

MEDITATION AND EDUCATION
MODERNIZING LEARNING THROUGH ANCIENT TECHNIQUES

By

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A THESIS
Presented to the School of Journalism and Communication
And the Robert D. Clark Honors College of the University of Oregon
In partial fulfillment of the requirements
For the degree of
Bachelor of Arts

Fall 2013

An Abstract of the Thesis of

Rabea Stueckemann for the degree of Bachelor of Arts
in the School of Journalism and Communication to be taken November 22, 2013

**Title: MEDITATION AND EDUCATION
MODERNIZING LEARNING THROUGH ANCIENT TECHNIQUES**

Approved: 

Professor Thomas Wheeler

Attention, contemplation and insight on the one side, productivity, acceleration and efficiency on the other. The contemplative slow-paced and the technological fast-paced worlds may seem to be opposites, yet they complement each other. However, cultural indicators suggest that the “more, faster, better” world has gradually gained the upper hand. In the Western world efficiency appears to be key to success. The Oxford English Dictionary defines efficient as “achieving maximum productivity with minimum wasted effort or expense.” Benjamin Franklin recognized that “time is money” as early as 1748; however, this maxim appears to become more and more indicative of today’s society. In order to keep up with a continuous striving for profit and advancement, society turns towards technology. Today’s generation of students has learned to flourish in a technology-driven world. While they have access to an infinite amount of data and produce professional work, they are also extremely distracted, stressed and dependent.

In a study on the impact of laptop multitasking on classroom learning, researchers found, “such a lifestyle is intended to increase efficiency; however, there are limitations to how well multiple tasks can be carried out concurrently” (Sana, Weston, Cepeda, 2012). This brings up the question whether students are both physically and mentally present in the classroom. The omnipresence of smartphones, laptops, and iPods has only fueled concerns about the tech-enabled student. The advertising agency re:fuel in New York specializes in the promotion of brands in the college market. According to its latest study, which was published in the June 2013 edition of *College Explorer*, the average 18 to 34-year-old college student in the U.S. owns seven electronic devices, such as laptops, smartphones and video game consoles. The impact on attention and performance is apparent when multitasking has become a way of life. Many students find it hard to sustain concentration and process information.

A potential remedy is a contemplative tradition that dates back to antiquity: meditation. It can increase efficiency through improving concentration, attention and goal-directed action, therefore enhancing academic performance. Although highly useful for students, the implementation of meditation in American universities only moves at a sluggish pace due to its religious connotation. This thesis affirms that meditation practiced in a secular way closes the gap between the fast and the slow world and serves as an additional resource to improve academic performance. While no panacea, meditation can shift the educational experience individually and globally.

ACKNOWLEDGEMENTS

This project would not have been possible without the help and support of the generous people around me, only some of whom I am able to particularly mention here.

I owe special thanks to the professors from various departments who supported me during my research. First and foremost I thank my primary thesis advisor, Thomas Wheeler, for his guidance, patience, enthusiasm and knowledge of the subject matter. I specifically want to thank Louise Bishop and Rebecca Force, who not only agreed to join my committee, but who supported me on both an academic and a personal level. I would also like to thank David Koranda, who entrusted me with his life story and invited me to his practice and discussion circles. Finally, thanks to Lisa Freinkel for sharing her knowledge and introducing me to her colleagues and friends in the Buddhist community.

I would also like to acknowledge the financial and academic support of the Robert D. Clark Honors College. The generous research grant expanded my research opportunities and beyond that gave me the chance to make life-changing experiences.

Lastly, I am extremely grateful for the continuous support and encouragement of my friends and family in the United States and in Germany, above all my sister Debbie. Her loving support, patience and assistance became indispensable. My sincere thanks also go to Ben DeJarnette, friend, athlete and mentor, who challenged and comforted me and always kept a sense of humor when I had lost mine.

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INTRODUCTION

In today's fast-paced world, the pressure on the individual has grown dramatically. The number of Americans suffering from stress, anxiety and depression has risen significantly. In 2013, the American Psychological Association found that more than 70 per cent of U.S. citizens suffer from either psychological or physical stress symptoms, caused by, for example, financial pressure, part-time jobs and fear of failure. The American College Health Association has initiated many projects to research the situation in American universities and found that stress is not only detrimental to students' health, but especially to their academic performance and productivity. In a 2006 study, 32 per cent of 97,357 college students reported that academic stress had resulted in an incomplete, a dropped course or a lower grade. Professor David Jones teaches at the Massachusetts Institute of Technology (MIT) and regularly notices poor performance and absent-mindedness. Drawing from his personal experience, Jones explains, "It's not that students are dumb, it's not that they're not trying... they're trying in a way that's not as effective as it could be because they're distracted by everything else" (Digital Nation, 2010).

Today's students try to increase productivity and to save time through engaging in what became known as media multitasking. The term has become ubiquitous so fast that it presses for a better understanding of the context as well as for guidance on how to approach this phenomenon. While we are individually aware of our tendency to engage in multitasking, we often collectively succumb to the pull of the plethora of devices that compete for our attention. In her report, "The impacts of media

multitasking on children's learning and development," (2010) Claudia Wallis differentiates between three types of multitasking:

- (a) Between medium and face-to-face interaction, e.g. texting while at dinner table
- (b) Between two or more media, e.g. listening to the radio while texting
- (c) Within a single medium, e.g. listening to iTunes while checking e-mail and doing online research

Media multitasking appears to be omnipresent in Western universities, where the student who attends a lecture and simultaneously types on his laptop while keeping an eye on his smartphone and holding an iPod in his pocket is no longer uncommon (Sana, Weston, Cepeda, 2012). Whether it is the latest Facebook status updates or international breaking news, there is a constant desire to "plug in." The term "information overload" coined by Bertram Gross in 1964 has reached a new extreme. Yet, the possible dangers of technological advancement are long known. In 1971 Herbert Simon, one of the founders of the modern science of artificial intelligence, wrote:

In an information rich world, the wealth of information means a dearth of something else: a scarcity of whatever [it] is that information consumes. What information consumes is rather obvious: it consumes the attention of its recipients. Hence a wealth of information creates a poverty of attention.

Thus, alongside unknown opportunities, the digital revolution also brought distraction, dependency and mental overload.

In this high-tech world, it might just be the ancient tradition of meditation that provides relief and improves the ability to concentrate, refocus and perform. Out of the many forms of meditation, the Buddhist model in particular attracts many followers.

During the last two decades the communication between Western scientists and

Buddhist practitioners grew significantly due to Buddhism's scientific components. "Like science, Buddhism encourages people to take nothing on faith alone and does not require a belief in God," says neuropsychologist Rick Hanson. "It also has a detailed model of the mind that translates well to psychology and neurology," demonstrating its secular components (Hanson, Medius, 2009). Scientists now have the technical tools to thoroughly investigate the changes the brain undergoes, as they manifest themselves in MRI tests and other brain scans. These measurements bring reliable results and a scientific explanation with regards to the benefits of meditation, which include physiological relaxation, slowed metabolism, a heightened self-awareness, improved concentration, empathy, perceptual acuity, as well as a drop in anxiety and stress symptoms (Davidson, Lutz, 2008; Halsband, 2009; Levy, 2012). This work provides an insight into the relationship between meditation and brain activity.

The medical field recognized these benefits and uses meditation in the form of mindfulness-based stress reduction (MBSR) as an alternative treatment method. Developed by Dr. Jon Kabat-Zinn at the University of Massachusetts Medical School, the combination of mindfulness meditation and yoga is designed to treat stress and chronic illness. However, instead of only using meditation when stress and pressure have already overwhelmed the individual, it might be advisable to place it at the disposable in those environments where the probability to suffer from these very conditions is high. It almost comes as a surprise that meditation has not yet been established as a component and additional tool in education if we know that it can help students to reduce stress and improve performance. There is a vast amount of credible research suggesting a natural bridge between meditation and performance. The skills

meditation develops are desirable for today's students, who would benefit from improving critical thinking while enriching their reflection.

My goal for this thesis is to demonstrate why and how Buddhist meditation techniques can be applied outside of a religious context and function as a secular tool that improves academic performance and enhances the learning experience as a whole. Ideally, students may also learn to use their digital devices more purposefully so that technology assumes its original role as facilitator and support system.

Chapter I—Meditation

Buddhism and Modern Education

Before diving into meditation, Buddhism must be understood in its framework. Sarah Shaw is an honorary fellow of the Oxford Centre for Buddhist Studies. Her book “Introduction to Buddhist meditation” provides both students and experienced practitioners with a deeper understanding of the origin and meaning of meditation as well as its purpose and place in different Buddhist schools. Shaw makes clear that Buddha is not a god, but rather a symbol of wisdom. The historical Buddha was born in Nepal into a royal Hindu family. His name was Siddhartha, which means “he who achieves aims.” In fact, this definition reminds us strongly of our understanding of an efficient worker. Siddhartha achieved wisdom and experienced ultimate happiness through finding a way to end his suffering. He reached nirvana, which is defined as the place where the mind is in perfect peace. He became “the one who is awake”: Buddha. Buddhists believe that everybody has the potential to reach Buddhahood because everybody has the ability to determine his or her life. While abilities and ideals vary from person to person, the method remains the same: meditation. Yongey Mingyur Rinpoche is a widely recognized Buddhist teacher and author. His best-selling book “The Joy of Living: Unlocking the Secret and Science of Happiness” has been translated into more than 20 languages. The author weaves together principles of Tibetan Buddhism, neuroscience and quantum physics and thus makes Buddhist philosophy and techniques accessible to a secular Western audience. Through providing information and guidance on basic meditation practices, he demonstrates the unlimited

potential of the human mind along with our ability to transform obstacles into opportunities. He shows that meditation can exist outside of a religious and spiritual context and allow the individual to improve performance and reach personal goals.

Today stress, anxiety and a tense academic atmosphere often characterize the situation on American campuses (Robotham, Julian, 2006). Attention overload exacerbated by a ubiquitous technology that calls for our attention on multiple screens is increasingly the cause. This forces us to look at new approaches and solutions. Meditation might be just that because it uses and develops attention to address stress that results from multitasking. Including meditation techniques in the classroom would additionally open up an alternative to the otherwise mostly rational method of teaching. Arthur Zajonc is President of the Mind & Life Institute in Massachusetts as well as emeritus Professor of Physics at Amherst College. He currently directs the Center for Contemplative Mind in Society in Massachusetts and is one of the driving forces behind the movement to incorporate contemplative practice in higher education. Zajonc describes the difference between science and contemplation: “Where conventional science strives to disengage or distance itself from direct experience for the sake of objectivity, contemplative inquiry does exactly the opposite. It seeks to engage direct experience, to participate more and more fully in the phenomena of consciousness” (Zajonc, 2009). Thus, meditation can serve as a contemplative practice that promotes objectivity by allowing the individual to step aside and evaluate the situation from multiple perspectives. Hence, meditation is tailored directly to the needs of the individual student. This suggests that the relationship between meditation and academic performance might be much more direct and promising than many people would think.

Besides his work as author, teacher and master of Tibetan Buddhism, Yongey Mingyur Rinpoche oversees the Tergar Meditation Community, a global network of Buddhist meditation centers. He is known for his humorous accounts of personal experiences and their relation to modern scientific research. He has worked with neuroscientists at the Waisman Laboratory for Brain Imaging and Behavior at the University of Wisconsin, Madison, in order to promote research on the impact of meditation on brain activity. He summarizes the essence of Buddhism as follows: “The mind is the source of all experience, and by changing the direction of the mind, we can change the quality of everything we experience” (Yongey, 2007). This makes a case for including meditation in the curricula of modern universities. Changing the mind also means embracing unfamiliar ways of thinking, thus possibly enriching the learning experience with a new dimension. The mind can be trained and strengthened just like a muscle. Neglecting the existing scientific research on the benefits of meditation would mean depriving students of the opportunity to realize the full potential of their mental capacities.

Buddhism distinguishes between two main forms of meditation: *shamatha* and *vipassana*. While *shamatha* is concerned with calming the mind and developing concentration, *vipassana* is more analytical and therefore also called insight meditation. The two generally build on each other. After calming the mind, the student enters a state where he can analyze and evaluate his thought patterns, perceptions and actions. Rather than wandering through the day absentmindedly and immersed in various digital channels of communication, practitioners could act more goal-oriented, absorbing and processing the information they receive differently. Both forms of meditation can be

practiced in various ways, depending on what the student feels most comfortable with. Contrary to public thinking, training the mind through meditation does not necessarily mean sitting still for multiple hours. Depending on time and preference, dedicating five to ten minutes might be all it takes. Ultimately, it is the practitioner who decides which position and technique are the most appealing. Buddhists say that only if the body is comfortable, the mind is able to relax. In contrast to strict sitting meditation in Zen Buddhism, other forms, for example the Japanese Nichiren Buddhism, are based on chanting. Still other forms prefer walking or movement meditation such as yoga.

People who are unfamiliar with meditation often associate the term with emptiness. While emptiness is in fact the right term, it has a different meaning in Buddhism. Emptiness is the unlimited potential for anything to appear, change or disappear. Therefore, meditation does not imply the elimination of thought, but rather the recognition of thoughts, emotions, and sensations as they arise. Being aware of what is going on, both externally and internally, is called mindfulness. Thich Nhat Hanh was born in 1926 in Vietnam and enjoys worldwide recognition as Buddhist monk, poet, scholar and peace activist. He explains that the mind itself never changes; it is “like the ocean: It’s always clean and clear, no matter what it’s reflecting” (Yongey, 2007). In this clarity, every mind possesses the basic qualities of happiness, skillfulness, flexibility, intelligence and humor. However, the mind—the ocean—can be troubled or darkened by hindrances. Buddhism speaks of 84 kinds of negative emotions, of which the five central ones are hatred, desire, confusion, pride and jealousy. Humans fall victim to these moods or emotions, known as states of mind, which serve as filters or colored lenses through which we see the world. For today’s students these hindrances also

comprise all sorts of distractions, stress and pressure. They have to be overcome in order to be able to focus on an assignment.

One of the most popular Buddhist metaphors for awareness is watching a monkey swing from branch to branch in a forest. If one does not want to lose sight of the monkey, one has to constantly watch it. Recognizing all thoughts and emotions demonstrates why meditation is not always a pleasurable experience. We prefer to distract ourselves from everything that causes pain, thereby reinforcing the power of this emotion. If students encounter a problem, they often tend to simply switch to a different task rather than dealing with the difficult problem. Working on their laptops, they switch back and forth between multiple tabs running simultaneously (Parry, 2013). The results manifest themselves in prolonged task completion, superficial responses and unforced errors. However, by recognizing what happens in the mind, students would be less likely to be carried away. To say it in the words of Thich Nhat Hanh, “Meditation is not evasion; it is a serene encounter with reality” (Nhat, 1987).

When in class, students must face the problems at hand and learn to welcome challenges instead of worrying about other exams or the evaluation of academic testing. A short meditation in the beginning of class allows the student to calm down and give his undivided attention to class material. Meditation could thus provide more control over thought processes. Over time this training strengthens the mind so that when facing distractions in class, the student is more able to sustain focus and attention. The more experienced the practitioner, the more visible the effects will also become outside the classroom. Mindfulness will eventually become an everyday routine. It can help students to finish daily obligations such as homework without constantly feeling the

need to check emails or Facebook. Zajonc explains our role in both meditation and life through a metaphor. Comparing the practitioner to a sculpture made out of stone, he says, “You are at once the stubborn stone, the transforming chisel, and the artist’s guiding hands” (Zajonc, 2009). Buddhist meditation gives the practitioner the permission and opportunity to take matters into his or her hands.

Buddhism—A scientific Religion?

The growing American fascination with meditation developed out of the explosion of interest in Asian religions that started in the 1960s and 1970s (Rockefeller, 2006). Especially the younger generation experienced boredom and frustration with traditional doctrines of Christianity and Judaism. What young people wanted was change. Through revolutionary ways of thinking and acting they distanced themselves from the older generation and values such as materialism and consumerism. It was mainly an era of protest against mainstream ideas (Engler, Scheiding, 2005). Longing for something different, people turned towards traditions such as Buddhism, Hinduism and Taoism, which stood for a different worldview and the idea of freedom. America’s fast growing interest in Transcendental Meditation in the 1960s and 70s is another example (Rockefeller, 2006). The ideology and practices that were new in the 1960s are by now well established. Novices can easily access a vast pool of literature and find teachers and communities for practice and discussion. Yet, meditation remains part of many religions, which tends to make an approach from an objective and scientific point of view more difficult. However, an acknowledgement and even fascination with this ancient practice grew out of advanced technical opportunities and an increasing number of scientists working to investigate and prove the effects of meditation.

Marjorie Woollacott is a neuroscience professor at the University of Oregon and lives on both sides of the spectrum. Being both a scientist and a practicing Buddhist, she spent the last 30 years trying to scientifically prove and understand the effects of meditation and spirituality. “It’s a schizophrenic existence,” she says. Upon mentioning her practice, many colleagues roll their eyes and call her crazy. In fact, she also used to degrade meditation as irrational nonsense, but that was before she started meditating in 1976 and experienced positive effects on health and performance. Woollacott practices daily and says that science and meditation have more in common than one might think. Before dismissing meditation, skeptics should dare trying it themselves, she says.

It is important to distinguish between meditation and spirituality as a whole. While some meditators report about moments of clarification, energy flow and bliss, these experiences remain difficult to examine and explain. It is one of those things you only believe if you have experienced it yourself. However, there is common ground regarding the nature of consciousness, the concept of self and various aspects of contemplative practice in Western and Buddhist psychologies (Kelly, 2008). Most prominent in current research are the changes the brain undergoes during meditation, which manifest themselves in various modern research techniques and tools such as MRI. At the base of this research is the cooperation of Buddhist monks and Western scientists. While scientists investigate the structure and functioning of the brain, Buddhists seek to unravel the deeper secrets of the mind. For Buddhists, the brain is only the base of the mind. Thus, in addition to scientific empirical questions, Buddhists also raise philosophical questions about what the mind is, where it begins and ends, and to what extent it determines our actions and perceptions.

The communication between Western scientists and Buddhists is primarily the result of the Dalai Lama's active enthusiasm for science, which he expresses in his book "The Universe in a Single Atom."

Although my own interest in science began with curiosity about a world, foreign to me at that time, governed by technology, it was not long before the colossal significance of science for humanity as a whole dawned on me. There is no area of human life today that is not touched by the effects of science and technology... The insights of science have enriched many aspects of my own Buddhist worldview. (2005)

The Dalai Lama's collaboration with the Mind & Life Institute in Massachusetts triggered a wave of global interaction between Tibetan monastic circles and Western scientists. The non-profit organization is dedicated to exploring and fostering research and dialogue between scientific researchers and practitioners of contemplative traditions, such as Buddhism. Some scientists are simply curious; others are themselves Buddhists who seek to integrate their scientific and Buddhist worldviews. At the same time, formal science education has gradually entered the curricula of scholastic Tibetan monastic institutions. This mutual interest has led to Buddhist monks not only volunteering as research subjects, but also taking an active role in the design of the study. Over time this collaboration has led to the emergence of a field called "contemplative science," or "science of meditation." Alan Wallace is an American author who taught Buddhism, philosophy and meditation across the world and served as interpreter for multiple Buddhist scholars including the Dalai Lama. His work is dedicated to the relationship and commonalities between contemplative and scientific modes of inquiry. In his book "Contemplative Science: Where Buddhism and Neuroscience Converge," he elaborates on the origin of seemingly opposite terms.

He explains that the term contemplation is derived from the Latin term *contemplatio* and corresponds to the Greek word *theoria*. Both terms imply a revelation, clarification and manifestation of reality, directed at the pursuit of truth. Wallace refers to Webster's Ninth New Collegiate Dictionary that defines the scientific method as, "principles and procedures for the systematic pursuit of knowledge involving the recognition and formulation of a problem, the collection of data through observation and experimentation, and the formulation and testing of hypotheses" (1983). Wallace argues, "there is nothing in this definition to preclude the possibility of first-person observations of mental phenomena and their relation to the world at large" (Wallace, 2007). He argues that while history has always been opposed to a collaboration of science and contemplation, there is nothing fundamentally incompatible between the two. Instead, Wallace advocates a natural connection between science and contemplative practices such as meditation. Thupten Jinpa, a principal translator to the Dalai Lama since 1985, agrees and says what we find is "the recognition of Buddhism and science as representing two investigative traditions in a quest to gain deeper understanding of reality" (Jinpa, 2010). The efforts of scientists to investigate the relationship between meditation and brain activity have brought a scientific explanation to practitioners' improvements with regards to concentration, focus and even academic performance.

Meditation and the Brain

Multiple studies demonstrate that Buddhist meditative practices can alter brain activity in areas important for sensory, cognitive and emotional processing and thus enable the practitioner to absorb and process more information (e.g. Newberg and

Iversen, 2003; Lazar et al., 2005; Doraiswami and Xiong, 2007; Jha et al., 2007; Srinivasan and Baijal, 2007; Strickner, 2009).

Richard Davidson and Antoine Lutz at the Waisman Laboratory for Brain Imaging and Behavior at the University of Wisconsin, Madison, specifically targeted neuroplasticity, defined as brain changes that occur in response to an experience. These changes range from the growth of new connections to the creation of new neurons. The study consisted of two parts and focused on two common styles of meditation: FA, or “Focused Attention,” and OM, or “Open Monitoring” meditation. FA meditation consists of maintaining focus on a chosen object, mostly on breath, and is supposed to calm the mind. In OM meditation, the practitioner allows whatever catches his or her attention to enter awareness, without following the thoughts or judging them. Lutz and his colleagues used functional MRI, a neuroimaging technique that measures brain activity based on changes in blood flow, for their undertaking. For researching the effects of FA meditation, they alternated between presenting meditators with an external visual object and letting them rest. They found that “after extensive FA meditation training, minimal effort is necessary to sustain attentional focus,” (Davidson, Lutz, 2008) making it easier for the practitioner to resist distractions. During FA meditation in response to various sounds, expert meditators showed less activation than novices in the amygdala—an almond-shape set of neurons located deep in the brain, which plays a key role in the processing of emotions. Thus, research suggest that advanced levels of concentration can significantly decrease emotionally reactive behaviors, so that meditators remain objective and avoid mind wanderings, defined as a shift of attention from a task to unrelated concerns. Similarly, when studying in a noisy environment,

students are less likely to be distracted. Davidson and Lutz are convinced that “attention is a trainable skill that can be enhanced through the mental practice of FA meditation” (Davidson, Lutz, 2008). These results match the findings of a 2010 study by the Association for Psychological Science, which demonstrated that intensive meditation training improves vigilance, perceptual discrimination and sustained attention (MacLean, Ferrer, 2010).

The second study by Davidson and Lutz focused on OM meditation. It addressed the common problem that when presenting two stimuli T1 and T2 shortly after each other, subjects tend to “get stuck” on the first stimulus. Additionally, they are unable to process T2. This is the case when students try to listen to a lecture while being active on their laptops. The study found that after three months of intensive OM meditation training, subjects allocated fewer brain resources to the first target and were more able to shift their attention from one stimulus to the next. The researchers concluded, “meditation might help to reduce neural noise and so enhance signal-to-noise ratios in certain types of tasks... so that training in meditation may facilitate more rapid learning” (Davidson, Lutz, 2008). In a 2012 study, David Levy, a computer scientist and professor at the University of Washington, also targeted the effects of FA and OM meditation. According to his findings, “FA training appears to strengthen the ability to stay focused and ignore distracting information, while OM training appears to strengthen the ability to attend to a succession of stimuli without being overly drawn in by any one of them” (Levy, 2012). This in turn might be of great importance considering the abundance of information and stimuli students try to simultaneously attend to in the classroom. Further studies demonstrated that practitioners improved

“voluntary attention” (MacLean, Ferrer, 2010). These findings suggest that more control over thoughts running through the head will in turn improve accuracy and efficiency.

Michael D. Mrazek from the Department of Psychological and Brain Sciences at the University of California conducted a two-week mindfulness training with graduate students. He found improvements in working memory capacity and a decrease in mind wandering, which allowed his students to perform better on Graduate Record Examinations (GRE), a standardized admissions test for many universities in the United States. Students performed better on reading comprehension and retained more information (Mrazek, 2012). Researchers from the University in Freiburg, Germany, support this evaluation. “Our data suggest an enhanced capacity for selective attention after intensive meditation training. Behavioral measurements indicate that the ability to focus on the desired percept while suppressing the undesired one improved during the course of the meditation training” (Halsband, Mueller, 2009).

In a 2003 study, Richard Davidson and the founder of MBSR, Jon Kabat-Zinn, examined alterations in the brain produced by mindfulness meditation. They started an eight-week clinical training program in mindfulness meditation in a work environment with healthy employees. They found a significant increase in the left-sided anterior activation of the brain, which is associated with reductions in anxiety and better adaptation to stressful events and provocation. A study with Chinese undergraduate students verified Davidson and Kabat-Zinn’s findings and demonstrated how these changes can be advantageous for students. A daily 20-minute practice of mindfulness meditation enabled students to do better on attention tests and demonstrate lower levels of anxiety, depression, anger and fatigue. They also showed a significant decrease in

stress-related cortisol (Tang, Ma, Wang, 2007).

The impact on body chemistry and formation shows how far reaching the effects of meditation can be. Lazar et al. (2005) found that brain regions associated with attention and sensory processing were thicker in 20 meditation participants. These findings suggest that meditation might be a way to counteract cortical thinning and associated sensory and cognitive decline that occurs in the normal aging process. Meditation might serve as remedy to another alarming problem. According to new data from the Federal Centers for Disease Control and Prevention, attention deficit hyperactivity disorder (ADHD) is now seen in 11 per cent of U.S. children, a 41 per cent rise over the past decade. While this development is also the result of newer and improved methods of documentation, the increase is still significant. Research suggests that meditative practice may help counteract ADHD symptoms (Woollacott, 2007; Zylowska et al., 2008).

Chapter II—Technology

No Time to Think

During his guest lecture at the University of Oregon in Eugene in May 2013, David Levy discussed how the combination of digital technology and a fast-paced lifestyle impacts education. He predicts that this situation will ultimately pave the way towards a renaissance of contemplative practice once people realize the need to slow down. Levy argues that the Industrial Revolution triggered an accelerated lifestyle and an economic system based on increasing production and consumption. This in turn promoted what he calls a “more, faster, better” attitude and philosophy. This development reached a point where everything has become part of the economic speedup. Levy refers to the Norwegian anthropologist Thomas Hylland Eriksen and his distinction between fast and slow time activities: “When fast and slow time meet, fast time wins” (Eriksen, 2001). Fast time activities are those that appear to be more productive, efficient and urgent, so that slow and long time activities lose out. Digital technologies play a crucial role because they are designed to enable and facilitate such a high-speed life. In contrast, thinking, Levy argues, is a slow time activity that you cannot speed up or schedule. “One of the problems with thinking is that when you are thinking it may not look like work at all,” Levy says. “It may look like taking a walk or having a conversation or even like closing your eyes and taking a nap.” According to Levy, “all of these things do not fit comfortably into our industrial era understanding of the factory machine, which is supposed to be always on and always accelerating.”

The modern university is a place where the acceleration mode becomes visible. It leads to concerns about the relationship between high-tech pedagogy and academic

success. It is no longer just about using one technology, but about using all of them, all the time. In 2009, the Educause Center for Applied Research (ECAR) performed a study on undergraduate students and information technology. Working with students from 39 institutions across America, they found that many students choose their major depending on their perceived skills in certain IT applications and their reported preference for technology in courses (Smith, Salaway, 2009). Things have changed when “the Apple iPod has become the iconic symbol of the 21st century collegiate learner, and creating audio recordings of academic lectures has become accepted and widespread within US higher education” (Smith, Salaway, 2009). Given the central role of the Internet, several experts even express their concern related to a possible shift away from on-campus life and towards online courses (Anderson, Boyles, 2012).

However, for most students, both this lifestyle and way of thinking are nothing but the norm. According to a study by the Kaiser Family Foundation, youth between 8 and 18 years spend an average of 7.5 hours a day using different electronic devices, such as listening to music, watching TV and using computers. Looking only at 15 to 18-year-olds, the number even reaches 12 hours a day (Rideout, Foehr, Roberts, 2010). More and more professionals are worried that the omnipresence of digital devices is well on its way to replace our thinking and problem solving abilities (Thurman, 2006).

Media Multitasking

The last two decades brought the development of personal devices to a new level. In 2009, nearly 8 out of 10 (79 per cent) freshmen in the U.S. owned a laptop that was one year old or less (Smith, Salaway, 2009). The ability to receive information on the go and communicate with anybody at any time is revolutionary. Nevertheless,

through their omnipresence, new media have also become a distraction. In modern universities technology's effect is ambiguous, as it both facilitates and hinders learning. "Today, the business of higher education seems to some as susceptible to tech disruption as other information-centric industries such as the news media, magazines and journals, encyclopedias, music, motion pictures, and television" (Anderson, Boyles, 2012). The 2010 documentary "Digital Nation" addresses this very problem. We see the undergraduate student Eliza typing on her phone. "I have a few friends who, if they hear the word BlackBerry, they think of me," she says. "Like, I am never off of it. It is glued to me. When it's more than arm's-length from me, I start to get panicky. It's very disconcerting" (Digital Nation, 2010). Eliza is not a single case, and media addiction is not limited to cell phones. Students are used to media multitasking. In the ECAR study, the top Internet activities students performed from handheld devices were checking information such as news, weather and sports (76.7 per cent), using email (75.1 per cent), social networking websites (62.5 per cent) and using maps, getting directions, or planning routes (58.7 per cent). Students reported using two or more media concurrently almost 30 per cent of the time (Jankiewicz, Boston, 2010). Drawing conclusions from 30,616 students from 115 colleges and universities, the study is representative of the nationwide situation.

This handling of the media has strong influences not only on what, but also on how students learn. Constantly skipping through multiple media channels, it becomes hard to maintain focus for an extended time period. As Nicholas Carr discusses in his 2008 article, "Is Google making us stupid?" reading an in-depth article, let alone a book, is a struggle because our concentration starts drifting after a few paragraphs.

Media do not only provide us with the material to think about, they also influence how we think. Carr describes the Internet as an external force that tinkers with the brain.

What the Net seems to be doing is chipping away my capacity for concentration and contemplation. My mind now expects to take in information the way the Net distributes it: in a swiftly moving stream of particles. Once I was a scuba diver in the sea of words. Now I zip along the surface like a guy on a Jet Ski (Carr, 2008).

He goes on to explain that the Internet replaces and diminishes our intellectual abilities.

As Carr states, “The Internet is becoming our map and our clock, our printing press and our typewriter, our calculator and our telephone, and our radio and TV” (Carr, 2008).

American dramatist Richard Foreman develops this idea further and says that we have become “pancake people—spread wide and thin as we connect with that vast network of information accessed by the mere touch of a button” (Foreman, 2005). A life without the Internet appears inconceivable.

Clifford Nass is professor at Stanford University and Director of the Communication between Humans and Interactive Media Lab. In his 2010 essay “Sweet talking your computer,” he argues, “We may be reaching the point at which our technologies are actually more socially effective than our colleagues.” He conducted multiple studies that demonstrated that people use the same social rules and expectations when interacting with computers and humans. They call computers by nicknames, yell at them and desperately beg them to cooperate.

The impact of media multitasking on learning is immense, since the abundance of digital stimuli makes it almost impossible for students not to be distracted. According to writer and communications consultant Claudia Wallis, attention is “the scarcest resource of the Information Age: it is pulled, stretched, split, and scattered” (Wallis,

2010). Sherry Turkle has been teaching at Massachusetts Institute of Technology (MIT) for over thirty years. Witnessing her students' learning habits makes her worried about their career prospects.

I teach the most brilliant students in the world. But they have done themselves a disservice by drinking the Kool-Aid and believing that a multitasking learning environment will serve their best purposes. There are just some things that are not amenable to being thought about in conjunction with 15 other things (Digital Nation, 2010).

She explains the difficult situation professors find themselves in when constantly having to fight for attention against their digital competitors.

Every professor who looks out onto a sea of students these days knows there's email, Facebook, Googling me, Googling them, Googling their next-door neighbor... It even changes how teachers teach because now the pressure is on teaching kind of scintillating PowerPoint things that will distract them from the Web (Digital Nation, 2010).

David Jones, associate professor at MIT, drew similar conclusions and says, "You can test how well they're paying attention in lecture and you can test how well they're absorbing information from readings that you assign. And I don't think they're doing either of those things well" (Digital Nation, 2010). Many students admit that there is a problem. In the ECAR study on information technology, 50.5 per cent of the respondents admitted that mobile phones cause distractions and should therefore be forbidden in the classroom.

It is especially the use of laptops in the classroom that concerns academics and researchers. On the one hand, laptops assist learning through facilitating active approaches to teaching. Students use software programs, take notes and access additional resources and web-based activities (Driver, 2002). Thus, laptops can increase

satisfaction, motivation and engagement among students (Fried, 2008). On the other hand, laptops in class promote multitasking and thus turn into a distraction. A recent psychological study found that students who multitask on a laptop during a lecture scored lower on a test compared to those who did not multitask. In addition, participants who were in direct view of a multitasking peer scored 17 per cent lower on a post-lecture comprehension test (Sana, Weston, Cepeda, 2012). Multiple studies show that students admit using the laptop for non-academic purposes, such as playing games, surfing the web or watching movies (Bugeja, 2007; Driver, 2002). Engaging in multiple activities while studying reduces not only the quality of learning, but also inhibits the long-term storage of the information (Wallis, 2010). This is significant given that students multitask approximately 42 per cent of class time (Kraushaar, Novak, 2010).

Professor Ulrich Mayr from the University of Oregon explains the difference between active and passive multitasking. The human brain can only fully concentrate on one thing at a time. When driving a car while listening to the radio, the knowledge of how to drive is stored deep in our brain, which allows us to execute the action without consciously making decisions about every step in the process. This is called passive multitasking. However, absorbing and processing lecture material requires the individual's undivided attention. When the student simultaneously formulates an email, he engages in active multitasking. The primary task is attending the lecture and taking notes, the secondary task consists of completing unrelated online tasks. Performance decrements as a result of two tasks competing for the same limited attentional resources. Instead of doing two things simultaneously, the brain switches back and forth between academic and non-academic tasks (Fried, 2008). This switching costs speed

and accuracy because there is always some “dead time” involved during which the brain reconfigures itself. Adding a second task means that attention must be divided, which is why the processing of incoming information becomes fragmented and the quantity and quality of information stored is reduced (Pashler, 1994). “If a student listens to the professor with one ear while surfing Facebook, I’m 100 per cent certain that that critical process of creating new knowledge structures is not happening in the student’s head,” says Mayr (The Chronicle, 2013). Clifford Nass agrees with this evaluation. “It turns out multitaskers are terrible at every aspect of multitasking. They get distracted constantly. Their memory is very disorganized. Recent work we’ve done suggests they’re worse at analytic reasoning. We worry that it may be creating people who are unable to think well and clearly” (Digital Nation, 2010).

Chapter III—Bridging the Gap

Education at a Crossroads

The combination of progress in technology and educational systems as a whole should put students in the best position to prepare for a career and to get the most out of their education. However, some concern and dissatisfaction hang in the air.

Our scientific knowledge of how the world works has never been stronger, but our ability to use it to transform our lives to create greater personal and social harmony remains relatively weak. We have become the masters of third-person scientific investigation, but we are novices in the arts of critical first-person scientific investigation. We have never known more about how the mind works, yet our ability to apply this knowledge to our own experience has not been correspondingly developed (Roth, 2006).

Critics argue that contemporary education only emphasizes rationality through calculation, analysis, observation and measurement. If a student struggles there is most likely some sort of technology available that provides a remedy. Writing papers for example has become easier with an infinite online data universe only a few clicks away. Professor Thomas Wheeler teaches Journalism at the University of Oregon in Eugene and talks about his experience with term papers. “28 out of 30 papers were almost identical,” he says. “I am sure the students did not cheat, but they all relied on the first source that came up on Google.” Many students never learn to engage with what they read and write on a deeper level. Instead of spending time going through books in the library, they can copy and paste the content of various online sources. They do not even have to worry about grammar or spelling, since spell checkers do it for them, or at least claim to do so. Journalism professors are concerned. “They aspire to be professional writers, but many simply do not know how to write,” says Wheeler. “Writing is feeling,

a form of art, and the computer doesn't do that for you." Wheeler alludes to writing being a slow time activity that requires the writer to dig deeper and look beyond the surface. We find that the key to creative writing and storytelling lies in the balance of slow and fast activities and the combination of rational scientific research, observation and reflection.

Wheeler is not alone with his concerns regarding performance. As Harold Roth, professor at Brown University, says, "We observe, analyze, record, and discuss a whole variety of subjects at a distance, as something 'out there,' as if they were solely objects and our own subjectivity in viewing them does not exist" (Roth, 2006). While complaints about the lazy student increase, the question becomes to what extent this is the student's choice and also whether he or she is encouraged to work differently. Professor Levy points at our economically driven society. During his last eight years working as professor he began asking himself whether universities should not be leading the culture rather than following it. "It looks to me like universities are caught up in the same acceleration and concern for production," Levy says. To him even a resume is nothing more than an Industrial era's document of one's productivity. The only problem is that groups of people are not machines, he says, and this creates stress and pressure. Thus, students need more time and encouragement to do their work thoroughly as well as to learn how to use the time they have at their disposal more efficiently. This would in turn reduce stress levels and increase performance.

Students and stress

The Oxford English Dictionary defines stress as, “A state of mental or emotional strain or tension resulting from adverse or demanding circumstances.” Stress is a body’s natural protection mechanism and can be healthy when it serves to increase motivation and concentration. However, problems occur when it exceeds normal levels and causes panic and anxiety. Thus, the issue is not stress per se, but the reaction it triggers.

The university is a place where demanding circumstances accumulate and often overwhelm the student. There is evidence that stress and anxiety can hamper cognitive functioning and adversely affect academic performance (Eysenck, 1996; Hill, 1984; Keogh, Bond, & Flaxman, 2006). Stress “handicaps our abilities for learning, for holding information in working memory, for reacting flexibly and creatively, for focusing attention at will, and for planning and organizing effectively” (Goleman, 2006). The reasons causing this stress are manifold: financial pressure, part-time jobs, examinations, time demands, changes in sleeping and eating habits, new responsibilities, increased workload, career decisions, fear of failure and parental pressure (Schafer, 1996; Aherne, 2001; Hardy, 2003). The American College Health Association’s 2006 survey of college students showed that the greatest health obstacle to college students’ academic performance was academic stress. Evaluating the responses from 97,357 college students, they found that for 32 per cent of the participants academic stress had resulted in an incomplete, a dropped course or a lower grade. According to a 2013 article in the American Journal of Health Studies, anxiety, ineffective time management and a lack of satisfying activities outside of academia are strong predictors of academic stress (Misra, McKean, 2013). The prospect of taking an

exam is often worse than the exam itself, as the anxiety associated with the test creates physiological and emotional reactions (Gadzella et al., 1998). Reduction in academic performance can cause a continuous downward spiral that transcends the educational realm. The inability to perform can cause frustration, anxiety and even depression (Misra et al., 2000). Many victims of stress deny their problem because it could be considered a weakness in today's society: "Students, in general, experience higher stress due to pressure and self-imposed stress as compared to changes, conflict, and frustration" (Misra, McKean, 2013). The Journal of Further and Higher Education warns that this intensifies the pressure on the student and eventually impacts motivation and self-esteem (Robotham and Julian, 2006).

Self-imposed stress can be alleviated through the adoption of a different mindset. The American Journal of Health Studies recommends several methods to reduce stress, including effective time management, social support, positive reappraisal and leisure activities (Misra, McKean, 2013). However, the potential of meditation to both reduce stress and promote the adoption of a different mindset has so far been underestimated (Tang, Ma, Wang, 2007). Meditation could be beneficial in higher education on various levels, including the management of stress and the improvement of concentration, attention and comprehension. This raises the question why a reluctance to incorporate meditation in education often persists.

Difficulties of Implementation

Many institutions remain hesitant when it comes to implementing contemplative practices such as meditation because they are often perceived as less academic and therefore less valid (Holland, 2006). This point of view reflects the "more, faster,

better” mode described earlier. Providing space and time to relax and contemplate might mean losing time that could be used to proceed with teaching and learning contents. This alludes to the difficulty that the results of meditation are not always quantifiable. In his essay, “Charting Future Terrain within Higher Education,” Ed Sarath from the University of Michigan tries to counter this argument: “Even though the focus of meditation may appear to be a temporary retreat from daily activities, which is sometimes misunderstood as an escape from life, the underlying purpose of meditation is for one to be able to engage in life with more passion, creativity, and dynamism” (Sarath, 2006).

Another problem is related to expertise, since teachers and professors must be able to give advice and instructions. While there are multiple fellowships that train teachers in contemplative practice, not all professors are qualified and others simply lack the opportunity to look further into this subject. However, no extended training is necessary to be able to offer short meditation sessions during class time. The idea here is not to teach a class on contemplative practice. Instead, the professor must only be willing to provide the students with some time, space and a selection of exercises. As a result, the professor allows the students to put themselves in the best mental position for the work ahead, so that “students are given both a flexible, personal space for the first-person inquiry, yet also third-person frameworks that integrate that experience within the overall educational fabric” (Sarath, 2006). If, however, there was a desire to expand the set of basic exercises, universities could additionally reach out to external community resources, find other groups of practitioners, or establish an affiliation with a local meditation center.

The Separation of Church and State

The biggest impediment to the implementation of meditation in universities remains its affiliation with various religions. Yet, there are multiple arguments counteracting this point of view. Students could be informed prior to enrollment that meditation is part of the course, making their participation voluntary. In one model, participation in the practice is voluntary. Meditation could also not be a graded assignment, but rather a chance to approach course challenges in a different way.

Tobin Hart is associate professor of psychology at the University of West Georgia. His research deals with consciousness, spirituality, psychotherapy and education. Hart does not only clearly distinguish between contemplative practice and religion, but also considers it a university's duty to provide students with the best tool kit for success.

Inviting the contemplative simply includes the natural human capacity for knowing through silence, looking inward, pondering deeply, beholding, witnessing the contents of our consciousness, and so forth. These approaches cultivate an inner technology of knowing and thereby a technology of learning and pedagogy without any imposition of religious doctrine whatsoever. If we knew that particular and readily available activities would increase concentration, learning, wellbeing, and social and emotional growth and catalyze transformative learning, we would be cheating our students to exclude it (Hart, 2004).

Other experts stress that while playing a central role in many religions, meditation can very well exist outside of this context. Harold Roth asks, "Why not allow [students] to get some first-hand experience of a religious practice—such as meditation in a secular context—in which the need to believe is removed, in which all they need is to be willing to conduct simple observations in the only laboratory that we carry with us wherever we go: our own consciousness?" (Roth, 2006) Instead of denying any

religious background of meditation, institutions could recognize and appreciate this origin and then apply practices in a secular way. Robert Thurman is a former Buddhist monk and closely associated with the Dalai Lama. As professor of Indo-Tibetan Buddhist Studies at Columbia University, he has been instrumental in translating Buddhism for a Western audience.

It is only natural that religion should be regarded with suspicion by the academy. However, without the assistance of religion's deepest disciplines, contemplative and intellectual, the liberal arts and sciences are effectively prevented from becoming liberating arts and sciences.... Although no particular religion could, or should, dominate the academy again, the moral, psychological, contemplative and philosophical disciplines embedded within various religions must be made available to faculty and students if education is to go beyond being merely informative and become transformative (Thurman, 2006).

Thus, as long as we use universally acceptable language and exercises that are designed to improve attention, concentration and memory capacity, build self-confidence and reduce stress, meditation could serve as a natural tool that promotes performance and enhances the learning experience. Thurman states, "The Buddhist tradition should be viewed essentially as an educational tradition. In its essence and beginnings, it is not too religious in the usual sense of the word. Its goals are rather liberative and evolutionary" (Thurman, 2006). While using traditional routines, both methods and goals are secular and free from any spiritual ideals.

Greek and Roman Heritage

Rather than a novelty, contemplative practices are a rediscovery. Professor Levy explains the role that Roman and Greek schools still play in our educational system. "We salute Greece and Rome as our inheritance, reflected in campus architecture and the texts we read in class," he says. "Even the idea of the liberal arts, the free arts, is a

reference back to ancient Greece and the idea that the free man was entitled to a certain kind of leisure to study, do art, and reflect.” Despite recognizing these concepts, “we haven’t realized that contemplative practices, prospectus and pedagogy were a central part of Greek and Roman philosophy and learning,” Levy says. He explains that philosophy was not simply a theoretical construct, but a method for training people to look at the world from multiple perspectives. In order to do so, classes included reading exercises, meditations, examinations of conscience and the contemplation of nature.

A Play on Words

Many proponents of meditation in education are convinced that its implementation is only a matter of time, referring to the popularity and status yoga has gained in our society. In Buddhism and other traditions, yoga plays a key role as a form of moving meditation. However, we have come to see yoga as a secular fitness class designed to improve the condition of body and mind. Yet, several public schools still remain hesitant to include yoga in the curriculum. Encinitas, a small town near San Diego, has one of the highest numbers of yoga classes and practitioners per capita nationwide. Yet, the practice of yoga in public schools alarmed both parents and a Christian organization, seeing yoga as a form of religious indoctrination. The result of this discussion is an ongoing lawsuit. The disagreement in Encinitas is only one of many examples that fueled the request to simply alter the name. In his article, “Yoga Is Religious, Only It’s Not,” Philip Goldberg suggests to call yoga “stretch time” in order to prevent further arguments (Goldberg, 2013). Tara Guber teaches at a public elementary school in Aspen, Colorado. When she suggested teaching yoga, Christian fundamentalists as well as parents were outraged and argued that yoga’s Hindu roots are

opposed to Christian teachings. Thus, Guber crafted a “modern” curriculum free from any religious associations. Yogic panting is now called “bunny breathing,” and meditation became “time in.” Today more than 100 schools in 26 states have adopted Guber’s “modified” yoga education. The question arises whether resistance on campuses would diminish if “meditation” were substituted for “concentration practice.”

Contemplative Studies

The efforts to bring meditation and other contemplative practices back to the classroom are summarized under the umbrella “Contemplative Studies.” Tobin Hart describes contemplation as a way “to quiet and shift the habitual chatter of the mind to cultivate a capacity for deepened awareness, concentration and insight” (Hart, 2004). Contemplative practices, including meditation, emerged out of a rich history that has endured for thousands of years in Buddhism, Hinduism and Christianity. Besides meditation, they include yoga, dance, visualization, storytelling and volunteering. Hart is well aware of the fact that introducing contemplative practices has been difficult because it may appear to interfere with the separation of church and state. He argues that contemplative practices are legitimate if they fulfill and provide two rationales:

- a) Evidence that contemplation can address the very practical concerns of contemporary education
- b) A range of simple, secular methods that can be adapted to various classroom situations

Hart argues that contemplation addresses the concerns of contemporary education by promoting performance, character and depth. As discussed in the section about

meditation and the brain, meditation yields improved concentration, perceptual acuity, a drop in anxiety and stress symptoms and more effective performance in a broad range of domains from sports and academic test taking to creativity. Character is reflected in social and emotional management, civility and compassion. Finally, depth means looking beyond good grades. It is the ability to apply memorized concepts and theories outside the classroom. Taken together, these practices are designed to form individuals who are satisfied with themselves and produce better results.

Although this is not the focus of my project, I would like to point out the continuously growing number of non-profit groups that support Hart's efforts in higher education. These organizations do not only target academic improvements, but also stress the power of present moment awareness and the intrinsic value of the experience. One of the most influential organizations in the field is the Center for Contemplative Mind in Society in Northampton, MA, founded it 1997. The multidisciplinary professional association with a membership of educators, scholars and administrators promotes the implementation of contemplative practices in higher education. Towards the end of 2013, current director Daniel Barbezat and founding director Mirabai Bush will publish a book on the uses of contemplative practices in college and university classrooms as pioneered by recipients of Contemplative Practice Fellowships—a program that, for ten years, supported more than 150 professors in developing courses with a contemplative component. It will be the first book that provides clear guidelines and sets of exercises on meditation and other practices, which teachers can follow and use to structure their classes.

Experience in the Field

I would like to give two examples of professors who have experience in the application of meditation in the classroom. In 2004, Daniel Holland taught two experiential courses in mindfulness in radically different environments and conditions: a metropolitan university in Little Rock, Arkansas, and a school for applied sciences in Bad Gleichenberg, Austria. In both cases his course was a dramatic departure from the typical curriculum and in both cases it was a huge success. In Arkansas enrollment in the course was filled in 48 hours and no student ever dropped. Holland has recognized the importance of different methods. “It is necessary to offer a variety of activities with the potential of fostering mindfulness and allow each student to determine for him-or herself which is most accessible” (Holland, 2006). The syllabi included sitting meditation, guided body scan, walking meditation, mindful movement meditation, classroom discussion on experiences as well as readings in mindfulness practices to provide students with the necessary background. Both universities now allow mindfulness meditation in their curricula.

The other example I would like to direct the reader’s attention to is the work of David Levy, who is considered a pioneer in the field. Levy holds a PhD in computer science from Stanford University and worked at Xerox Palo Alto Research Center for fifteen years. His book, “Scrolling Forward: Making Sense of Documents in the Digital Age,” received nationwide attention and recognition. I was fortunate enough both to attend some of his lectures as well as to meet him in person to talk about his endeavors and experiences. Levy tries to use meditation as a way to teach students a more responsible and effective approach to technology. He knows that digital technologies

are part of the acceleration process, but advocates that they can also be used in more contemplative ways that strengthen and broaden mental capacities.

In 2012, Levy and his colleagues conducted a research experiment on the relationship between mindfulness meditation training and multitasking. They worked with a group of human resource managers, both with and without a background in meditation. Both groups completed tasks in a highly stressful environment, including scheduling meetings amid interruptions and distractions such as e-mail, phone calls, and knocks on the door. The results were profound. Subjects with meditation training were less fragmented in their work, switched tasks less frequently and spent more time on a singular task. In addition, they demonstrated less stress and better memory. The study further corroborated previous findings in terms of the power of meditation to improve emotional regulation and attention (Levy, 2012). Levy recognized the value these results have for students. Besides constant technological distraction, many students juggle a busy class schedule with work and other extracurricular activities.

Over the course of the last 20 years, Levy worked on applying his findings and experiences in the classroom. Levy's current class is one of a kind, called "Information and Contemplation." In order to enroll into the class, each student has to talk to him individually and explain his or her motivation for taking this class. "This is not just some class you take on the side, finish your homework in twenty minutes and be done with," Levy says. In addition to every class beginning with a 15-minute meditation exercise, Levy particularly expects students to observe their use of technology. He asks them to pay attention to how much time they spend with different tools and how this in turn affects their mood and fragments their attention. Levy's methods are secular, but

inspired by Buddhist tradition. Students perform e-mail meditation, film themselves during multitasking and write reports and guidelines in response to their experiences. The students are surprised when looking at their own behavior. Meran Hill is a student in Levy's class and says:

It seems so simple to just observe how you do e-mail or observe how you multitask between two things. But when you take a video of yourself doing it and then review it later, you notice all kinds of weird habits you have. We're really unconscious when we use technology. This class is helping bring that consciousness back—of just how zoned out I am (cited in *The Chronicle*, 2013).

Hill also noticed her isolation. "I was involved in all these cool social circles on Facebook, but it was so lonely," she says. "I get all of my social energy out of a computer" (cited in *The Chronicle*, 2013). Levy hopes to fill this void and use meditation as a way to introduce students to a healthier interaction with technology. "I discovered that students hunger for this more intimate participation and permission," he says. "If you give them the opportunity to actually feel what it is like to be multitasking or doing e-mail, Facebook or Twitter, they come to clear ideas about how to do it better." Levy's experience demonstrates the potential of meditation to not only develop attention and concentration, but also to improve students' use of digital devices.

Conclusion

This thesis has demonstrated the possibility of bridging fast and slow activities, acceleration and contemplation. Students cannot simply free themselves from busy schedules and overwhelming information technology; however, they do have some choice with regards to their engagement with and response to this lifestyle. Meditation gives them an opportunity to make life and work a little easier.

In “Meditation as Contemplative Inquiry,” Zajonc cites the words of the Trappist monk Thomas Merton: “To allow oneself to be carried away by a multitude of conflicting concerns, to surrender to too many demands, to commit to too many projects, to want to help everyone in everything is in itself to succumb to the violence of our times” (Zajonc, 2009). I recognized the truth of this statement. The need for finding an equilibrium and space to let go is urgent. As advised by many meditation teachers, I began observing my thought and decision making patterns. I started meditating on my own, taking meditation classes at the university and visiting Buddhist temples both in Eugene as well as across Europe and in Vancouver BC. It was a fascinating experience to meet people from various backgrounds and learn how meditation has improved and transformed their lives. I took their advice on meditation techniques and gradually found what works best for me. Meditation is not easy and can be frustrating at times. However, realizing these difficulties, yet maintaining the discipline to keep trying builds self-confidence. I noticed the impact meditation has on my ability to sustain concentration. During difficult tennis matches I have always been susceptible to being carried away and distracted by my emotions. Meditation has helped to be more focused

and thus achieve better results. I made similar experiences with regards to my schoolwork. Although it is still hard, I try to only do one thing at a time. Doing homework on my laptop, I only open the documents necessary for the assignment. Over time the urge to check my phone, Facebook or e-mail diminished. In addition, my ability to sustain concentration for longer periods of time improved. Whenever I notice that my mind starts to wander, I take a few minutes to sit back and meditate before returning to the assignment.

Meditation can not only improve students' performance, but it can also broaden their perspectives and make them more receptive to new ways of thinking. Arthur Zajonc summarizes the essence of meditation, stating, "It is a schooling for experiencing life from the inside...We need to bring cognition—normally associated with the rapidity of thinking—to the more measured tempo of heartbeat and breath" (Zajonc, 2009). I hope that this work has shown how much of an impact a few minutes of meditation in the beginning of class can have on academic performance. Despite its religious origin, meditation complements the traditional goals of the academy and can be a way to connect the slow and the fast life.

Appendix

Examples of Classroom Exercises

Meditation Posture

Masters of all forms of Buddhism explain that there is no such thing as one right meditation posture. Many people picture the typical lotus position when they hear the word meditation. However, this posture is very complex and requires a great deal of flexibility. Like in every other sitting meditation position, back and neck are straight so that the chest can expand and the lungs can take in the maximum amount of oxygen. The practitioner assumes a cross-legged position with knees touching the ground. While many Buddhists recommend this posture, they also point out that most important remains the intention and outcome of the meditation, which is distorted if the student feels discomfort or even pain (Yongey, 2007). For many meditators it takes a long time to find the most comfortable position. Posture is crucial in all forms of meditation because it is directly connected to emotions and outcome. Sitting in an uncomfortable position can impact the breathing and trigger feelings of tiredness and exhaustion. A comfortable and upright posture generates relaxation and alertness. Thus, good posture is a precondition to a lasting strengthening of the mind.

Meditation can be practiced in different positions and with the help of various tools such as chairs, cushions and benches. Many people fight against falling asleep, a natural consequence of the body starting to relax. Over time the body will get used to the practice and it becomes easier to maintain focus. Yet, some prefer to meditate with their eyes open to prevent fatigue and increase attention and awareness. After all there is not just one solution and every student has to find and create his or her comfort zone.

No matter which position appears most comfortable, a few guidelines should be kept in mind:

- The spine should be relaxed and upright, following its natural tendency to be slightly hollowed
- The shoulders should be relaxed, and slightly rolled back and down
- The hands should be supported, either resting on a cushion or on the lap, so that the arms are relaxed
- The head should be balanced evenly, with the chin slightly tucked in. The back of the neck should be relaxed, long, and open
- The face should be relaxed, with the eyes and jaw relaxed and the tongue touching the back of the teeth

In the following I provide examples of different forms of meditation. All of these exercises can be performed in the beginning of class when some students are still busy catching up with their neighbors, others are dealing with their smartphones or laptops, and again others are simply exhausted from a busy day. This clutter is highly distracting and impacts the degree of attention brought to class material. Starting class with a meditative exercise creates a transitory phase during which students can refocus and bring their attention and awareness to the classroom. Practicing with a group of students renders the additional advantage of using group dynamics. For beginners group practice often makes regular meditation easier. “The presence of others and the efforts they are making seem to resonate with our own effort, enhancing and compensating for the meagerness of our resources” (Zajonc, 2009). By providing the mass of students with a set of ideas and options to choose from, the individual student will develop the most adequate and enjoyable technique and set individual goals. The professor can decide

whether to dim or turn off the light for the duration of the exercise. He might also ring a bell at the beginning and end of the meditation session to give the student a chance to slowly bring the attention back to the classroom. This is a moment of transition from deep contemplation to active participation and engagement with course material. While none of the following exercises requires oral guidance, it might be easier for students new to meditation to have this additional support. Therefore, I included different examples to demonstrate how a professor could lead a class in meditation.

Meditation on Breath

This is one of the most popular forms, partially because it does not require an external object or condition as focus of the meditation. It is a form of Focused Attention (FA) meditation. For beginners it is important not to meditate for too long in order to avoid boredom and frustration. This meditation allows students to calm down, collect their thoughts and mentally prepare to absorb and process the information they are about to receive. In addition, it improves their ability to concentrate and resist distractions.

Sit comfortably and close your eyes. Take a few moments to “simply be.” Notice whatever is being experienced in the moment — sounds, physical sensations, thoughts, feelings — without trying to do anything about it. Continue like this a little while, allowing yourself to settle down. Now bring the attention to the breath. Simply notice the breath as it moves in and out as the body inhales and exhales. Notice how the breath moves in and out automatically, effortlessly. Don’t try to manipulate it in any way. Notice all the details of the experience of breathing — the feeling of the air moving in

and out of the nose, the way the body moves as it breathes, etc. The mind will wander away from the breath — that's fine, it doesn't matter. That's a part of the meditation! When you notice that you are no longer observing the breath, easily bring your attention back to it. Let all of your experiences — thoughts, emotions, bodily sensations — come and go in the background of your awareness of the breath. Notice how all of your experiences — thoughts, emotions, bodily sensations, awareness of sounds and smells — come automatically and effortlessly like the breath. In time, you can become aware of the tendencies of your mind. You will see how it resists certain experiences and tries to hold onto others. The natural settling down of the mind allows you to notice these underlying tendencies and creates the possibility to let them go. If you experience a resistance to what is occurring, an attempt to change what is happening, a tendency to hold on to some experience — let it go. (Maddux)

Mindfulness Meditation

As explained above, mindfulness is a key concept in Buddhism. It is a form of Open Monitoring (OM) meditation. Instead of focusing on a specific object, the idea is to notice thoughts coming up without following them. Although it sounds easy, students often find this to be the hardest form of meditation. They recognize the abundance of thoughts running through their heads that they otherwise never pay attention to. It teaches students to resist distractions and to control their thoughts and sensations. Reducing the number of thoughts fighting for attention allows the practitioner to devote more attention and focus on the assigned task and, consequently, to be more productive.

This is an example from Steven Smith, a guiding teacher of the Insight Meditation Society and advisor for the Center for Contemplative Mind in Society.

Begin by sitting in a chair or on a cushion on the floor, with your back straight. Relax into your sitting posture with a few deep breaths. Allow the body and mind to become utterly relaxed while remaining very alert and attentive to the present moment. Feel the areas of your body that are tense, and the areas that are relaxing. Just let the body follow its own natural law. Do not try to force or fix anything. Let your mind be soft, and allow a spacious awareness to wash gently through your body. Simply feel the sensations of sitting, sidestepping with your mind the tendency to image your body, to interpret, to define or think about it. Just let such thoughts and images come and go without being bothered by them, and attune to the bare sensations of sitting.

Feel your body with an awareness that arises from within your body, not from your head. Awareness of the body anchors your attention in the present moment. Gently sweep your awareness through your body, feeling the sensations with no agenda, no goal. Allow your body to anchor awareness in the present moment by just staying mindful of these sensations.

After some time, shift your awareness to the field of sound vibrations. Awareness of sounds creates openness, spaciousness, and receptivity in the mind. Be aware of both the pure sound vibration as well as the space or silence between the sounds. As with body sensations incline your awareness away from the definition of the sound, or thoughts about the sound, and simply attune to the sound just as it is. After some minutes of awareness of body and sounds, bring your attention to your natural

breathing process. Locate the area where the breath is most clear and let awareness lightly rest there. For some it is the sensation of the rising and falling of the abdomen. For others it may be the sensations experienced at the nostrils with the inhalation and exhalation.

You can use very soft mental labels to guide and sustain attention to the breath. “Rising/falling” for the abdomen and “in/out” for the nostrils. Let the breath breathe itself without control, direction, or force. Feel each breath from within the breath, not from the head. Feel the full breath cycle from the beginning through the middle to the end. The awareness is a combination of light, open spaciousness and receptivity, like listening, and alert, attentive presence, touching the actual texture, shape, and form of sensations. Let go of everything else, or let it be in the background. Just let the breathing breathe itself. Rest in a sense of utter relaxation, in that mindful feeling, with the sensations of the breath. As soon as you notice the mind wandering off, lost in thought, be aware of that with nonjudging awareness, gently connect it again to your anchor. Just feel from within the stream of sensations. Toward the end of your sitting, not striving or anticipating, not pouncing on sensations in the present, not bending back to what was just missed or reflecting on what just happened, keep inclining to the totality of the present moment. Keep anchoring easily, deeply, restfully. Just one breath at a time.

Mindfulness of breath begins to collect and concentrate the mind so that the initial distractions of thoughts, emotions, sensations, and sounds soon become objects of awareness themselves. Insight is gained into the true nature of the body and mind.

As concentration grows, mindfulness opens to the entire “flow” of body/mind experience through all the sense doors — sights, sounds, smells, tastes, touch and mental/emotive. Seeing things as they are begins to untangle the tangles of attachment, fear, and confusion. One is able to live more from a place of joy, compassion, equanimity and wisdom.

Meditation on Sound

This exercise uses sound to combine Focused Attention (FA) and Open Monitoring (OM) meditation and consists of four parts. Since it is easier to practice with only one clear sound instead of a whole series of notes, we begin by choosing a bell. We sound it and listen to the sound three times. We continue by using the afterimage as object of meditation. The student maintains attention to the sound into silence and concentrates fully on it, trying to hear the memory of the bell sound as long as possible. Once that sound dies, the student shifts his or her inner posture from focused concentration to the bell sound to open awareness. The idea is to hold the space without expectation. The practitioner is open to any thoughts and sensations that arise. The teacher may sound the bell again in order to prolong and repeat the exercise. The more practice sessions the student goes through, the more his ability to hear the mental memory of the sound and to concentrate for a longer time improves.

Guided Imagery Meditation

Some students find it hard to use traditional meditation techniques to stop their minds from wandering. In this case, guided imagery meditation might be exactly what they need, since the human body is very responsive to mental images. When we picture

stressful or negative events in our minds, the body will react to those ideas and we will feel stressed. In contrast, if we imagine soothing, joyful experiences, the entire body becomes relaxed and releases natural chemicals that create positive feelings. This meditation guides the student through visual scenes that allow the muscles to relax and the heart rate to slow down. Short visual meditations also serve well as a sort of “pre-meditation” to other techniques. In contrast to other techniques, this form strengthens not only attentional abilities, but also stimulates imagination and creativity.

Take some deep breaths, settle into your seat, close your eyes, and relax.

Imagine yourself in a comfortable scene in nature, feel the soft breeze, notice the smells, the temperature on your face, the color of the sky, the feel of the ground beneath you, and the feeling in your body. Take a few moments to be still and sense all that you can in this pleasant and comfortable scene. Now off in one direction notice a well-worn path leading into the distance toward some woods. Follow the path and continue to notice the texture of the ground underfoot, the sounds near and far, the light, the vegetation, the wildlife, and the smells as you move farther and farther along the path. The path narrows as it winds its way deeper into the woods. You cross over a brook, perhaps pausing to listen and feel the water, and then continue along the path. Soon the path emerges out of the woods and opens into a bright hilly meadow. Walk back into the bright light and notice a magnificent old tree on the hillside. Walk to the tree and sit under it for a few moments, appreciating its magnificence. The tree may have a message for you; listen and feel its offering to you. Note the words, images, and feelings that arise. If you would like, you can continue on around the hillside and discover that it

becomes rockier, almost cliff-like on the far side. Among this rock you may notice a strong doorway. You approach and enter, surprised to find a few steps leading to a gently lit curved room filled with other doorways. If you would like, you can pick one and look inside. You don't need to go in. You can just observe from the opened doorway. Take a few moments in silence if you would like. When you're ready, consider if there is any lesson or knowledge that is offered. In a few moments it will be time to close the inner door, exit the way you came in, back out onto the hillside. Return around the hill stopping back at the tree for a moment, listening. Then follow the path back the way you came, through the woods, crossing the brook, and eventually back to the pleasant place where you started the journey. Know you can return to this place and to anywhere you visited on your own when you would like. Now it is time to come back fully. Give me a glance to let me know you have arrived back into the classroom. In a moment let's share some of your experiences [or write them in a journal]. How many were able to find a place to start with? How many found a tree? Did the tree have anything for you? Who found a doorway? What did you see? Was there anything unexpected (scary, fun, confusing, helpful, etc.)? What did you take away?

(Zajonc, 2009)

Sustained voluntary attention

This is also an example of FA meditation. Arthur Zajonc includes this exercise in his book “Contemplative Inquiry.” He asks the student to observe his or her own thinking. Does the student have control over it or is it ruled by promptings of cell phones, doorbells, road signs, memories and associations? Although this appears to be a

simple exercise, it is ideal to practice sustained attention, memory and visualization skills.

Concentrate on a simple and insignificant object, such as a pencil, a flower or a paper clip. Take some time to study the object closely: its shape, color, texture, surface and thickness. When you think you know the details, close your eyes and imagine what it looks like. Work with your imagination and examine it and considering its function in order to create a vivid mental image. Turn it around in your head and look at it from different perspectives.

Zajonc goes into the example of studying a flower and says, "One looks not so much with the eyes of the botanist as with the eye of the artist." Thus, be open to the creations and transformations your mind produces. If you struggle remembering anything, open your eyes again and study the object. The goal is to only create thoughts directly related to the object. If you find your mind wandering, simply return back to what you have been doing. This is totally normal. Once it becomes easier, try practicing in a noisy environment such as a train station. Alternatively, make the external noise the object of attention.

Reality versus Illusion

Zajonc explains that we see the world in terms of theories and concepts. As a consequence, we are used to seeing holistically, always judging the parts in relation to the whole. The author explains that if we want to overcome habits of perception, we must first be aware of them and then work to change them. One way to do so is through practicing with entertaining alternatives. Practicing with visual illusions is an ideal

classroom exercise because it is entertaining. Coming across like a funny game, these pictures serve as metaphors for real life experiences. After practicing with several images, the student can apply this strategy to problems he or she has to solve in class and in his homework. It teaches the student persistency and improves his perceptual accuracy.

Stories

In the course of this project I met many fascinating people who were willing to share their life stories with me. I decided to include two examples in the appendix because they do not focus on academic performance. Looking into the impact of meditation on overall well-being would have exceeded the scope of this project. However, both the interview and the enterprise story show how meditation, through increasing confidence and opening a space to reevaluate experiences and perceptions, has the ability to transform whole lives.

A Second Chance

By Rabea Stueckemann

At 55 years old, Amanda Wilcox is not the typical Master's student at Northwest College of Art. Her life has been a rollercoaster. After suffering a debilitating head injury that almost took her life, she found refuge in Tibetan Buddhism. Meditation practices and teachings helped her to overcome feelings of self-doubt, confusion and unworthiness.

How did you come across Buddhism?

I was in my early 20s, having one disastrous relationship after another. In 1984, I was with a jerk—an engineer and big pot smoker. He did international business and the secretary he hired was the wife of a Tibetan Lama, Chagdud Tulku Rinpoche. I started dropping by his house and watching meditation sessions.

Did that make you want to become a Buddhist?

Not directly. Eugene at that time was an epicenter of new religions. I didn't want to follow a trend. I wanted to be something real. So I watched, learned and listened. It was great, but then my life collapsed... I injured my head badly in a car accident. My boyfriend basically abandoned me in his house in the woods and traveled. The bills weren't getting paid. My parents were typical Hollywood people who didn't give a shit. I lay in bed for months with no means of support. I almost starved to death. The social service at that time was very anti-hippie. If you looked like a dirty drug addict or hippie, you were screwed. I was refused welfare, food stamps and medical services. I was just dying.

How did you maintain faith in Buddhism and compassion when the whole world was turning against you?

Chagdud Tulku sent people to check on me. I slowly got better. After so much suffering it moved me to understand the deep meaning of compassion. I realized that a small act of kindness can spark a whole journey for somebody.

So meditation opened your eyes about yourself and the world...

Meditation calms my mind, makes me stronger and more focused. Through meditation you get to know the true nature of your mind. Time is only a concept. Nothing is permanent. Thoughts are just passing by like clouds in the sky; they are scenery. If you let go, you experience a preciousness of moment, a preciousness of being. You

appreciate your own qualities and then see those in other people, in animals, flowers and the sky, even in some ugly pile of junk.

Did the meditation help you to live healthy relationships?

I had this horrible pattern of making bad decisions. I never took time to get to know men. I needed that validation, but not anymore. I recognized vulnerability as something beautiful. Every drawback is an opportunity. I am married and have three kids. My husband is very difficult to live with, but I don't buy into his bullshit. He knows how to back off and I know how to say he's full of shit. I have my own qualities and failures, but I don't depress myself over them. I've gained courage and clarity.

Buddhism talks a lot about overcoming the feeling of unworthiness. Is that what you experienced?

Guilt is a huge part of our western experience. You have to mature and that doesn't just come with age. It's the self-worthiness of slowly taking control of your mind. You step away and see what you want. You make decisions and if people don't like them, so be it. You feel encouraged to be your whole self and not under the gun of a very oppressive personality.

How did you free yourself?

Meditation has allowed me to feel brave. I worked as a graphic designer for years and now went back to school to study fine arts. It has been very helpful because it creates a

retreat situation. I don't think it's healthy to constantly live in each other's face. You begin to feel like a piece of furniture.

How did the meditation change your artistic experience?

I learned to embrace the horror of mistakes. I started to relax and experiment. The sparkle unfolds in the process. So many things grow out of a mistake. I became aware of those wonderful moments where the light changes and everything opens up and adds a glow to the awareness of the moment.

And now?

I am 55. I'll be glad if I can graduate with a master's degree before I turn 60. Anything could happen. Maybe I'll die before I pay off my financial-aid debt. I do the best I can with what I've got and live in the moment.

Do you believe in reincarnation?

I don't know, but I have been on my deathbed. When you die there is a level of clarity and you are left with how you think about yourself and the world. If you have been a good person and inspired kindness, you die well.

The Mind as Source of all Happiness

By Rabea Stueckemann

Kathleen Caprario was eight years old when she witnessed a deadly shooting only a few meters away from her. As a teenager, she was sexually abused and tortured by the family gynecologist. She never told her parents. On the outside she continued to lead a normal life.

She hid the pain under a layer of competence and accomplishment. “You deal with it by anesthetizing yourself,” she says. Caprario ambitiously focused on her career. “You put those experiences into a place that you don’t open up.”

The wounds never healed and eventually she hit bottom. When counseling and medication no longer provided relief, she turned to Buddhism. At 61, Caprario is experiencing a second adolescence.

Caprario’s story is one of many about how Buddhism has transformed lives. Its practitioners say the power of what is both a religion and a way of life stems from its universal message: suffering is inevitable, but everybody has the ability to be happy. To reach this state of mind, you have to take matters into your own hands.

On a beautiful Sunday morning, 25 practitioners have gathered in the “Zendo,” the local Buddhist temple in Eugene, Oregon. Whether young, old, experienced or inexperienced, everybody is welcomed with tea, cookies and a smile. The group retreats into the

meditation room. Some assume the traditional lotus position; others sit with their legs extended or even on a bench. The only sounds come from a water fountain and birds singing outside the window. With eyes closed, the practitioners embark on a mental journey. Everything that matters is the present moment.

At the sound of the gong, Lisa Freinkel slowly gets up, folds her hands in front of her chest, and bows. Freinkel both practices and teaches at the “Zendo.” For her, Zen Buddhism isn’t just a daily practice, but a tool to experience life in its entirety. “When you meditate you slow down and allow life to unfold so that you can see the components of every moment,” she says.

Her voice remains steady and calm. She always looks straight into the eyes of the person she is talking to. “Human condition is one of fear and self-protectiveness,” she says. “We are always on guard and put up walls around us.” Freinkel has learned to feel less threatened by the unpredictability of life, and to instead embrace the unknown. “It’s the difference of having control over your life and being completely under the whims and mercy of whatever happens to you,” she says.

A fascination with the power of the mind extends across all fields of study. Over the last decade, western scientists emphasized research on the effects of Buddhist meditation on the brain. They found that meditation strengthens the mind through physiological relaxation, slowed metabolism, a heightened self-awareness, improved concentration, empathy, perceptual acuity, and a drop in anxiety and stress symptoms.

However, what studies do not yet address are experiences that go beyond the realm of relaxation and relief. Mysterious moments of spirituality and energy flow still make many scientists shake their heads in disbelief.

Marjorie Woollacott lives on both sides of the spectrum. Being both a scientist and a practicing Buddhist, she spent the last 30 years trying to scientifically prove and understand the effects of meditation and spirituality. “It’s a schizophrenic existence,” she says.

Woollacott explains that upon mentioning her practice, many colleagues roll their eyes and call her crazy. In fact, she used to be one of those people who degrade meditation as irrational nonsense, but that was before her life changed forever. The spiritual leader of her first two-day meditation workshop in 1976 didn’t do more than touch her nose and forehead.

“I felt an electric current go from his hand down to the center of my chest,” says Woollacott. “The energy started gently flowing out of my heart, almost like nectar, like honey. It felt like I was home for the first time in my life.”

A deeper understanding of herself and her role in the world has determined her life ever since. “I felt incredible love and joy that I never knew I had inside of me.” Woollacott knows there are things we will never be able to explain.

For Buddhists, the mind is the source of all experience. Practitioners say that if we understand the reasons behind our actions and perceptions, we will learn to be at ease and create a better future for ourselves and the people around us.

People often confuse meditation with a total elimination of thinking. However, the Buddhist understanding of emptiness refers to the unlimited potential for thoughts, emotions and sensations to appear and disappear. At the core of every Buddhist practice stands mindfulness, a non-evaluative and sustained moment-to-moment awareness.

Buddhist philosophy explains how humans see the world through artificially constructed filters. Trapped in emotions and deeply ingrained systems of value and judgment, we are unable to perceive reality the way it is. We are attached to what we have and often resist change.

Recognizing all thoughts and emotions is not always a pleasurable experience. Instead, we prefer to distract ourselves from everything that causes pain, thereby reinforcing the power of this emotion. Buddhists say that by recognizing what happens in our mind, we gain confidence and are less likely to be carried away.

Caprario's story shows this connection between Buddhism and empowerment. "I don't have to stuff things down anymore," she says. "I accept what happened as a part of who I am."

Buddhist philosophy plays a central role in Caprario's artistic career. Landscape, identity and the relationship of self to nature are at the core of her paintings. Her fascination with landscape is linked to the Buddhist idea of the inevitability of change.

Caprario says humans don't realize that nature, just like real life, is constantly changing. For her, change is no longer a threat, but rather a chance to determine the direction of her life. "It becomes a metaphor for being out in that Grand Canyon where you see the timelessness, monumentality, innate spontaneity and flexibility," she says.

Caprario always had to be flexible, but it is only today that she acts in her own interest. She reached a point where she had to reevaluate her life. After all the violence she endured as a young woman, her husband committed suicide after three years of severe depression.

Meeting Buddhist practitioners in the art community opened the door towards a new beginning. "Buddhism helped tremendously to air out those dark rooms inside me," Caprario says. "When you accept loss as part of life, you can make a choice about how you respond and determine how past experiences affect your present life."

Caprario practices Nichiren Buddhism, which originates in Japan in the 13th century. According to this form of Buddhism, every human being possesses Buddhahood, which is defined as the ability to reach enlightenment and happiness in this lifetime. Practitioners reach for this state through chanting.

“The chanting allows me to connect with the authentic part of myself and I came to honor, respect and own it,” she says. “But Buddha doesn’t give me this permission, I do.”

Caprario found the best strategy to deal with her past: chanting and laughing. She began to take chances in both her private and her professional life. “The work I am doing right now is probably the best and most authentic work I have ever done,” she says. Not only is Caprario in the process of writing a movie, but she also started doing stand-up comedy. “It’s not that I am different,” she says. “I am just a truer and more authentic me.”

Caprario learned to control the posttraumatic stress disorder she suffers since childhood without taking medication. “If I were clever enough and truly brilliant I would write a comedy about suicide, abuse, torture, and violence against women,” she says. She thinks the combination of Buddhism and comedy might be powerful enough to allow her putting this dream into practice.

“My entire life I wanted to be fully human, fully present, and to realize the potential I have... being fully adult and citizen,” she says. “It’s not a lot, but it’s everything I want.”

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