,
 41–43, 49, 50, 53, 54, 65, 76,
 79, 82–84, 90, 97–99, 105,
 111, 112, 114, 117, 119, 122,
 132, 137, 145, 147–151, 154,
 155, 168, 172, 177–178, 185,
 221, 226, 229, 231, 232, 254,
 267, 272, 275, 299, 300, 309,
 321, 327, 328, 332, 334, 336,
 337, 340–342, 348, 357, 358,
 373, 375, 377, 382, 383,
 387–397
 reduction, 83, 97, 111, 150, 154,
 155, 254, 395, 397
 related disorders, 389
 responses, 387–390, 392, 393, 395
 Stretching, 112, 172, 285, 357

SUBJECT INDEX

- Stroke, 112, 216, 222, 228, 262, 268,
287, 294, 305, 313, 321, 325,
327, 338
- Subjectivity, 6, 97, 153, 355
- Suffering, 30, 32, 36, 37, 90, 103, 105,
156, 216, 220–223, 232, 235–248,
259, 292, 322, 325, 326, 334,
345, 366, 372, 382
- Sugar concentration in blood, 345,
348–350, 355–364, 366, 367
- Supervisor flow, 357
- Survival, 34, 179, 275, 302, 388–390
- Sustainability, 3, 97, 98, 123, 160, 163,
169, 371–385
personal, 371–385
- Sympathetic activity, 348, 394
- Sympathetic nervous system, 348,
388–390, 392
- T**
- Tai Chi, 80, 231, 352
- Tantra, 82, 215, 226, 227, 229, 350
- Taoism, 215, 224, 225
- Teacher
education, 92, 109–125, 172, 188,
325
induction, 171, 178, 180, 181
stress, 24, 117, 151
- Tension, 25, 66–69, 91, 98–100, 102,
105, 106, 173, 221, 270, 271,
277, 278, 281, 287, 292, 298,
328, 338, 383, 392, 397
- Test, high stakes, 6, 89, 101, 106, 146,
148–150
- Thailand, 159–169
- Thai National Curriculum, 161, 162
- Theory, psychological, 22
- Therapeutic, 34, 36, 137, 141, 148,
251, 380
- Thinking, magical, 187
- Thorny issue, 66, 68, 69, 95, 154
- Tibetan, 82
- Tibetan medicine, 295
- Top-down, 256–259, 261
- Totalizing, 148
- Toxic fat, 371
- Traditional Chinese Medicine, 10
- Traditional Oriental Medicine, 307
- Transcendental Meditation, 397
- Transformation, 4–6, 21, 23, 26–28,
30, 33, 36, 42, 43, 45, 51, 66,
69, 76, 90, 93, 97, 99, 110, 114,
145–156, 199, 204, 225, 233,
251, 270, 299, 310, 332, 335,
350, 380
learning, 97, 99
practices, 335
- Transparency, 102
- Transpersonal art therapy, 371–385
- Trauma, 98–101, 103, 105, 115,
150, 215, 217, 222, 223, 229,
232, 247, 284, 310, 311,
371–373, 376, 379, 380, 384,
385, 389
- Trisikkha, 159, 163, 165, 167, 168
- Trust, 68, 80, 90, 95, 110, 122, 123,
135, 155, 276–278, 300, 301,
377, 379
- Type 2 Diabetes, 325, 328, 345–367,
371
- U**
- Ukraine, 65
- Umbilicus, 341, 354, 357, 360–362
- Unattachment, 32, 255, 260, 261
- Uncertainty, 91, 118, 122, 302, 323
- Unconscious, 25, 34, 35, 45, 135, 200,
291, 377, 381, 384
- Unhappiness, 75, 132, 151, 342, 383
- Universal energy, 11, 268, 306, 308,
320, 340, 345, 353, 356
flow, 11, 320, 340, 353
- Unpleasurable, 136
- Unreflective, 146, 147, 154
- Unstuck, 3, 226, 332
- Upside-down, 33, 253–262

V

Vagal control, 349
 Vagus nerve, 348, 349, 358, 360, 362, 363, 367, 389, 390
 activity, 348
 circuit, 349
 dysfunction, 389, 390
 myelinated, 348, 389
 tone, 387, 389, 390, 392, 394, 396, 397
 unmyelinated, 389
 Vedic, 186, 198, 201
 Vegetarian, 15, 164, 297
 Violence, 3, 41–46, 52, 54, 150, 163, 164, 215, 217, 219, 222, 224, 225, 230, 232, 242

W

Wai, 159, 160, 164, 166, 167, 169
 Waistline, 268, 280, 353, 354, 364,
 Wellbeing, 1, 4, 5, 10, 11, 23–25, 29, 44, 79, 82–84, 89, 90, 97, 98, 100, 103, 106, 111, 112, 116, 120, 123, 124, 135, 141, 145, 147, 149, 150, 154, 186, 216, 232, 244, 277, 278, 280, 282, 293, 296, 297, 299, 301, 305, 310, 317, 321, 325, 327, 329, 331–333, 335, 339–343, 352, 367, 385, 387, 390, 395, 397
 Wellness, 1–17, 60, 76, 112, 147, 179, 181, 215–233, 291–303, 305–329,

338, 343, 346, 347, 352, 354, 358, 365–367, 388
 Western, 15, 22, 23, 26, 42, 46, 48, 51, 58, 84, 97, 100, 101, 112, 137, 160, 168, 169, 195, 197, 198, 207, 215, 216, 220–225, 228, 231–233, 242, 254, 265, 270, 272, 291, 294, 302, 305, 307, 310, 324, 329, 346, 356
 medicine, 1, 9, 10, 254, 265, 291, 305, 307, 309, 317, 321, 322, 324, 328, 329, 340, 345–347, 355
 non-, 197, 221, 228
 White privilege, 153, 155
 Wisdom, 30, 82, 102, 105, 132, 152, 159, 163, 165, 203, 269, 274, 291, 301, 302, 327, 329, 346, 372
 Worldview, 46, 146, 154, 155, 187, 190, 191, 195–198, 204, 207
 Writing, magical, 187

Y

Yoga, 10, 22, 24, 80, 131, 226, 253, 258, 260, 296, 394, 395
 Kriya, 226

Z

Zen, 32, 33, 98, 302, 394
 master, 302
 meditation, 394
 Zone of proximal development, 111