5th Annual Summer Session on Contemplative Curriculum Development
August 9 – 14, 2009
Report by Beth Wadham, Academic Program Associate

After five years, this gathering of educators in August at Smith College has become an established way to demonstrate how satisfying it can be for professors to work across disciplines to explore the role of contemplative practice in their courses. This year, faculty from Economics, Chemistry, Physics, Law, Art History and Architecture worked with the group of mostly English and writing professors to their mutual benefit. Participants agreed that there is a "contemplative heart" of each discipline that can be shared with all.

In welcoming the participants, Arthur Zajonc remarked that "each one of us is an educator with our own competencies and specializations, and wants to prepare students in deeply responsible way, but we often feel we miss half the potential. Education has developed techniques over thousands of years to develop the exterior abilities of the student; we come together this week to give care and intention to the development of the interior." This "complementary curriculum," he proposed, can offer great benefits, and has practical applications in many fields, including medicine (MBSR), technology (Google's SIY course) and the military (the Center's work with resilience for military caregivers). We deprive ourselves, he suggested, of half the resources available when our solutions to problems fail to plumb our own depths of insight and concern. In addressing the pressing issues of our time, these partial responses are inadequate.

During the week ahead, educators explored universals that apply across curricula, as well as practices designed for particular disciplines, in the interest of expanding the range of their students' flourishing capacities. In addition, while practicing, learning, and working together, they built the resources of a community that would sustain them in their home institutions in the future.

At the close of the opening circle of introductions, Mirabai Bush shared Wendell Berry's poem, "The Wild Geese," setting the tone for what was revealed over the course of the time together.

The Wild Geese

Horseback on Sunday morning,
harvest over, we taste persimmon
and wild grape, sharp sweet
of summer's end. In time's maze
over the fall fields, we name names
that went west from here, names
that rest on graves. We open
a persimmon seed to find the tree
that stands in promise,
pale, in the seed's marrow.
Geese appear high over us,
pass, and the sky closes. Abandon,
as in love or sleep, holds
them to their way, clear,
in the ancient faith: what we need
is here. And we pray, not
for new earth or heaven, but to be
quiet in heart, and in eye
clear. What we need is here.

~ Wendell Berry ~
(*Collected Poems 1957-1982*)

Contemplative Pedagogy: Principles, Design, and Practice

Arthur Zajonc, the Center's Academic Program Director and Professor of Physics at Amherst College, shared the design principles for two courses he's taught along with a sequence of practices, offering a rationale and example for each. Zajonc has been developing contemplative pedagogy and contemplative epistemology over the past 20 years in the interest of expanding our view of knowing to include the contemplative dimension. A growing body of research supports these pedagogical interventions. The time, Zajonc urges, has arrived to integrate the inner and outer dimensions of education.

At first, this consists of introducing what he calls "general practices," which establish attention, equanimity, and emotional stability, and support the discovery of relationships and the students' ability to sustain contradictions. General practices cultivate capacities that have wide application to learning across curricula.

The two courses he discussed, "Eros and Insight" and "Science and Spirituality," are freshman seminars that introduce students to intellectual inquiry at Amherst. In the first week, Zajonc also introduces them to the contemplative, using a passage from Thoreau which offers an invitation to silence, wakefulness, and the poetic and divine life. Then Zajonc gives an assignment to be silent, to cultivate silence for a short time, to simply observe what happens, and to write three drafts characterizing the experience.

In the second week, he introduces concentration exercises, starting with something simple, like a paper clip. The students look closely at the object, and then imagine it, picturing it in their minds. They imagine its manufacture, function, everything having to do with it.

In the third week, they explore empathy and afterimage, moving between focused and open attention, first focusing on a sense object, such as the sound of a bell, and then letting it resound in memory. As the resounding fades, they move into a state of open awareness: letting go, not seeking, and not expecting. Then the exercise can proceed to a further stage of letting come, holding open a space for thoughts to arise from non-habitual sources.

Zajonc is committed to methods such as these. He finds they offer a "deep epistemology" which serves the core mission of education and cultivate and recognize the importance of the student's responses. His experience has shown that students' engagement with the subject of their refined attention, whether it be an organism, poem or social problem, is heightened through these means and that when students develop a feeling for the object of study, their inquiries can lead to contemplative insights.

The group was invited to experience firsthand the steps Zajonc developed as a contemplative method. First, he asks his students to concentrate on the "outer phenomenology" of the subject of inquiry, for example the outward behavior, speech and posture of an autistic child, and to build up as clear and accurate an objective description as possible. Then, they're asked to focus on the "inner phenomenology." Using the same example, one can imagine the inner experience, feeling, and mood of the autistic child.

After writing a short paragraph describing what is observed from outer and inner perspectives, the next step is to develop a poetic line or image that represents the question at the center of the inquiry. This line or image then becomes the focus of attention like the bell sound in the introductory exercises. After a period of focused attention on the language or image, students can move between focused and open awareness, allowing for new perceptions or insights to come. This "living back and forth" with a well-formulated question, Zajonc finds, can nearly always be relied upon to reveal something fresh. He finds that Goethe's phrase, "a delicate empiricism," describes this approach, which gathers information and impressions from an intimate stance, and allows for a viewpoint that "makes itself utterly identical with what is observed."

Practical Approaches to the Impractical; Impractical Approaches to the Practical

Michelle Francl, Professor of Chemistry at Bryn Mawr College and 2008 Contemplative Practice Fellow, began her presentation on science and contemplative practice with the questions: "Is contemplative science an oxymoron? Or isn't that what scientists do: contemplate?"

She asked the group to conjure up for themselves some images of the scientist. Those that arose—figures sporting wild hair, working in solitude, and in isolated labs—were not far from the contemplative. Yet the world, she observes, interprets science as "objective" and contemplation as "subjective," and tends to put them at opposite poles. Francl suggests that in reality they twine around one another. Science explores questions that range between the quantifiable world and the unknowable, infinite universe.

In the past, she remarks, the contradiction may have produced less tension. Johannes Kepler, for example, when writing up his *Mysterium Cosmographicum*, frequently bursts into poetic rapture and indulges in what he calls sacred ecstasy. Gregor Mendel studied variation in plants and developed his laws of inheritance in the garden of an Augustinian monastery. For Francl, these might serve as models of the contemplative scientist.

Francl personally identifies with a monastic (Ignatian) foundation for what she does in her classroom and for her, practice is not distinct from life. She writes for *Nature* magazine, her church paper, and has prayed with a monastic community in Villanova for 25 years. During her recent sabbatical year she attended what she calls "Jesuit boot camp," where she was alone with Ignatian practice, just self and contemplation. Twice daily, as part of an "examine" practice, she engaged in reflection on what had happened and on her desire for the future. This tradition now finds its expression in her teaching, as she sets her intentions for lessons, checks in on what actually happened, and then sets new intentions.

Her inclusion of a "stillness practice" with her students to begin class cultivates the patience, attention and carefulness she sees as critical for the development of scientists. She introduces other practices, such as *lexio divina* and "beholding" to extend the student's ways of seeing and perceiving verbal and visual information. She refers to Gerald Holton's *The Scientific Imagination* (Harvard: 1998), which looks at how the discoveries of Fermi, Heisenberg and Oppenheimer were made. It describes the "unforced pace" of their research, despite the idea that science is often characterized by frantic progress.

Francl has even developed contemplative assessment measures that reward skillful reflection as well as accurate results. For example, if students are able to identify their

own errors, and articulate how they know they're wrong, she will award them some of the points lost for the mistakes. To close, she shared with the group a method she uses to extend her students' capacities for problem solving by having them attempt to find a solutions to those for which they are completely unprepared. To do this, she suggests, as Natalie Goldberg has written, they need to find the "bones" of the problem and allow this to inform their approach. To the group before her, she posed the question, "What is the circumference of the earth?" and gave us four minutes to respond. Many methods were employed, some effective, some less so, but no one left the page blank. The experience of trying, however one could, left the group engaged and appreciative of the energy that's generated from moving into the unknown, as Michelle illustrated with a slide of her son jumping from a cliff to the water below, taking the leap.

Contemplative Seeing

This afternoon presentation, about inviting students to see, was preceded by an announcement that a meteor shower would be visible later that evening. So during Mirabai's introduction of Jody Ziegler, professor of Visual Arts and Art History at Holy Cross College, she referred to Ziegler as "our own personal meteor shower." Ziegler, who was one of the Center's first Contemplative Practice Fellows (1997), has taught at every one of the five Summer Sessions, returning regularly, trailing her sparkling enthusiasm wherever she goes.

From a presentation by an Art Historian, one might well expect the talk to show images of art and architecture, but Ziegler did not use slides. Instead, she brought a series of questions: "Why are we here? Why undertake this work? What do I desire? What is this work?" She wanted to explore the distinctions between teaching contemplatively, teaching contemplative practice, and teaching about contemplation, and assert that bringing contemplative practice to higher education is a public declaration that "the inner life matters."

For her, contemplative pedagogy has to do with cultivating her students' ability to see, or "behold," the objects of their studies. This means that she will teach less but they will know more. She doesn't teach them meditation, yoga or Tai Chi, but she teaches from within her own practice and out of her grounding in her discipline. Ziegler characterizes contemplative pedagogy as the thread that winds between teachers and students and encourages educators to ask themselves, "What is the one thing I want

the students to have at the end of the course?" For her, her desire for her students to love art, live with awareness, and see themselves and their world more clearly is motivated by an "objective of justice" that is rooted in an appreciation of beauty.

While she recognizes that beauty is a loaded concept, and that its relationship to truth and justice has been the topic of philosophical quests at least since the Pre-Socratics, she finds that if she can wake her students to seeing beauty, to developing the organs to perceive it, they can discover their own moral compasses. Through attending to and developing a feeling for great works of art, they become more interested and intimate with them, and they begin to love what they know.

Repetition is such a strong feature of her pedagogy that one might say that establishing this connection between the student and the work of art is nearly ritually induced. The assignment, to go at the same time to the same place each day to sit before the same painting and just look, focuses their attention again and again. By noticing the changes in the way they see the painting, they also notice changes in themselves. Once they have this experience, from within, of observing the impermanence of their own preconceptions and prejudices, they have, Ziegler believes, the foundation of an ethical awareness, the beginning of an ethical stance.

They may or may not be ready for meditation, yoga, or other traditional practices, but, Ziegler finds, they can learn to see. And their attentiveness leads to care and the capacity to focus on what's valuable in art, nature, and human life and orients their centrifugal energies toward making a better world for everyone.

Mindfulness Meditation and the Brain

Britta Hoelzel, from the Department of Psychiatry at Massachusetts General Hospital, shared her research from the lab of Harvard Professor Sara Lazar on the neural mechanisms and effects of mindfulness meditation. Mindfulness, as described by Jon Kabat Zinn, is "intentionally paying attention to experiences in the present moment, non-judgmentally." (1990) Hoelzel's research contributes to a body of work that shows the benefits of meditation for attentional performance, emotion regulation and body awareness.

Attention is described as consisting of three functionally distinct cognitive networks: *alerting,* which is a vigilant state of preparedness; *orienting*, which allows us to select information from sets of possible sensory data; and *conflict monitoring*, or "executive functioning," which is the ability to prioritize among competing thoughts, feelings and responses. Mindfulness trainings resulted in improvements in all three networks (Jha et al. 2007).

Subjects in the studies received instruction in insight (Vipassana) meditation and practiced intensively for three months. Alerting, orienting, and conflict monitoring

can be evaluated by "attentional blink," a test which presents new information that is typically undetectable in a predictable series. Experienced practitioners more often detected the new target than those without practice.

Magnetic Resonance Imaging (MRI), which reveals the function (blood flow) and structure (matter, cell-bodies, and synapses) of the brain also reveals functional correlates of meditation. Hoelzel tested conflict monitoring using MRI, comparing 15 meditators and non-meditatiors, and observed that the anterior cingulated cortex, which is responsible for keeping on task, showed greater activation in the meditators.

Emotion regulation has been studied using qualitative interviews, self-reports and physiological tests. Participants with mindfulness meditation experience showed a diminished startle response from aversive stimuli (Zeidler 2007), decreased emotional reactivity and less interference from negative images and tones (Otner et al 2007).

Body awareness was studied through qualitative interviews and a "heartbeat detection task." Experienced mindfulness meditators reported a more differentiated perception of body sensations and a higher rate of interoceptive awareness.

Hoelzel reviewed a final study of her own that took as its question, "Does gray matter concentration increase as a result of mindfulness training?" Participants took a regular 8-week class at the Center for Mindfulness and maintained a daily meditation practice along with yoga, bodyscan and breath awareness.

Subjective measures, as reported on a 54-item psychological well-being scale, showed significant improvement over the 8–week period, but would the change predict changes in the gray matter concentration? The results were positive, indicating an increase in concentration in the posterior cingulated cortex, which is linked to introspection; the left temporo-parietal junction, linked to orienting; and brainstem cluster bilaterals, which correlate to psychological well-being, monitoring the release of serotonin (affecting mood) and norephinephrine (modulating arousal and optimizing attentional performance).

In summary, there are behavioral and neurological indicators for the benefits of meditation on attention, emotion regulation and body awareness, all capacities which have important implications for education.

Regret

Daniel Barbezat, Professor of Economics at Amherst College, 2008 Contemplative Practice Fellow and long-time Buddhist practitioner, began his presentation on regret as he would with his students: leading with contemplative practice. He asked his listeners to "sit in ease," suggesting that might mean changing the way of sitting to "ease sitting" or, if sitting in unease, to notice that, and be easy with it. From that place, he asked us to take the opportunity to wish someone well, to let that go, and then write for a couple minutes in answer the question, "What did you notice?"

At this point, Barbezat might ask students to read over what they've written and ask, '"What do you notice now?" Throughout the exercise, the invitation to pay attention, to watch what arises, and to watch what you're doing while you're doing it, is always present. An interesting comparison can be made with Jody Ziegler's persistent query to her students: "What do you see now?"

One might wonder what relationship these methods, and even the title of his talk, "Regret," has to the study of economics. Regret is important to behavioral economics, which explores the effects of choice and uncertainty on the actions of consumers. The theory is that we know our budgetary constraints and make choices to optimize them, allocating scarce resources to maximize them. But reality, it turns out, is often different. Regret figures as a factor in the cost of action (or inaction). Barbezat introduces the practice of self-inquiry so that everyone has an experiential resource to draw upon when investigating how this works. Barbezat wants his students to have access to their personal experience and take it seriously in the study of economic behavior.

The sound of writing begins and then, a bit later, Barbezat notices and remarks that, "maybe this is going on a little too long. Some people are looking a little bored…notice that." Next he asks his listeners to check in with their bodies. He's specific: "the toe next to the big one on the left. What are the sensations there? Just notice. Your stomach might not let you go there.…" He then asks them to turn to their neighbors and share what they noticed. "Thank your neighbor for sharing, and for listening to, what was noticed."

Upon returning after a 15-minute break, a more general discussion of regret ensued. Regret is a way of examining the costs of our actions. Under conditions of scarcity, in which we do not have perfect information, we make choices. This kind of self examination of the results of our choices allows us to explore the interactions between desires and resources. Regret is a combination, Barbezat suggests, of judgment and feeling. The subtle nature of feeling associated with regret can help clarify how we use and are used by our regrets.

Consider the word "decide," he proposes. It shares the Latin root, *caedere,* with patricide, matricide and homicide, and means to "kill off." Making choices always involves forgoing other options. Options forgone, or alternate worlds that might have been, are created by regret. Decisions about the future require assessing two elusive

probabilities: what the future will be like and what you'll be like in it. Given the uncertainty regarding those two factors it becomes almost impossible to calculate the risk. So we often have to commit to action without knowing, and then factor in the cost of regret. The world might not (probably won't) turn out the way you'd like. Is there a way to deal with this?

It turns out that whether we regret or rejoice, our choices may have more to do with our own point of view than with any objective outcome of those choices. Barbezat refers to *Stumbling on Happiness,* in which Harvard Professor of Psychology Daniel Gilbert finds that people are not very good at anticipating their future happiness and that the best way to reduce the pain of regrettable actions may be to rationalize them.

Another possibility that Barbezat proposes is to develop a sense of awareness of our states of emotion and better understand the inner conditions of our well-being. One such "awareness development technique" is contemplative practice, which can provide students with access to greater self-understanding. Barbazet wants his students to learn that if they are more informed about themselves and better able to sit with anxiety, they will suffer less and be better able to be with what is, rather than wishing for other outcomes.

Contextualization: Matching Mindfulness Practice to Substantive Pedagogy. Teaching Practice in Law School

David Zlotnick, Distinguished Service Professor of Law, and 2008 Contemplative Practice Fellow, brought mindfulness to Roger Williams University. His fellowship brought legitimacy to the inclusion of contemplative practices and allowed him to bring more of himself into the class and court room.

In law school, Zlotnick finds, students are at a later stage of their development, and their professional and personal identities have a stronger correspondence. But the litigator personality, with its connotations of aggression, toughness, and greed; the reality of the trials, in which someone wins and someone loses; and the typical atmosphere of law school, with its fierce competition, high stress, and paper chases, all exacerbate social and personal difficulties. The course he developed attempts to address all these aspects, by offering opportunities for service, emotional catharsis, democracy in action, and participatory citizenship.

In his Trial Advocacy course, he simulates a courtroom setting and offers tools for performance. Students learn by doing, observe one another, and share their critiques. Mindfulness components include beginning each simulation with a centering practice, journaling, and writing reflection papers. The training in courtroom "performance" they receive is also informed by mindfulness. He brings in a yoga teacher and actor to

introduce tools for "finding one's feet," setting intentions as preparation, and remaining present with the story as they hear witness testimony. In the simulated courtroom, they sometimes listen while blindfolded.

He finds that students always learn something, and the trial never goes the way they expect. This brings in still other applications of mindfulness: letting go of control and using pauses to check in and simply observe themselves and the situation. These simple practices allow students to cope with their anxieties about fixing problems and offer chances for unexpected solutions to come toward them.

He does recognize that there are limits to what mindfulness practice can do to address all the difficulties of law practice. There are necessary value conflicts that can't be eliminated. Lawyers have to do things that aren't always consistent with their own values; they are subject, as is everyone, to laws like mandatory minimum sentencing, and they will at some point have to defend people who may be guilty. That's where Zlotnick finds that the dynamic approach to balance, which they learn in yoga, between effort, commitment and ease can help to reconcile their sense of right and wrong.

Seeing through Drawing

Brad Grant, Professor of Architecture and Associate Dean and Director of Howard University School of Architecture and Design, comes from a background in community design and teaching and is now primarily an administrator. His work is mission driven, out of care for his institution, and he's now working to integrate contemplative practice with faculty and staff rather than with students.

His presentation explored drawing as meditation and began with his revelation of the distinct phases of his own development. First, in Juvenile Hall, to gain respect in a complex pecking order, his skill in drawing set him apart (along with skill in boxing, which is the preferred form of conflict resolution in Juvenile Hall). Then, as a Junior Architect, he was responsible for designing what are termed the "bowels of the building:" loading docks, hallways, and bathrooms. This required, before computer graphics, a great deal of drafting. The task of drafting the ceiling plan for a corporate office building, where the smoke alarms go, might be deadly dull, but also, he found, there could be something interesting in the drawing itself. To manage, he transformed the drafting into a form of meditation and looked forward to coming to work to do it.

His current idea of drawing as meditation is informed by the creative process as reflected by Lynda Barry, in which 7 attitudes prevail: non-judging, patience, beginner's mind, trust, non-striving, acceptance, and letting go. He also finds

inspiration from Frederick Franck, who writes, in *Zen Seeing, Zen Drawin*g, that drawing is more that creating images. It is "a meditation-in-action on That Which Matters, a veritable breakthrough, an awakening from the years of non-seeing, from the coma of looking-at to firsthand seeing." Drawing can be an exploration of perception.

Grant invited the audience to take up paper and pencil and explore together. The first prompt was to "draw emotion," and the results were highly expressive. During the second, blind contour drawing, one could feel the concentrated effort in the room as eyes followed lines of perception and hands moved in response on the page. The third exercise was inspired by architect Louis Kahn, whose creative process once prompted him to have a conversation with the material, asking a brick what it wanted to be. (In case you're wondering, the brick answered that it wanted to be an arch, with a keystone.) After some leafy branches had been passed around, Grant suggested that participants "have a conversation with the branches," and then draw them with a heightened sense of awareness and precision.

Drawing from nature, like writing poetry, can be a chance to slow down enough to notice and to befriend that which is before one. Although in architecture it follows logically, Grant also suggested drawing exercises for all kinds of classrooms, and for field work. "When you take students to see something, have them draw it," he recommends, or in verbal/linguistic disciplines, have them draw poems, or a favorite room from childhood, or other interior spaces. Their powers of perception for and intimacy with their surroundings and memories will be enhanced.

Open Space Review

For a final forum, the group divided into small clusters to discuss the topics of common interest that had been proposed in the large circle. Thoughtful, penetrating conversations on Storytelling, Desire and Intention, Monastic Education, and Teaching and Proselytizing were engaged. Brief reports from each small group were summarized and insights shared the next morning with the whole group.

Closing Circle

After five days together, a strong sense of what was learned and stirred could be felt in the closing circle. Each participant shared one thing they would carry back from the week together. From setting the intention to "introduce a sense of wonder in students, rather than the books to read between now and Tuesday," or to "illicit students' own experience, examples from their lives," to learning to "just say yes to practice, before I'm present, and trust that," the harvest was rich and varied. Nearly everyone expressed gratitude to be with amazing people, joined in service, in a generous and supportive environment. The qualities of heart and life felt very precious, and the mind was awake to friendship.

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Google University's School of Personal Growth's emotional intelligence course is called S.I.Y. or "Search Inside Yourself." An article about the course is posted at http://www.webpronews.com/topnews/2009/01/09/google-universitys-school-of-personal-growth.

The Center is working with the US Army to explore the uses of meditation to restore resiliency in chaplains and medical caregivers. A prospectus, "The Use of Meditation and Mindfulness Practices to Support Military Care Providers," is now available online at http://www.contemplativemind.org/publications/MeditationforCareProviders.pdf.

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