# Contemplation in Education

# 2

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## Introduction

The word *contemplation* is derived from Latin, meaning "to mark out a space for observation." In ancient times, a space so marked often had religious significance as a place designated for philosophical or spiritual practices. Today the space marked out for contemplation is likely to be the classroom, art studio, or science laboratory. In recent years the connection between contemplation and learning has become increasingly appreciated, and contemplative practices are finding their way into many secular educational settings from kindergarten, elementary and high schools (Wisner, Jones, & Gwin, 2010) to community colleges, universities, and professional schools (Gravois, 2005; Kroll, 2010). Perhaps we should not be surprised at this remarkable development, because the long history of contemplative practice has had as its foremost goal, the refinement of the human being, a goal which educators today surely share with those of long ago.

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## The Origins of Contemplation in Education

Any attempt to trace in detail the lineage of contemplation in education would be far too ambitious for this essay, but it is important to appreciate the significant place occupied by contemplative practices in education over thousands of years in both Asia and the West.

### Contemplation in the Western Tradition

Contemplation has a rich history within the Greco-Roman philosophic tradition, where it was historically understood as a process of forming the human being through education and training. The French classicist Pierre Hadot (1995, 2002) has done us a great service in looking afresh at the real ideals and purposes of ancient Greek philosophy. He has shown that we must understand that philosophy's true purpose was to educate, or better to shape, the human being through *askēsis*, which is to say through practice or training, and not simply to offer theoretical musings on abstruse topics. In Hadot's (2002) words,

> We must discern the philosopher's underlying intention, which was not to develop a discourse which had its end in itself, but to act upon souls… The point was always and above all not to communicate to them [the reader or auditor] some ready-


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> made knowledge but to *form* them. In other words, the goal was to learn a type of know-how; to develop a *habitus*, or new capacity to judge and to criticize; and to *transform*—that is, to change people's way of living and of seeing the world. (p. 274)

This notion of practical formation through training was reflected in the words of Simplicius, who when asked, "What place shall the philosopher occupy in the city?" replied: "That of a sculptor of men" (quoted in Hadot, 2002, p. xiii). Our very way of seeing and being in the world was to be remade through ancient philosophy as a practice and a way of living; this was the ancient view of education.

With Hadot's help, we can trace the lineage of practice or askēsis through Scholasticism and the monasteries of the Middle Ages to Montaigne's *Essays* and from there to Descartes's *Meditations* (1641/1993). In the Scholasticism of the High Middle Ages, the education of the monks began with *lectio*, which was a reading or teaching by the Master with no questions permitted. The second stage was *disputatio* or dialectical reasoning, during which the particulars of the reading/teaching were vigorously debated. Extending and complementing these stages of Scholastic education was the monastic practice of *lectio divina*, which was first articulated by the Carthusian monk Guigo II in the twelfth century. Its four stages were: *lectio* (reading), *meditatio* (thinking about), *oratio* (praying), and *contemplatio* (contemplative union).

Michel Foucault viewed Descartes as the watershed figure in philosophy who substituted evidence for practice. "Before Descartes, a subject could have access to the truth only by carrying out beforehand a certain work upon himself which made him susceptible of knowing the truth… [But now] evidence has been substituted for *askēsis*" (Foucault as cited in Hadot, 2002, pp. 263–264). Contemplative exercises were the means by which one worked on and transformed oneself in a manner that was required for a new insight. After Descartes's *Meditations*, we increasingly find such practices lose their explicit place in education in favor of reasoning and evidence. Yet, even in later periods, the traditional idea of working on oneself found its voice in a number of literary and philosophical personalities.

In German, education translates as both *Erziehung* and *Bildung*. The latter word stems from the root meaning "to form," or education as formation. The German poet Goethe (1988) encapsulated this principle of education and its essential link with contemplative engagement when he wrote, "Every object, well-contemplated, opens a new organ in us" (p. 39, my translation). Giving our attention repeatedly to an object works back on the human organism in remarkable and powerful ways. The individual develops, or we could say is sculpted, through contemplative practice. Attention to an object works back on the individual as formation, and the cycle is repeated (see Fig. 2.1). It is by means of the new organ, formed through the repeated act of attending, that Goethe viewed insight as arising.

In the twentieth century, the quantum physicist Erwin Schrödinger (1967) put forward a very similar sentiment,

> And thus at every step, on every day of our life, as it were, something of the shape that we possessed until then has to change, to be overcome, to be deleted and replaced by something new. The resistance of our primitive will is the psychical correlate of the resistance of the existing shape to the transforming chisel. For we ourselves are chisel and statue, conquerors and conquered at the same time—it is a true continued 'self-conquering' (Selbstüberwindung). (p. 107)

What was for Goethe an artistic and intuitive certainty has become a field of scientific research in our time: neuroplasticity. Research in animals, and more recently using noninvasive techniques in humans, has demonstrated the scale and scope

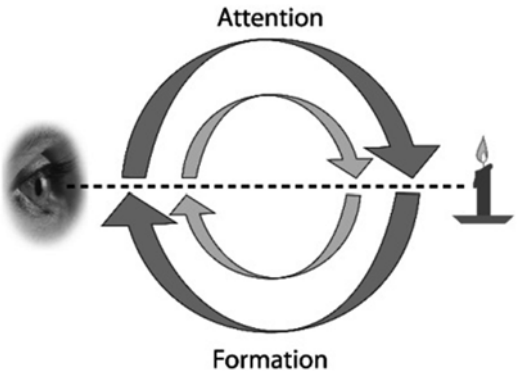


**Fig. 2.1** The attention-formation cycle

of neurological changes induced by repeated practice, including by repeated contemplative exercise. For example, one set of studies, by Sara Lazar et al. (2005), have shown cortical thickening to be associated with moderate contemplative practice. The research group found that 8 weeks of contemplative practice (mindfulness training) was associated with changes in gray matter concentration in brain regions involved in learning and memory processes, emotion regulation, self-referential processing, and perspective taking. These areas of the brain are of obvious interest to educators.

Hadot's (2002) description of philosophy as a transformative contemplative practice aligns nicely with the research of Lazar and others:

> [Philosophy] is essentially an effort to become aware of ourselves, our being-in-the-world, and our being-with-others. It is also, as Maurice Merleau-Ponty used to say, an effort to "relearn how to see the world" and attain a universal vision, thanks to which we can put ourselves in the place of others and transcend our own partiality. (p. 276)

Perspective-taking, learning "how to see," empathy, and self-awareness are essential educational goals that transcend particular subject content and are central to human cognitive and affective development as described, for example, by Kegan (1982) and Mezirow (2000).

As our consideration of the Western lineage of contemplation makes clear, practice was, and is, understood as essential to the formation of the human being. This view is commensurate with that of modern developmental science and neuroscience, which also provide a means of understanding education as a process of transformation (see MLERN, 2012; Roeser, 2013).

Many contemporary researchers in the area of contemplative neuroscience and psychology see themselves as working in the tradition of William James (see The Journal of Consciousness Studies, 2010, Vol. 17). Although James's range of interests was broad, he recognized that the training of attention would have enormous educational benefit. A citation well known to contemplative scholars offered by James (1890) states the importance of attention for education in the strongest possible terms:

> …the faculty of voluntarily bringing back a wandering attention, over and over again, is the very root of judgment, character, and will…An education which would improve this faculty would be *the* education *par excellence*. But it is easier to define this ideal than to give practical directions for bringing it about. (p. 424)[1]

One hundred and twenty years ago William James defined the ideal, but it is only now that universities and colleges are beginning to teach practices that demonstrably improve attention. We will return to this research in secular educational settings below, but for now it suffices to note that practical directions for bringing it about are now becoming available to educators.

## Contemplation in the Eastern Tradition

Of equal or greater importance for the reemergence of contemplative education in recent times has been the influx of Buddhist and other Eastern spiritual traditions into the Western world. Many of those who are active today in contemplative education visited the Indian subcontinent during the 1970s and 1980s, taking up contemplative practice for personal benefit (Harrington, 2008). For many, Buddhist contemplative practice was an essentially secular activity, which facilitated the incorporation of these practices into secular settings such as health care institutions and schools. In order to better understand the role contemplation can play in modern education, it is instructive to examine the place of meditation within traditional Buddhist monastic education.

*Buddhist Monastic Education* The place of meditation in education in the Tibetan Buddhist monastic tradition is well described by Georges Dreyfus (2003), who went through long and arduous training to become a monk with a *Geshe* degree, which roughly corresponds to getting a Ph.D. (see also Rabten, trans. 1980). In his book *The Sound of Two Hands Clapping*: *The*

[1] William James, *the Principles of Psychology* (NY: Henry Holt, 1890) vol. 1, p. 424.

*Education of a Tibetan Buddhist Monk*, Dreyfus (2003) situates meditation within the larger curriculum of Tibetan monastic education as one of "three acumens" and points to similarities with Christian monastic education in the Middle Ages.

The first acumen is that of *listening* or *reading* for simple comprehension. This is typically accomplished by listening to a teaching or reading a text for the first time, much like the Scholastic practice of lectio. At this level, the engagement with the ideas and teachings remains quite superficial, but it provides the basis for further work.

The second acumen arises through *thinking*. At this stage, engagement is far more active intellectually: doubts are raised, questions are posed, ideas are debated, as in Scholastic disputatio. Also, at this level, one connects the ideas being studied to one's own life. The second acumen can help achieve true intellectual insight and appreciation for the relevance of the teaching to one's own life. As important as such scholarly achievement is, it lacks the transformative power of the third acumen that arises through *meditation*. In this case, that which was heard (first acumen) and grasped intellectually through thinking (the second acumen) now begins to deepen and to reshape the mind of the student through the repeated practice of meditative concentration. As Dreyfus goes on to explain:

> To effect such a transformation, the meaning must penetrate the deeper layers of the mind, an internalization that requires the power of meditative concentration. It can lead to a more direct insight into the nature of persons and other phenomena, which gradually frees an individual from the bondage of negative emotions. (p. 166)

It is important to note that meditation instruction for the young monks within Tibetan Buddhist monasteries does not begin until adolescence. At earlier ages, study and ritualistic religious practices are thought more appropriate. This timing makes sense if meditation is seen as being concerned with deepening internalization and self-reflective understanding of the meaning of contemplative practices that relies on the neural and psychological developments characteristic of adolescence (Roeser & Pinela, 2014).

## Contemplation and Knowing

From these two lineages, Greco-Roman-European and Asian Indian, we can appreciate the role that contemplation has played in education in the past, and we can also begin to see the important role it can continue to play in modern, secular education. In both traditions, basic comprehension of the material at hand is viewed as a first stage in learning. This stage is followed by vigorous intellectual engagement and debate. But in both traditions, a further essential dimension of education requires that the material be internalized through contemplative engagement.[2] True mastery cannot be achieved without it.

If one would be a painter, then it is insufficient to read about or debate the art of painting. One must also practice painting, not merely to learn how to use brush and pigment, but to learn to see as a painter sees, that is to *become* an artist. In a letter to Emile Bernard, Cézanne wrote, "In order to make progress, there is only nature, and the eye is trained through contact with her. It becomes concentric through looking and working" (in Rewald, trans. 1976, pp. 45–46). One "becomes concentric" to that which is in our field of attention. If one would be a scientist, a doctor, a business leader, the principle similarly applies. "Looking and working" sets the artist on the attention-formation cycle (see Fig. 2.1). But Cézanne's insight is as true for the scientist as for the artist. To become a scientist requires that one live the discipline, not merely read about it. This connects well to the philosophy of contemplative education, which emphasizes the value of repeated attentive engagement and practice as essential to a fully integrated and embodied education.

Notice also the close connection between contemplative practice and learning. Thus, while the

[2] Dreyfus points out that only a small number of monks become committed practitioners, even if the central importance of meditation is recognized.

contemplative spiritual traditions of Asia recognize the pragmatically useful, skill- and dispositional-capacity-building effects of contemplation (e.g., increased powers of concentration and greater emotional balance), the Asian Indian practitioner ultimately views meditation as an acumen or *a path to knowledge* (Roeser, 2005). By overcoming ignorance, insight has the possibility of breaking the cycle of suffering by dispelling the false views of self and world that lead to unnecessary suffering. Knowledge that relies on external authority, or even on logical inference, is considered inferior to "direct perception," which is made possible through meditation (the Dalai Lama, as cited in Zajonc, 2004, pp. 155-159).

## Contemplation in Higher Education Today

In the secular settings of today's universities, insight into self and world are still valued, but rightfully are shorn of religious associations. Education is a public service guaranteed by the government and should be entirely free of religious orientation. Because many of the practices used in contemplative pedagogy have their roots in the religious traditions of the East and West, a perennial discussion concerning decontextualization is common. There is growing evidence that the efficacy of mindfulness and secular contemplative exercises can be demonstrated independent of the religious origins of such exercises (see Lutz, Dunne, & Davidson, 2007; Lutz, Greischar, Rawlings, Ricard, & Davidson, 2004). Contemplative practices offer faculty, students, and staff tools for working productively with the mind and emotions. These tools can become an important aid to sustained reflection and capacity building. Meditation may also support the achievement of direct insight and creativity. In these ways, contemplation can play a valuable role in education at many different levels.

An integrative education is concerned with the maturation of children from their early years to adulthood, which entails cognitive, emotional, social, and moral development (Eccles & Roeser, 2014). The development of the whole human being is as much the concern of education as information and skills, insofar as education seeks to be comprehensive in executing its important task. In fact, unless and until we attend more to the social-emotional development of the student alongside his or her cognitive development, the challenging content we seek to teach (for example formal mathematics) may remain an elusive goal (Eccles & Roeser, 2014). Here too contemplative exercises can be of use, offering students a way of working with demanding content, new perspectives, and disorienting ideas and experiences (Jennings, Lantieri, & Roeser, 2012). For reasons such as these, contemplative exercises have come to play an increasingly important role in the education (Roeser, 2014).

Learning can only take place if those we teach give us their attention. This basic fact cannot be taken for granted. Factors aggravating students' ability to pay attention in school may include a wide range of stressors from family difficulties to health concerns, external distractions, or they may suffer from ADHD or other forms of learning disability (Zylowska et al., 2008). As a consequence of these and other considerations, in addition to standard pedagogical methods, contemplative exercises such as mindfulness-based stress reduction (MBSR; Kabat-Zinn, 2003) are finding an important place in education (Roeser, Skinner, Beers, & Jennings, 2012). The cultivation of emotional balance and attention is fundamental to successful learning, and an increasing body of research is showing that contemplative methods can be effective in developing these attributes (see Roeser, 2014).

Given the great autonomy of university faculty and the maturity of their students, working with young adults in colleges, universities, and professional schools raises few ethical or pedagogical issues. However, as the other chapters in this volume attest, contemplative exercises are also finding their way into numerous high schools, elementary schools, and even early childhood centers. In the face of these facts, it is essential to ask when and how to introduce contemplative exercises into the classroom for children of different ages (see Greenberg &

Harris, 2012; Zelazo & Lyons, 2012). Age-appropriate means and methods are essential to the responsible use of contemplative methods. Exercises that are suitable for adults may well not be appropriate for small children. I will not address this important issue directly, but confine the remainder of my remarks to the inclusion of contemplation in higher education where my own work has been focused for a dozen years.

## Contemplation in Higher Education

The experience of higher education is, whether it be years spent in college, university, or professional school, an important and formative one. Not only does one train for a vocation during these years, but even more fundamentally, one's intellectual disposition, ethical orientation, character, and inner life are shaped in ways that can endure for decades. For these reasons, it is of special importance to offer an integrative educational experience that nurtures the whole human being, one that makes full use of the three acumens, including the reflective and contemplative. The cultivation of the mind through meditation should be as much a part of a person's education as the skills of writing, numeracy, articulate speech, and intellectual mastery of one's discipline. Good judgment, creativity, compassionate action, social-emotional intelligence, and true insight depend on the ability for balanced reflection, on sustained attention to complex situations, and equanimity in the face of difficulty. In short, a genuine, integrative education calls for the cultivation of our contemplative capacities (see Parker & Zajonc, 2010).

Contemplative exercises have been offered as part of US college instruction for decades, but this pedagogical innovation remained largely invisible until a dozen years ago. In 1997, the Center for Contemplative Mind in Society (www.contemplativemind.org) began its first academic program on contemplative practices in higher education. In collaboration with the American Council of Learned Societies, the Center initiated a Contemplative Practice Fellowship program. The intent of the program was to support faculty at colleges and universities in the USA who were interested in including a contemplative perspective or contemplative practices in their courses. We were completely uncertain at the time as to the level of interest or capacity within the Academy for contemplative education. Much to our delight and surprise, in the first year we received nearly 100 applications from institutions of every type, liberal arts colleges, public and private universities, as well as religiously affiliated colleges. Most of the applications were of high quality and submitted by faculty with many years of contemplative experience. They saw these fellowships as a way of connecting a highly valued personal practice with their classroom teaching. In the course of the 11 years during which the Contemplative Practice Fellowships were offered, 158 fellows were named from 136 colleges and universities (Craig, 2011).

Today, the Center for Contemplative Mind in Society works with over 2500 faculty and administrators in North America and beyond, who are including contemplative practices in their teaching. At the University of Michigan School of Music, students are able to get a Bachelor's in Fine Arts in Jazz and Contemplative Studies (a formal concentration in Contemplative Studies was created in 2014 by Prof. Hal Roth and colleagues). At Brown University, medical students are able to do a "Concentration in Contemplative Studies."[3]

Recognizing the importance of community in the establishment of a new form of pedagogy, since 2009 the Center has sponsored the Association for Contemplative Mind in Higher Education (www.acmhe.org). It promotes the emergence of a broad culture of contemplation in the academy by creating a network of academics, administrators, and their institutions who are interested in the recovery and development of the contemplative dimension of teaching, learning, and knowing. In 2011, the Association had 650 members. The Association serves its members by:

[3] See http://med.brown.edu/education/concentrations/contemplative.html

- Stimulating scholarship and research concerning contemplative pedagogy, methodology, and epistemology within and across disciplines.
- Sponsoring forums for the presentation of research and exchange of ideas through webinars, regional and national meetings, and an annual conference.
- Supporting the development of courses and curricula through 1-week residential summer sessions.
- Supporting the deepening of contemplative teaching through retreats for academics offering a variety of traditional and secular practices of potential value for classroom teaching.
- Distributing scholarly work and general information relating to the field of contemplative education online, including a quarterly e-newsletter.
- Providing online, social-networking resources for members to participate in discussion forums and share profiles, publications, papers, and syllabi.

## The Practices and Principles of Contemplative Higher Education

A very wide range of contemplative exercises are used by faculty with their students. These include:

1. Mindfulness exercises of various types, for example, mindfulness of the breath, mindful walking, mindful reading, mindful listening, and mindful viewing. These have in common the application of moment-to-moment, nonjudgmental awareness (see other chapters in Handbook)
2. MBSR (Mindfulness-based Stress Reduction) exercises (Kabat-Zinn, 1990)
3. Concentration exercises
4. Exercises for cultivating emotional balance (CEB)[4]
5. Beholding a work of art[5]
6. Visualization
7. Silence
8. Alternation between "focused attention" and "open monitoring" (see Lutz, Slagter, Dunne, & Davidson, 2008)
9. Meditative movement: yoga, tai chi, qigong, authentic movement, eurythmy, contemplative dance, etc. (e.g., Helberg, Heyes, & Rohel, 2009)
10. Empathy, compassion, and loving kindness practices (e.g., Center for Compassion and Altruism Research and Education)
11. Analytical and settled meditation (Dalai Lama in Melrotra, 2005)

In addition to these, many professors have created contemplative exercises that are closely connected to the course content.

From the above list, it is evident that the range of contemplative exercises used is very wide, but I have come to aggregate them into three broad categories:

1. *Capacity-building exercises*, which seek to cultivate:
   (a) Equanimity, stress reduction, or emotional balance
   (b) Concentration, attention, and close observation
   (c) Memory and exact sensorial fantasy
   (d) Discernment, judgment, or relational exercises
   (e) Will or discipline
2. *Content-related exercises*, in which the material being studied (poetry, economics, art, or science) is approached through a contemplative method.
3. *Compassion and community*, in which the cultivation of empathy, compassionate concern, and altruism strengthens ethical qualities in the individual and deepens our caring relationships with others.

### Capacity Building

Capacities, such as emotional balance and a stable yet flexible attention, are of value both in the classroom and throughout life. As noted above, William

[4] www.cultivatingemotionalbalance.org

[5] For example, Joel Upton, Amherst College, http://vimeo.com/9007209

James, the founder of scientific psychology, felt that the cultivation of attention would be an education *par excellence*. A wide range of contemplative exercises exist that specifically cultivate attention. Practices that promote emotional balance (e.g., loving-kindness meditation) allow one to be both empathetic yet sufficiently objective that one can hold difficult life circumstances with poise and even grace. Mindfulness practices stabilize the mind by settling attention on a simple object or process, like the breath. Focused attention and open awareness (or monitoring) are two archetypal forms of attention which can be exercised. In my own teaching and writing, these play an important role (see Zajonc, 2009). I use the lemniscate below to illustrate for my students the contrasting aspects of focused and open attention. I see the silent, patient field of open awareness as the receptive space that is required for new insights and creative initiatives to arise (Fig. 2.2).

Attention researchers have now shown that meditation leads to a range of enhancements to attention; and emotion researchers have likewise shown the benefits of meditation for emotional balance (see Hölzel et al., 2011). Shapiro, Brown, and Astin (2011) reviewed this and other research relevant to contemplation in higher education as of 2008 for the Center. This research corroborates the in-class experience of thousands of professors who are now using contemplative exercises as part of their teaching. Of course, much more research concerning the psychology and neuroscience of contemplation still needs to be done.

## Content-Related Exercises: Course-Specific Contemplative Practices

In addition to generic contemplative practices for attention and emotional balance, more and more professors are developing practices that are highly relevant to their specific subject matter. For example, a number of art historians are teaching students ways of "beholding" a work of art that are based in contemplative practice. Poetry can be read in a way informed by the ancient practice of "*lectio divina*." But more technical courses such as economics are also amenable to course-specific contemplative practices.

In my own teaching with contemplative exercises for a particular content area, I have come to rely on the following design principles:

- Context: Who are you teaching? (e.g., age of students, subject matter of course).
- Intention: What is the pedagogical aim of the exercise?
- Practice: Choose a practice that suits the context and aim. Then give students a rationale, clear instructions, opportunity for questions. Gently lead the exercise.
- Process the practice afterwards by:
  1. Journaling concerning their experience
  2. Having students talk in pairs about their experience
  3. Having a class conversation

An example of this applied in the field of economics is given by Professor Daniel Barbezat of

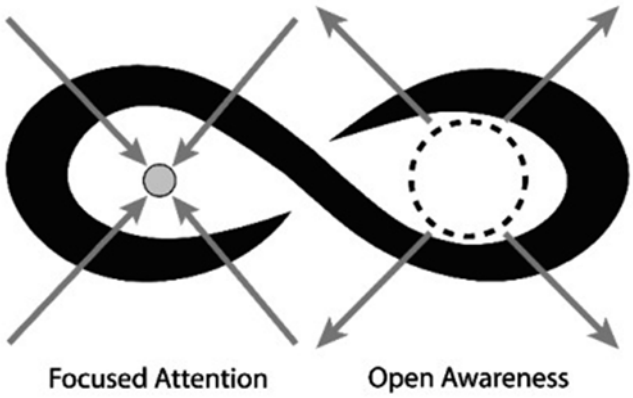


**Fig. 2.2** Lemniscate of attention

the Economics Department at Amherst College who uses contemplative practices to engage students in examining their own behavior. In economics, for example, many models assume that the gains of others worsen our utility since we place our self in relation to others; by providing for others, we harm ourselves. This "relative income hypothesis" is one of the ways economists have tried to explain the rather meager gain in reported well-being that comes with overall income gains. When students first hear this, it makes sense to them. In fact, when they are asked whether they would give more to others than they would receive, more than half the class rejects the opportunity. However, after some reflection, loving-kindness meditation, and a guided introspection on gratitude, only one or two students still chose to deny the others more than they would receive; all the others gladly provide the relative gain. These exercises not only provide the students insights into the models and articles containing assumptions about relative income, they also provide an opportunity to notice that preferences are dynamic and are affected by one's relationship to the world. In fact, from these exercises, students become keenly aware of implications of the behavioral assumptions of economic models, something that they took for granted prior to these exercises.

The development of such course-specific contemplative practices is of special significance in making a strong case that contemplation enhances learning, and so contributes not only to the generic capacities of students, but also to their understanding and mastery of course material.

## Compassion and Community: Cultivating Empathy Support and Compassionate Action

Finally, it is crucial that contemplative education not be misunderstood as aloof or disconnected from life. Indeed, contemplative exercises such as the one described above by Daniel Barbezat enhance empathy and compassionate connection to others, which can shape ethical action (see Hofmann, Grossman, & Hinton, 2011). The third domain of contemplative pedagogy is, therefore, directed to the cultivation of compassion and altruistic behavior (Keltner, 2009). Research on this has been recently undertaken by the Center for Compassion and Altruism Research and Education (CCARE) at Stanford University using an eight-session compassion training designed by Thupten Jinpa (Jazaieri et al., 2014). The reports on this work given at the 2010 Stanford University CCARE/Dalai Lama conference were very encouraging.[6]

## Larger Implications of Contemplative Education

Inclusion of contemplative methods in higher education will, I believe, go a long way toward addressing an imbalance increasingly recognized in higher education. In short, the inner life of our students is sorely neglected. In his book *Excellence without a Soul*, Harry Lewis (2007), former dean of Harvard College, explains that "Harvard and our other great universities lost sight of the essential purpose of undergraduate education" (p. xiv). They have forgotten that they are there to help students "learn who they are, to search for a larger purpose for their lives, and to leave college as better human beings" (p. xiv). He goes on to declare that "students are not soulless, but their university is" (p. 18).

In their new book *Cultivating the Spirit*: *How College can Enhance Students' Inner Lives*, Alexander and Helen Astin and Jennifer Lindholm (2011) of UCLA's Higher Education Research Institute report from their research that more than eight out of ten students say "an important reason for attending college is to find my purpose in life" (p. 225 Kindle edition). The authors hold up meditation and self-reflection as a valuable means of developing direction in life as well as a sense for meaning and purpose. In other words, the laments of Lewis and others

[6] CCARE at Stanford University, http://ccare.stanford.edu/content/scientific-explorations-compassion-and-altruism. And also http://ccare.stanford.edu/programs/research-projects

concerning the soullessness of the university can be significantly addressed by a new emphasis on the contemplative and reflective in higher education.

## From the Evaluation of the Contemplative Practice Fellowship Program

The Center for Contemplative Mind in Society completed a comprehensive evaluation of the Fellowship Program in early 2011. Its results are instructive beyond the specific program itself.[7] From the survey and telephone interviews, and in particular in response to a question concerning the value of using contemplative practice, a variety of views were offered by professors using contemplative pedagogy. Those interviewed described how their courses with contemplative practice had a positive reputation on campus and were recommended to other students. The value of contemplative practice was experienced, instructors said, as "self-validating." This meant that the practice itself led to such clear benefits for the students that external evidence from research studies was of secondary importance. A typical professor might begin very tentatively, but after positive student reactions, might then augment the amount of time spent with contemplative exercises.

One neuroscience researcher and professor of psychology reported that two aspects of the exercises seemed of special value to his students. The first was the training of attention, which is such a fundamental aspect of contemplative practice. He remarked, "Attention training really is a core aspect." He went on to say, "Distraction is the sea that they're swimming in." Yet even in an introductory course, with a very modest portion of time given contemplative exercise, the instructor found that students did benefit from the practice. In his opinion, a second type of contemplative practice (those directed toward compassion and altruism) was perhaps even of greater importance. The instructor noted:

> Despite all the cultural stereotypes, the current generation of college students is hungry for connecting in a meaningful way, to really find ways to make a difference in the world, and especially ways that address human suffering and enhance human portion. They don't know how best to do that, and they're often inarticulate, of course, but they seek ways to cultivate their own compassion and have it legitimized as part of higher education. It's really about caring for each other and making the world a livable place.

## Toward a Theory of Contemplative Pedagogy

An essential but underdeveloped area is the theory of contemplative education. As this field develops, it will become increasingly important to have not only evidence of contemplation's efficacy, but we also will need an adequate theory of contemplative education to undergird both research and teaching. One can begin to see the broad outlines of such a theory. It will have several parts. Repetition, whether physical or mental, is known to affect brain structure. The theory of neural plasticity has become well established and is an area of active research. The practice of repetitively focusing one's attention on the breath, on a line of text, or an external object or process can be understood within this context. Neural plasticity provides a mechanism whereby not only learning can take place, but entirely new or enhanced capacities are developed within the brain. We can recall Goethe's line, "Every object, well contemplated, opens a new organ in us." Human mental faculties are not fixed or inert, but rather they are open to development by repeated practice. Neural plasticity provides a way to understand the physical foundations for this. Once one appreciates the power of repetitive mental practice, contemplative exercises as a means for the cultivation of cognitive and affective capacities make great sense (see MLERN, 2012).

I also see the stage development theories of Robert Kegan and Jack Mezirow, which I have already mentioned, as offering an important framework for a theory of contemplative pedagogy that

[7] The full report can be found at the Center website www.contemplativemind.org

views contemplative exercises as aiding students in moving from one affective, cognitive, or epistemological stage to another (see Roeser & Zelazo, 2012).

In my view, interest in the uses of contemplation in teaching, learning, and research is burgeoning for the good reason that it is a genuine aid to education at many levels, but especially in higher education. It will be critical to meet that growing interest with a wide range of programs and research of the highest quality. As the use of contemplative pedagogy increases, we can also expect that the work done will come under increasing scrutiny. It is, therefore, imperative that we not only develop program initiatives that will reach a wide audience in the academy, but that we also ensure that sound educational rationales are offered, and wherever possible that contemplative methods are backed up by high-quality scientific and social science research.

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