

Center for Contemplative Mind in Society

Summer Session on Contemplative Curriculum Development

August 13-18, 2006
Smith College, Northampton, MA

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From August 13-18th, the Center for Contemplative Mind in Society convened its second annual residential Summer Session on Contemplative Curriculum Development. Thirty-five professors teaching at colleges and universities across the United States and Canada gathered to explore the impact that contemplative practices can have in teaching and learning. Among these participants were five professors who also attended last year's session; they chose to return in order to build on their experience and learn from each other. Presentations and discussions were held on pedagogical issues, including the relation between course content and contemplative practice, the benefits of stabilized attention and other qualities of mind fostered by meditation, evaluation and assessment, and communicating course intent with colleagues and college administrators. Each day also included substantial contemplative practice sessions, including meditation, yoga, and contemplative dance, walking meditation, and eurythmy, as well as practices adapted for secular classroom settings.

The Center for Contemplative Mind in Society believes that a fully democratic society requires a system of higher education that trains students for reflective insight as well as critical thinking. We believe that the cultivation of mindfulness amid the busy-ness of contemporary life can open up the possibility for developing new wisdom through introspection, to complement existing intellectual and analytic undertakings. We also believe that meditative

practices can help shape the direction of social action, contributing to an integration of the ethical and the political, the spiritual and the practical; the undergraduate college is one place where these issues can and should be thoughtfully explored.

The professors who attended this session are part of a developing community of educators committed to the belief that contemplative practices can be adapted to the classroom to aid students in the learning process, as pedagogical methods complementary to traditional critical, scientific, and quantitative analysis. The Center's Contemplative Practice Fellowship Program, which has 121 fellows teaching at 103 universities and colleges nationwide, has

acknowledged the already proven benefits of contemplative practice in settings such as health care, in which meditation and other contemplative practices are now used in the prevention and treatment of a wide variety of conditions and diseases. But, given the gap discussed above between the language of the contemplative and the language of curriculum and disciplinary

reform, it is hard to outline in the abstract how these developments might be extended to the educational process. The question of precisely what pedagogical and intellectual gains might be discovered by bringing contemplative practice into the academy is at the heart of the Program and the summer session.

Thus the fruit of education, whether in the university or in the monastery was the activation of that innermost center, that apex or spark which



is a freedom beyond freedom, an identity beyond essence, a self beyond ego, a being beyond the created realm, and a consciousness that transcends all division, all separation.

- Thomas Merton, *Learning to Live*

Contemplative Pedagogy Principles and Design

Arthur Zajonc, Director of the Center's Academic Program and Professor of Physics at Amherst College, opened the session's lecture series with a talk on the principles and design of contemplative pedagogy.

Arthur, in addition to his traditional physics courses, also co-teaches a first-year seminar with art historian **Joel Upton**, 'Eros and Insight', which explicitly attempts to explore the relations between love, knowledge, and contemplation. Four practices he uses in 'Eros and Insight' can be adapted to courses generally, without regard to discipline: exercises of silence, open attention, value scale, and sustaining contradictions.

SILENCE EXERCISE

Arthur and Joel open students up to the exploration of contemplative practices with a quote from Thoreau about what it means to be awake:

Little is to be expected of that day, if it can be called a day, to which we are not awakened by our own Genius, but by the mechanical nudging of some servitor, are not awakened by our own newly acquired force and aspirations from within, instead of factory bells. . . the millions are awake enough for physical labor; but only one in a million is awake enough for effective intellectual exertion, only one in a hundred million to a poetic or divine life. To be awake is to be alive. I have never yet met a man who was quite awake. How could I have looked him in the face?

At the end of the first class, they introduce the first meditation exercise: silence. Joel leads them through a series of slides of a Zen garden in Japan, taking them from the greater landscape to a pair of rocks in the pond, surrounded by ripples. Basho's haiku, and their first meditation exercise of five minutes of silence, ends the exercise.

Breaking the silence
of an ancient pond
a frog jumped into the water,
a deep resonance.

Students continue the exercise on their own by writing a one-page paper of pure description on the stages and experience of meditative silence. No flights of imagination, or sophisticated scientific or philosophical analysis. Only simple, attentive, deliberate, and descriptive prose. "It's remarkable," Arthur observed, "how the students respond to this assignment. One student admitted that he was going to blow off the assignment, but as he was running one day in a bird sanctuary, he thought, 'Hey, it's quiet out here, I'm going to sit.' After a few minutes he was in a totally different state of mind he had never discovered; it was in that moment that he became convinced of the value of contemplation."

AFTERIMAGE EXERCISE

The second exercise is on sustained attention and the cultivation of the so-called "afterimage." Breath, natural objects, thought, and images are all possibilities for single-pointed concentration, the purpose of which is to break reactive, free association thinking in order to bring clarity, freedom, and sustained focus to observation and thought.

This exercise has four parts, using the bell sound as the object of concentration. The first two of these four parts focus on concentration on an outer experience, in this case, the bell sound; the second two parts are the practice of open attention. This polarity is archetypal in most traditions. These parts of outward and inward experience are combined in a kind of rhythm, where one's attention is given to a single object and then opens out, letting go of the sound and letting it back in. This is a way of getting to the essence of things because one is working directly with the experience, rather than thinking about it. Through this, one comes into an open space of receptivity, allowing the bell sound to evoke a feeling, shape, form, or other kind of experience which is connected to that which you've just engaged. This kind of exercise is a way to open up to the unexpected.

The meditation has three parts which are performed; the fourth part is grace.

1. Sound the bell three times. Listen intently to its form and timbre.
2. Even after the bell sound has died away to outer silence, we possess the memory of the bell sound. We can re-sound the bell inwardly. Do so. Listen to its inner reverberation, again and again.
3. The third stage is that of silence. Allow the memory of the bell sound to fade, releasing all sound, and opening the attention wide. The appropriate mood for this state is wonderfully characterized in the *Tao Te Ching*:

The Master doesn't seek fulfillment.
Not seeking, not expecting
She is present, and can welcome all things.

4. The fourth phase is not enacted by us, but may presence itself in the silent space thus prepared and sustained. In Buddhaghosa's description of the so-called ten *kasinas* or devices (earth, water, air, fire, four colors...) this is called the "afterimage" phase.¹ During it the inner aspect of the bell sound, or other sense experiences used in the same way, arise in the silence or void.

Grace fills empty spaces, but it can only enter where there is a void to receive it, and it is grace itself which makes this void.
-Simone Weil, *Gravity and Grace*

VALUE SCALE EXERCISE

True single-pointed attention is, by definition, oblivious to everything outside the immediate field of attention. Contemplative inquiry moves out from sustained, focused attention to open attention. When we release the bell sound we already are approaching this stage of practice. However, it can become the main feature of the exercise by using relationship as the focus of attention. Any comparison will do, but one we have used is the simplest value-scale exercise common to artistic training. Giving the students paper, brush, and black and white acrylic paints, we ask them to make a graded sequence of grey squares that step evenly from white to black.

¹ Buddhaghosa, *Path of Purity* (London: Pali Text Society, 1975), pp. 143-204.

This and other comparison exercises are used to cultivate a sense for relationship and the inner discernment of difference, which Arthur and Joel see as the first feature of contemplative cognition. One moves from single states of awareness to the direct perception of differences and similarities. This is a key moment. If we intend to connect contemplation to knowing, to *veritas*, then we must articulate an understanding of contemplative practice that moves from the psychological and health benefits of meditation (which are great) to its cognitive dimensions.

SUSTAINING CONTRADICTIONS

The fourth stage of contemplative inquiry proves especially challenging for students, who are used to solving problems and resolving contradictions. Reality is often resistant to this approach, as illustrated by wave-particle duality in physics, the point at infinity in mathematics, and artistic tension produced by antagonistic elements in great works of art.

The deep significance of cultivating a consciousness that can sustain contradiction was appreciated during one of the informal evening conversations. "Several of our racially mixed and ethnically diverse students began to speak about the irreconcilable complexity in their lives that had caused them great uncertainty and personal suffering for years. Were they Chinese or American, how did the Haitian home they just left (so full of life, French language and deep religiosity) relate to the life of the pristine mind and raucous campus life they were pursuing here at Amherst? Were they betraying their lineage? Did they need to decide between their contradictory identities? How could they? Their very lives required them to sustain a huge contradiction. As the Lebanese-French writer Amin Maalouf has so eloquently stated, it is precisely through the irreconcilable complexities of our lives that our identity emerges.² When we deny that complexity, as a society we quickly decompose into warring ethnic and religious factions vying for dominance, with all the tragic consequences that attend on this archaic view."

Arthur also spoke about the disciplinary applications of contemplation, noting that the Center recently held

² Amin Maalouf, *In the Name of Identity: Violence and the Need to Belong* (New York: Arcade Pub. 2001).

a conference that explored the uses of contemplative practices in art, art history, and architecture education. This report can be found at www.contemplativemind.org/publications. In psychology and the cognitive sciences a new methodology that allows for first-person research methods is being articulated. Alan Wallace (Buddhist scholar), Francisco Varela (neuroscience), Evan Thompson (philosophy) have all done work on theoretical and practical methods by which one can explore consciousness first-hand. And Jane Goodall's work studying chimpanzees is an excellent example of how meditative observation can bear great knowledge: every day for six months she went to the same place in the jungle and sat quietly, which she describes as a state of meditative awareness. Over time, the chimps became accustomed to her presence and she became part of their world: "I and the chimpanzees, the earth and trees and air, seemed to merge, to become one with the spirit power of life itself." She, an untrained novice, was able to revolutionize the field of primatology through contemplative inquiry.



Contemplative inquiry is a set of exercises which move through the stages of respect, delicacy, intimacy, participation, vulnerability, transformation, education as formation, and finally, insight. Logical inference and induction alone are insufficient for discovery and creation; it is necessary to engage in contemplative inquiry as well. The first stage of contemplative inquiry is to respect the integrity of the other, to guard over its nature, regardless of what or whom the other is. Next, we must approach the object with delicacy in order to avoid distorting it; we need to apply a gentle empiricism. Intimacy follows, but we must be careful to exercise restraint to retain clarity and balanced judgment; once we become close, we are invited to participate in the unfolding phenomena before us, living out of ourselves and into the other. Authentic participation requires that our confidence in being vulnerable, secure enough to resign ourselves to the course of things and of not knowing; it is in this uncertainty that we can be open

to the unknown. Participation and vulnerability lead to a patterning of ourselves on the other: we are transformed by contemplative experience in accord with the object of contemplation. As Goethe says, "every object well-contemplated creates an organ of perception within us." The individual develops new capacities to live and see the world. Insight is born through an intimate participation in the course of things.

The epistemology of the west has emphasized *dianoia*, ratiocination, or valid inference, but ancient traditions in the East and West have also recognized a second faculty for knowing called episteme or direct

perception; these are complementary methodologies. William Rowan Hamilton's sudden discovery of quaternions (which are a step beyond imaginary and complex numbers) while walking across the Brougham Bridge in Dublin was the fruit of long contemplative uncertainty. The insight passed into him like an electric current, to use Hamilton's own metaphor.

It was an electrifying moment causing him to quickly turn aside and carve the key mathematical identities into the bridge railing. The so-called "context of discovery" is a contemplative context full of passion and sustained uncertainty. The conditions required for intuitive insight are quite different from the subsequent dispassionate, logical testing of it. The "context of proof" does indeed require careful assessment of insights against the data of experiments and the logic of mathematics. But the new insights of science enter as the fruit of contemplative gestation, not deductive analysis. As Emerson reminds us, "All becomes poetry when we look from within... because poetry is science, is the breath of the same spirit by which nature lives. And never did any science originate, but by a poetic perception."³

³ Ralph Waldo Emerson, quoted by Peter Antony Obuchowski, Jr. *The Relationship of Emerson's Interest in Science to his Thought*, University of Michigan, Ph.D. 1969 (University Microfilms, OInc. Ann Arbor, MI, 1969), p. 47, and in *The Complete Works of Ralph Waldo Emerson*, edited by Edward Waldo Emerson, vol. 8, pp. 364-65.

Contemplative Architecture and Sensory Awareness

Kat Vlahos, Professor of Architecture in the graduate program at the University of Colorado, spoke to the group about the specific contemplative practices she uses in the three courses she teaches and how they are designed to relate directly to the course content.

As an educator, Kat works to help create a paradigm shift in how her students view architecture and themselves as architects: mindfully, engaging all five senses in conversation with the landscape, and aware of the impact that the environment and architecture can have on each other. She teaches a studio class, 'Dwelling Places of the Western Spirit,' which deals with the physical making of place, and 'Building the Land' and 'Home on the Range,' both of which consider the built and cultural landscapes of ranching. These classes are interwoven so that they all look at the same ideas from different perspectives: the integration of the human spirit, the spirit within the landscape, and the structures housing that spirit. The practices she uses are intimately connected with the subject matter, as they serve to quiet the mind in order to open awareness to the unseen, unexpected, and disconnected.

Although her students don't build until they become practicing architects, she sees the design process as an opportunity for them to become mindful of all that architecture embodies and how one can best use natural resources and minimize the impact of the built environment. She incorporates practices that help awaken the five senses and bring awareness of relationships, scale, time, and light to their understanding of architecture.

One of the practices she uses is a guided meditation. She leads her students outside of the classroom and invites them to sit in the sun for ten or fifteen minutes. During this brief time, she guides the students into awareness of the sun's warmth, light, and trajectory; after this, the group gathers to reflect and process their experiences. This exercise can be adapted to observe a variety of phenomena: for example, she will also guide students in and out of micro and macro observations of the landscape. She will ask students to close their eyes, open them to observe the micro details of an object, close their

eyes, open them to observe the macro landscape, and close them again. As one participant noted, things that she didn't initially see as part of that landscape revealed themselves through this process.

She also takes her students camping for three nights on a ranch, which allows them to experience a site over a greater length of time. She deliberately places them in an environment where they are separated from telephones, television, and other technologies; this allows them to focus on their bodies, the space, and the place. Students are transformed by this experience: their perceptions of time and space are altered.

Kat has found the reflective process of speaking to what they've seen, via writing, drawing, or photos, to be an important aspect of these practices. The experiential part of these site visits informs their understanding of architecture and their design process in a way that mathematical equations or theory simply can't; it communicates the intangible. In turn, the students are able to bring these experiences and the tools they've acquired to bear on their design process.

Contemplative Seeing

Joanna Ziegler, Professor of Visual Arts at College of the Holy Cross, spoke about the practice of contemplative seeing. To her, the heart of contemplative practice is openness; as opposed to looking, seeing with full awareness means to see things as they are, leading one to dwell and connect with the other. Through contemplative seeing, one is opened to a source of insight. It is this awareness that she teaches her students to cultivate.

In one of her classes, Joanna asks her students to look at two paintings from the Renaissance and an abstract modern work. Week after week, looking at the same painting, she asks them to tell her what they see; they aren't allowed to read critiques, listen to the docents, or use any other secondary source. Each week, they report something new. She noted that her students think they'll see everything after a short time, but thirteen weeks later they are still discovering new elements, still asking questions. These exercises teach her students about the process of seeing and how much is contained within a single painting and within

the field of art history. These exercises are a form of meditation.

Joanna led the group in a similar exercise containing two parts. In the first part, she displayed the painting for thirty-seconds, the time we usually give a painting in a museum. Participants were asked to jot down their first impressions in that brief time; these notes were set aside for later reflection.

The second part was a re-evaluation of the painting, whereby the group shared observations and Joanna led a Socratic dialogue that touched upon some of the larger questions that are raised in her class curriculum.

The variety of observations was remarkable. This was a painting that had many elements: textures, light, angles, colors, weight, proportion, subjects laid bare and others occluded. At this stage in the class, Joanna limits observations just to what the group can agree on, a point that is open to much debate, she acknowledged, but a dilemma that also opens up rich possibilities. Discussions on these topics and others have their place later in the course, but the first stage of contemplative seeing requires that we limit ourselves only to naming what we can see; we need to set aside the lens through which we see the world, wipe it off, and start anew. No interpretations, no presuppositions, no outer contexts wrought on the painting. It's a challenge, but her students come to realize how much there is for the eye to see.

She has found that in taking the time to name only what they see, they are focused and she's able to talk about all the content that she would address by another method. Through this process, she also gives her students the tools to see with full awareness. Toward the end of the course, after her students have become familiar with the painting and the tools to see critically, she introduces the theoretical readings on the discipline of art history.

Joanna has found it significant for students to know that certain things can be agreed upon, like "I see the subject has a flute," because the question "is she picking the flute up or putting it down?" allows the class to safely diverge into greater questions of perception and interpretation. Over time, students will begin to see that there is a boundary between the painting's story and the story they bring to the

painting, the line between what is there and what is imposed, the intersection of self and other. To get to this place is a challenging pedagogical process, but one that yields great rewards and gives students tools that they can apply to further inquiry, in art history and every other field.

Toward a Poetry of Self-Forgetting

Marilyn Nelson, Professor Emerita of English at the University of Connecticut, and Poet Laureate of Connecticut, read selections from her poetry concerning contemplative practices, the contemplative experience, and African-American history. Before reading, she noted that that what she's been doing in her classes for the last few years has been influenced by the ACLS Contemplative Practice Fellowship she received in 1999 and by her sense that contemporary American poets would do well to practice some form of self-forgetting, in order to step out of the picture and release oneself to the poem. Quoting Michael Schmidt's observation that "the good poem takes the poet over, uses the poet to get itself written, surprise by surprise," Marilyn shared that "trying to write this poem of self-forgetting has a good deal to do with choosing to write in very restrictive forms and to write about subject matter which is given. The stricter the form, the less freedom the poet has to move around in the form, and ironically, the freer the poet is. You forget yourself and concentrate on the form and subject matter and in that interaction you lose yourself in the process of composition... you write surprise by surprise."

Branching Out: Moving from Contemplative Practice Courses to a Curricular Requirement

Heather Hathaway (English) and **Anthony Peressini** (Philosophy) have been teaching courses using contemplative practices as pedagogical and learning methods for the past seven years, since they were awarded an ACLS Contemplative Practice Fellowship in 1999. In 2006, they were awarded an ACLS Contemplative Curriculum Development Grant in order to expand on the contemplative practice offerings at Marquette University, where they co-direct the Honors Program.

Through a retreat for ten of their colleagues this summer, monthly faculty colloquia during the school year, and a University-wide lecture series focusing on the role and incorporation of contemplation in the traditional academic classroom, they are developing a network of faculty committed to fostering an interdisciplinary community of teachers, scholars, and administrators interested in contemplative practice and inquiry. Specifically, they aim to implement ten new contemplative courses within the Honors Program. They spoke to our group about the efforts, successes, and challenges facing them in this process of branching out from individual courses to a curricular requirement.

Upon appointment as directors of the Honors Program, they were charged to redesign the curriculum, which enabled them to make contemplative practices a key component. They framed their curricular offerings under the context of the University's commitment to the Jesuit belief that true education should develop not only the intellect, but also moral and spiritual character. Contemplative practices were among the various "nontraditional" pedagogical methods they proposed as a unique keystone of the program; they also teach traditional analytical and research methods.

The Honors curriculum consists of eight foundation courses in History, Literature, Philosophy, and Theology, and a four-year Seminar Series, the second year of which focuses on alternative pedagogies such as those incorporating contemplative practice. The fourth year "Full-Circle Seminar" is an integrative and multidisciplinary course designed to revisit and pull together the various strands of the student's formal education. As such, it explicitly incorporates content material experienced in previous seminars, including the contemplative practice course offerings in the second year. They allow for a lot of flexibility in this program and all of these courses are elective offerings within the general curricular requirement.

Heather noted, as did the other session presenters, that one's ability to integrate contemplative practices occurs on a number of different levels, depends on

factors including course content and class size. It's a luxury, she acknowledged, to be able to design a course around contemplative inquiry, but she has found ways to incorporate elements of contemplative pedagogy in all her classes. One professor who teaches a large lecture course begins each class with five minutes of silence; it's an opportunity for students to set aside what came before, to center themselves and to open up to the offerings of the day's class, and it has a palpable effect.



Heather and Tony offered five recommendations to professors designing their first course integrating contemplative practice and inquiry:

1. Teach from where you are in your own contemplative journey and be patient with yourself; you will learn from each class;
2. Remember that contemplative practices are content. You can't add practice without taking away something else;
3. Class size and content goals matter. The size of the group and the requirements of the course content will affect how deeply you can go with the practices you introduce;
4. The physical, and personal, space in which you teach is highly significant. Be reflective and thoughtful about how you are going to make that environment a contemplative space;
5. Community and instructional practice is recommended for beginning practitioners. Often the practices introduced require guided assistance and students are encouraged to practice surrounded by peers.

They also spoke briefly on the topic of assessment, a recurring theme of the session. Due to the nature of contemplative practices as personal and experiential, they have chosen not to assign letter grades to students taking these courses. Instead, faculty members evaluate students on a one-on-one basis, which they are able to do because they have small

classes and the structure of the Honors Program allows it. Heather feels that qualitative assessment measures are the way to evaluate the contemplative inquiry; other professors have graded on a pass/fail basis with a strict attendance policy.

With this framework in place, they are embarking on the next challenge: staffing. Demand for these courses from students is tremendous; not only are these classes highly popular within the Honors Program, students from across the university system also want to enroll. As such, they are facing a shortage of faculty to teach contemplative practice courses, for a variety of reasons including department requirements, professors who aren't sure how to incorporate contemplative practices and inquiry into their pedagogical methods, and administrative blocks that question the value of contemplative practices as a pedagogical method. The colloquial sessions, lecture series, and retreat will address these issues over the long-term.

The Science of Meditation

Arthur Zajonc also gave a brief synopsis on the scientific research of meditation and qualitative research studies. He noted that while this area of research has just scratched the surface of the range of meditative experience and scientific measures of first-person experience are still being developed, the positive outcomes of this research supports the theory that meditation can increase cognitive development, health, and emotional balance.

Neuroscience of meditation: **Richard Davidson** (University of Wisconsin at Madison) is one of the top researchers in the neuroscience of affective emotion. Significant results have come out of his research using three practices of focused attention, open presence, and non-referential compassion with eight "expert" meditators as subjects, expert being defined as one with 10,000 plus hours of meditation experience. One of his papers reported that gamma activity showed the highest non-pathological levels ever recorded which correlates with centers of positive emotion and compassion. This paper also reported the highest non-pathological levels of phase-synchrony, a pattern increasingly associated with robust brain function and the synthesis of activity

that we call the mind. In short, these reports suggest that mental training via meditation may improve functional integration, and may have implications for performance, mind-body health, thereby bringing the brain to a greater level of consciousness. Davidson states:

To summarize, our study of compassion meditation found activation in brain regions thought to be responsible for one's feeling state, planning of movements, and positive emotions. This pattern was robustly modulated by the degree of expertise. These data suggest that emotional and empathic processes are flexible skills that can be trained and that such training is accompanied by demonstrable neural changes.

-Davidson et al

Neuroplasticity, the brain's ability to reorganize the structure and function of neural connections, is another field of study that has been rewriting old scientific theories. Historically, it was thought that the brain had limited abilities to regenerate and reorganize neural circuitry, but new research has shown that the brain is far more malleable than previously thought. **Sara Lazar** and collaborators have done studies that have shown cortical thickening in subjects with an average of nine years of 40 minute/day meditative practice; this cortical thickening was demonstrable in the regions of the brain that deal with attention and processing sensory input⁴. Of note is that the older subjects in this group had a higher cortical thickness than non-meditators in a similar age range and a few who are younger; this area of the human cortex normally thins with age. "Our data suggest that meditation practice can promote cortical plasticity in adults in areas important for cognitive and emotional processing and well-being," says Lazar. "These findings are consistent with other studies that demonstrated increased thickness of music areas in the brains of musicians, and visual and motor areas in the brains of jugglers. In other words, the structure of an adult brain can change in response to repeated practice."

⁴ "Long-term meditators self-induce high-amplitude gamma synchrony during mental practice," *Proceedings of the National Academy of Sciences*, vol. 101, pp. 16369-16373, Nov. 16, 2004, Antoine Lutz, Lawrence L. Greischar, Nancy B. Rawlings, Matthieu Ricard, and Richard J. Davidson.

There are also longitudinal studies being performed, most prominently the Mindfulness-Based Stress Reduction (MBSR) project by **Jon Kabat-Zinn** and colleagues of the University of Massachusetts Medical School; **Herbert Benson**, of Harvard and the Mind/Body Medical Institute, which for many years has studied the relaxation response; and more recently, the as-yet unpublished study “Cultivating Emotional Balance,” by **Margaret Kemeny** of the University of California, San Francisco, and **Alan Wallace** of the Santa Barbara Institute.

The MBSR study began in 1979 and has since published multiple findings that mindfulness, an intentional focused awareness practice, has positive outcomes in the areas of chronic pain, psoriasis, anxiety disorder, fibromyalgia, and depression relapse. More information on this research can be found at <http://www.umassmed.edu/cfm/research/findings.cfm>.

Benson’s work on the relaxation response at his Mind/Body Medical Institute includes a stress study with college students, which demonstrated significantly greater reductions of psychological distress, state anxiety, and perceived stress among that experimental group. This group, who entered the program reporting high stress, received six 90-minute group-training sessions in the relaxation response and cognitive behavioral skills over a six-week period. The relaxation response is consciously elicited by using “a word, sound, prayer, phrase, or muscular activity while passively ignoring distracting thoughts”; among these relaxation response-based skills were diaphragmatic breathing, guided imagery, progressive muscle relaxation, yoga stretches, and mindfulness.

The Cultivating Emotional Balance project tests the effects of an 8-week training program integrating meditative techniques with psychological approaches to promote positive changes in emotional responses, well-being, and health; the experimental group is female school teachers between the ages of 25 and

60. The pilot study was completed in 2003 with positive results; they have just analyzed the data of the main study, which will soon be published. Advance word is that this study has also yielded positive results.

Other projects of note include:

The Shamatha Project at UC Davis and the Santa Barbara Institute, is designed to study whether one can train attention. Beginning in February 2007, two groups of 32 people will engage in a 97-day retreat where they will be taught and practice three meditative practices 8-10 hours per day.

Shauna Shapiro has published a paper detailing a theory of mindfulness, looking at intention, attention, and attitude (how one attends) and how these three lead to a “re-perceiving” or fundamental shift in perspective. “Mechanisms of Mindfulness” was published in the *Journal of Clinical Psychology*, 2006.

The Mind and Life Institute, since 1985, is committed to “collaboration and research partnerships between modern science and Buddhism to promote the creation of a contemplative, compassionate, and rigorous experimental and experiential science of the mind, which could guide and inform medicine, neuroscience, psychology, education and human development.” The Institute has convened major conferences, most recently the 2005 conference on the Science and Clinical Applications of Meditation. Since 2003, they have also held a summer research institute to build collaboration between scientists, neuroscientists, and biomedical researchers on the topics of meditation in functional neuroimaging research, neuroplasticity, fundamentals of clinical intervention research, affective and cognitive trait effects, integration of first-person techniques, longitudinal studies, and epistemological and methodological issues. www.mindandlife.org.

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