

THE PROBLEMS OF PASSIONATE CHESS

Helping business strategists change the rules of the game through applied meditation.

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Abstract

After suggesting the need for and the appropriateness of the use of applied meditation by top corporate executives charged with strategic work, this paper attempts to develop a persuasive “sales pitch” to such an audience. The functions and benefits of applied meditation are presented in a range of logical, measurable, and appealing contexts, using the range of psychophysical research available, including field dependence-independence, de-habituation as shown in EEG studies, de-linking of the cortex and limbic system, the process of de-automatization, and the potential for access to primary process thinking — the “undermind.” A unique rhetoric is also developed and suggested, to reinforce benefits and provide the appeal that specialist terminology has for the executive audience. Finally, a range of real-world anecdotal evidence of success in improving strategic thinking is presented.

A kind of introduction: A real story.

I'm sitting in a conference room at the headquarters of one of the top ten global pharmaceutical companies.¹ With me are the executive vice president of business development and her four top managers. The assignment is to articulate a new positioning and strategy to make the company more appealing to potential partners — companies that need the resources of a major corporation to bring a product through clinical development and into the market around the world.

The mood of the meeting is tentative and uninspired, in spite of my attempts to liven up the brainstorming with “creative exercises” to help the group see their challenges from different perspectives. They simply can't let go. Ideas barely make it onto my whiteboard list before the managers cut them down with a battery of political biases and emotional arguments:

The past failure: *“That sounds like the approach Jackson tried in ninety-eight, and we couldn't make it work then...”*

Distrust of other groups: *“You can't promise that. Tech Ops screwed it up royally the last time we tried. We'd be a laughingstock.”*

The painful incident: *“No way; I had a meeting with RTE last week and they're still upset about the way we handled the payments in June and July.”*

The unspoken power play: *While one manager is talking, two others are looking at the EVP and rolling their eyes...*

In other words, it's going the way most of these meetings go. After more than 25 years in big corporations — 10 on the inside and 17 as an outside consultant — outcomes are easy to predict. But I know how to move the project forward. With enough prompting, priming, and parrying from my side, we get a list of ideas down. And I take them away.

A week later, I bring back their ideas — finessed and restated — plus my own. That makes a new context, and changes their perspective. Debate is livelier. Objections

are more realistic. And more helpful. We're moving towards a solution that they can all work with.

But it would be much better if the client could truly own the solution — develop it and elaborate it on the spot. There would be more buy-in, more pride, and more sense of teamwork. Not to mention more efficiency. Maybe if clients could understand how much they get in their own way, they would be willing to look at techniques that might help them get free.

A perfect metaphor.

Nanavira Thera, who was born Harold Mussen to a military family in England and became a Buddhist monk in Ceylon, devised a metaphor that corporate minds can easily grasp. It's based on that hoariest of business analogies, seen even today in the hallowed pages of *Fortune*, *Forbes*, and *Business Week*, the chess game. But he gives it a twist that makes it newly profound.

Picture a chess game in which the Bishops move on the diagonal — except when they get near the Queen, on whom they have huge crushes. To further complicate matters, the rooks are having a silent feud and will break their pattern of movement at random to avoid each other. Of course, the knights are so vain that whenever they have an audience of pawns they refuse to move away from these admirers. And, go ahead, add your own variation — and motivation — to make the game even more unpredictable.

Nanavira Thera calls this “Passionate Chess” (Claxton 2000). It's a perfect description of both the meeting I described and the mental processes of the participants. It's a tough game to win.

A possible strategy.

Suppose, however, that we could remove the biases and emotional distractions from the game, and see it simply as it is. Suppose that my clients could play

dispassionate chess. They would be more effective and efficient in working within their own organization. And they would gain advantages over competitors who are still playing the passionate game, as well. Applied meditation could bring this about. But getting groups like that to try it is not an easy sell.

Current sales approaches for applied meditation.

Meditation is not usually presented as an “offensive strategy” for line managers to apply to help make their company more competitive and to drive revenues. Instead, it is presented in terms of its softer benefits, which human resources, development, and training managers can apply to improve productivity, job satisfaction, and employee health. These softer benefits are being sold now in U.S. corporations, in two general guises —“spirituality in the workplace” and “stress reduction” programs.

Perhaps the softer of the two is the “spirituality in the workplace” movement. This movement has grown significantly over the past decade or more. As evidence, according to the most recent bibliography published by the Center for Spirit at Work at the University of New Haven (Neal 1999), the movement has spawned more than 450 books and articles, both popular and scholarly, with perspectives ranging from Evangelical Christian to New Age. Though vague in its definitions, one of this movement’s many accomplishments is bringing discussion and application of meditation into corporate cultures. An article in *U.S. News & World Report*, for example, was titled “Shush. The guy in the cubicle is meditating” (McDonald 1999). The article mentioned use of “spirituality-based training techniques” by the global consulting firm McKinsey and Co., to “boost clients’ productivity and profits,” and use by Boeing of “...training programs designed to open spiritual dialogues that will unfetter employees’ creativity.” As suggested in the breadth of publications in the movement, meditation is just one of many practices, and, in fact, may not be represented at all in a given company’s program. Also, it has been noted by Judith Neal, the director of the Center for Spirit at work, that

many of these programs are the result of CEOs and high-level managers “coming out of the closet about their own spirituality” (McDonald 1999). This means, essentially, that the “sale” has been made at another place or time that may not be directly related to business life.

The stress reduction context for applied meditation is not quite as soft an approach, as it addresses a serious concern for corporations, and it can have an impact that is measurable in savings to the company. A recent feature story on stress in *Fortune* (Daniels 2002) quotes a study by the National Institute for Occupational Safety and Health which found that more than half the working people in the U.S. view job stress as a major problem in their lives, and that the number who called in sick due to stress has tripled in the past four years. In this context, meditation is portrayed as a coping mechanism, and its potential as a competitive tool receives at best a passing mention. For example, in a recent article in *Industry Week* (Secretan 2001) the phrase “...and enhance our state of awareness” is the longest discussion of the point.

It is interesting to note, however, that the professions are beginning to see applied meditation as valuable not just for stress reduction, but for performance enhancement, as well. For example, in an article in the *Journal of the American Medical Association*, Neil Prose, a physician, describes his use of mindfulness meditation to “avoid the numerous distractions that seem to take me away from patients,” allowing him to pick up subtle cues that let him better understand patients’ issues and, therefore, to make better informed treatment decisions (Prose 2000). In law, a role for this performance enhancement effect of meditation is also being acknowledged. An in-depth article in the *Harvard Negotiation Law Review* on the applicability of mindfulness meditation to the legal profession targets two major problems: lawyer dissatisfaction and missed opportunities in providing the most appropriate services to clients. While the dissatisfaction problem is approached with the same perspectives and prescriptions as in spirituality in the workplace and stress reduction, the missed opportunities problem is

approached through applied meditation for performance enhancement. This benefit is described as meditation “weakening the dominance of adversarial mind-sets, enabling some lawyers to make room for — and act from — broader and deeper perspectives, thereby providing more appropriate service (especially through better listening and negotiation) and gaining more personal satisfaction from their work” (Riskin 2002). In both medicine and law, this benefit of applied meditation is best defined as the ability to ignore both external and internal distractions, and to focus on the person and the problem in all their complexities. In other words, professionals are learning to play dispassionate chess.

The sales challenge.

This emerging view or trend in the professions is illustrative of the potential for a performance enhancement sell into the corporations. Yet the fact that adoption of contemplative practices by the professions is a slow process — “they [the practices] remain very much at the periphery of law practice and law school education” (Riskin 2002) — suggests the scope of the sales challenge. The logical, analytical skills that drive people to these occupations and that are developed through education and professional activities are sources of identity and pride. Such habits of mind can make professionals, at best, skeptical of, and, at worst, hostile to practices that are popularly misrepresented and misunderstood as overly affective, irrational, and “unmanly.” In fact, Neil Prose notes that he enrolled in a weekend course on mindfulness meditation with “enormous skepticism” (Prose 2002).

A macho mindset is endemic to these populations, and, I posit, is most prevalent among line managers and top executives in industrial, scientific, and technological corporations — where men are most likely to dominate. The flavor of the feelings of such groups when facing a concept such as applied meditation can be represented, I believe, by two recent descriptions in print. In an article on meditation in *Men’s Health*,

entitled “Put the Man in Mantra,” (Platt 1999), the author describes his initial resistance: “Like most men, I’ve always been skeptical about meditation. When it came to achieving inner tranquility, I’d done fine with Rockford Files reruns and an occasional can of Schlitz.” In a more extreme case, the health and fitness columnist for the *Philadelphia Inquirer*, who presents himself as a thoroughly macho type, writes of participating in a stress-reduction-oriented meditation program (Carey 2002). “He [the physician presenting the program] asked me to ponder this: What is the risk if I don’t change? (A myocardial infarction for sure.) And what is the risk if I do? (I may become a Sensitive New Age Guy.) Hard to say which is worse.”

Our question is, then, “How do we present applied meditation in such a way that this skeptical, macho audience will not feel threatened by it, and, indeed, will be motivated to experience it?”

A different language, the same ancient practice.

To create a sales message that appeals to the corporate executive audience, we need to focus on different benefits and use different language and examples than are used in the spirituality in the workplace and stress reduction approaches to applied meditation. We must show “hard” benefits that meet executives’ day-to-day challenges — to solve immediate problems, set short- and long-term strategies, and improve the company’s competitive position. We must support these benefits with “hard” evidence. Such evidence should be factual, logical, and, whenever possible, objectively measurable. This way, executives may use familiar habits of mind to make the decision to give applied meditation a trial.

Just as important, we must develop a rhetoric that appeals to the corporate audience. Using terms that can be adopted as exclusive language for users of applied meditation helps to create a verbal environment in which new habits of mind will flourish. And in which it becomes easier for us to make the next “sale.” Each use of a

unique term by the “initiates” within a corporation or professional group will help to recall the experience for them and to reinforce the concept it represents. What is more, when heard by “outsiders” in the organization, such terms will stimulate curiosity and a desire to share the experience. Certainly the term “passionate chess” is an example of such a term — a candidate for adoption into corporate-speak.

I must argue that this kind of sales approach is not cynical and does not diminish in any way the value of applied meditation. We are merely looking at the entire constellation of benefits and bringing certain facts and benefits into the foreground. The group we are selling to will still gain all the physical, psychological, and spiritual benefits of meditation, from stress reduction to the cultivation of wisdom and compassion. In a discussion of the status of science in the context of spiritual inquiry, Guy Claxton (2000) notes that “For minds that need to *understand* before they will act — even in their own best interests — the power of science to persuade can be used in a good cause. This does not mean that Buddhism itself is given greater warrant by an allegiance with science; only that certain kinds of mind will give it greater credence.” I believe this statement stands equally well for sales strategies for applied meditation.

Measuring abilities and personalities: FDI.

There is a convenient and powerful way to look at the ability of applied meditation to help meditators achieve greater focus in the face of distractions, solve complex problems, and make confident decisions. It is a concept called field dependence – independence (FDI). The concept was first described by Herman Witkin and Solomon Asch in the 1940’s. Their work on spatial orientation perception used physical tests such as the Rod and Frame Test (RFT) to understand the importance of visual cues in perceiving the vertical direction of space. In the RFT, the subject is seated in a tilting chair or tilting room in darkness, a tilting square frame is shown to them, and they are asked to adjust a rod in the frame to the vertical position. Such tests have revealed that

some people use visual cues to perceive the vertical and place the rod in respect of those cues only, while others use internal sensations of gravity and place the rod counter to the visual cues when those cues are “misleading.” Those who use visual cues are classified as field dependent, those who use internal cues are classified as field independent. As the concept was elaborated, researchers found that field independence was related to the ability to locate camouflaged, that is, embedded, figures in a picture. (Think of the “Where’s Waldo” children’s books, or the hidden name “NINA” in Al Hirschfeld’s famed caricatures of show business personalities.) This finding led to the development of the Embedded Figures Test (EFT), which made testing for field dependence much more efficient and cost effective; in the EFT, field independent people identify the embedded figures faster than field dependent people. As the concept was elaborated further, field dependence and independence came to be seen as two poles of a continuum of cognitive style and personality, which, at the risk of oversimplification, suggests that field dependent types have less ability to attend, rely on external cues, and are more easily persuaded by others, while field independent types are capable of highly focused attention, rely on internal cues, and are not easily swayed by others (Goodenough 1986).

Because meditation practices can be viewed essentially as methods of training attention — focusing on an object and resisting internal and external distractions — researchers hypothesized that meditation would enhance a person’s level of field independence. Studies of FDI and related perceptual concepts have shown that this may be the case, although the variations in procedures, methods, and subject populations make it difficult to state this as a certainty. For our use in persuading the corporate executive audience, however, several seminal studies provide useful data.

William Linden, in 1973, performed a randomized study of 90 third grade students, measuring FDI, test anxiety, and reading achievement. After 36 meditation training sessions (20 - 25 minutes twice a week for 18 weeks) in which the students learned a simple concentration technique, the meditating group was found to have

achieved significant gains in field independence and significant reductions in test anxiety versus a group that received study skill instruction from a guidance counselor for 45 minutes once a week for 18 weeks and a control group. There was no significant difference among the groups on reading achievement.

Kenneth Pelletier, in 1974, tested 40 adults for a shift in perceptual style after three months of meditation practice. Subjects were selected from attendees at an introductory lecture on Transcendental Meditation (TM). They were randomly assigned to two groups, one practicing TM, a concentrative technique using a mantra, and the other asked to “sit quietly” for 20 minutes each morning. After three months, posttests on autokinetic effect, the EFT and the RFT showed that the meditators demonstrated a shift towards increased field independence — on all test measures.

Davidson, Goleman, and Schwartz, in 1976, were prompted by studies like those above to look further at the suggested enhancement of attentive ability, previously measured with the RFT and EFT, as well as the suggested reduction in trait anxiety in the Linden study. They tested four groups — control (interested in meditation, but not meditators), beginners (practicing for one month or less), short-term (< 24 months), and long-term (> 24 months) — on the Tellegen Absorption Scale (TAS) and the State-Trait Anxiety Inventory (STAI). Meditation practices of the subjects varied, including TM, Zen, and focused attention on breathing. Data revealed highly significant changes in absorption measures on the TAS that are consistent with a training effect, and highly significant decreases on the STAI as a function of the length of time meditating.

More recently, in 1992 and 1993, Lee Fergusson studied field independence and art achievement in meditating and non-meditating college art students, a group in which the perceptual abilities suggested by field independence are considered desirable. Field independence was measured with the EFT. The 1992 study of 47 students, including 12 at Maharishi International University who practiced TM, and control groups at other universities, found that the meditating group was significantly more field independent

than the control groups. The 1993 study expanded the size of the control groups at other universities, and revealed the same trend, with meditators significantly outperforming non-meditators on the EFT; in a contrary finding, there was one group of controls who, though scoring lower, were not significantly different in their EFT scores.

The majority of studies on meditation and FDI and related measures — 12 of 14, according to a comprehensive review and bibliography of research on the physical and psychological effects of meditation from 1931 to 2002 (Murphy and Donovan 1996, 2002) — show an increase in field independence for meditators. However, two studies do create questions. Goldman, Domitor, and Murray, in 1979, found no change in FDI in a study of 72 subjects randomly assigned to two control groups and one group that was given training in Zen meditation. The study is questionable, however, in that the duration was only one week, and data revealed not only no change in measures of FDI, but also no change in measures of state or trait anxiety — another finding contrary to the majority of studies. Bono, in 1984, found that a group of 16 meditators made a significant shift in the direction of field independence after six months of TM practice, but the control group of twenty, who sat quietly with their eyes closed for twenty minutes rather than meditating also made a significant shift towards field independence. Bono suggests that relaxation and calmness, with, perhaps, a training effect, may be involved in this shift of perceptual style, and that meditation is one way, but not the only way of bringing this about. It could also be argued that sitting for twenty minutes with eyes closed and the intention of relaxation every day for six months is, or certainly has the possibility of developing into, a “personal” meditation technique (the Zen technique of *shikantaza* is described much this way, as “just sitting.”)

Increased field independence would be valuable to our target audience within the corporation, and the embedded figure test is another ideal metaphor for the top-level strategic challenges in keeping a company competitive. As with passionate chess, the rhetorical possibilities are certainly powerful.

Applied meditation may help executives gain an edge, by improving their ability to focus on and analyze the relevant information, while avoiding the distractions of secondary issues and transitory problems. Further, the prospect of becoming a more field independent personality type is appealing to this group. Some aspects of a field independent personality that would be desired are “showing initiative, taking responsibility, self-reliance, thinking for self, less difficulty in separating from others, less need for structure in interpersonal relations” (Wapner and Demick 1991).

Yet FDI is only one objective way of describing the value of applied meditation, and it is a psychological — soft science! — measure. A physiological way of looking at the benefits of meditation would be helpful for further persuasion.

Measuring brain waves: De-habituating.

Field independence helps solve the problems of passionate chess through increased focus and analysis. Another way to solve those problems is to simply see them anew each time, to approach them with no expectations or bias. Applied meditation offers such a perspective. The mechanism can be described and, if not proven, at least supported in several ways.

In a 1976 behavioral analysis of Zen meditation, Deane Shapiro and Steven Zifferblatt concisely and usefully (to my mind) described the process of meditation and the de-habituating that can result: “First, [breath meditation] is a type of relaxation training. The individual sits in a physically centered posture and breathes in a calm, effortless way. Second, the person learns to focus attention on one thing — his breath — and to do so in a relaxed, yet deliberate fashion. Third, the person learns to be self-conscious (i.e., to self-observe) without a reactive effect and without habituating to the task. Fourth, the individual is able to desensitize himself to whatever is on his mind: thought, fears, worries. And fifth, the meditator is able to eventually remove all covert thoughts and images, thereby allowing him to ‘let go’ of cognitive labels, ‘reopen’ the

senses, and be more receptive to internal and external stimuli; or, in the words of the Zen master, the individual learns ‘To be able to see the flower the five hundredth time as he saw it the first time.’”

One way of objectively and physically measuring this phenomenon of de-habituation — the constant refreshing of perception of the moment — is with electroencephalographic (EEG) studies. And, in fact, there is support for the concept of dehabituation in the literature reviewed. Among the most influential studies are those by Akira Kasamatsu and Tomio Hirai in the 1960’s and 1970’s. In these studies an auditory click stimulus was given at regular 15-second intervals during the deep stage of meditation in which the EEG of the meditators, Zen priests, showed long persisting alpha waves. Each click blocked the alpha waves for two to three seconds, even at the twentieth repetition. In the control subjects, who sat quietly with eyes closed, the alpha blocking time decreased sharply after the fifth or sixth click (Kasamatsu and Hirai 1973). For the priests, each stimulus was “new.” One described the feeling as “noticing every person on a street without looking back at them with emotional curiosity” (Hirai 1989).

An interesting and instructive twist on this finding is that there is no alpha blocking from click stimuli in concentrative meditation states, such as yogic *samadhi*. A study by Anand, Chhina, and Singh, summarized in a 1975 review by Robert Woolfolk, measured alpha activity in experienced Yogis during rest and meditation. They found that in meditation, the alpha pattern was not blocked by the click stimulus or by visual or haptic stimuli. However, even during the “control” period of rest the Yogis still displayed considerable alpha activity, and when they were exposed to the stimuli, the alpha rhythm was blocked — and there was no habituation.

Sixteen studies that report de-habituation are listed in the Murphy and Donovan bibliography. Three other studies, in 1978, 1981, and 1986, failed to replicate the finding, while literature reviews in 1980 and 1984 concluded that too few systematic studies had been done to reach a conclusion.

Specific brain activity: De-linking.

Another way of looking at the concept of “fresh perspective” is suggested in the work of Daniel Goleman, Gary Schwartz, and others at Harvard University in the mid-1970’s who were investigating meditation as one mode of self-regulation. Based on the findings referred to in the FDI section above, for example, Davidson, Schwartz, and Rothman, in 1976, looked for enhanced specificity of cortical excitation and inhibition in brain regions relevant to attentional tasks. Data suggested that differences between groups with a high capacity for attention (meditators) and those with less “was not in the ability to activate selectively the modality-relevant area per se but rather the inhibition of the modality-irrelevant area.” In the Zen master’s words, the meditators could “notice people on the street without looking back with emotional curiosity.” Gary Schwartz, in a 1975 study of meditation and biofeedback in self-regulation suggested specific brain activity: “Meditation practices can lead to *heightened cortical arousability* and *decreased limbic arousability at the same time*, experienced as heightened perceptual awareness and simultaneously reduced emotional arousal and stress.” He referred to this as “de-linking” of the cortex and limbic system. De-linking is an apt physiological description of “dispassionate chess,” and a powerful rhetorical trope to add to our sales pitch.

A logical process: De-automatization

Still another way of looking at the “fresh perspective” concept is suggested in a 1966 theoretical study of mystic experience by Arthur Deikman. In this, as in earlier experimental studies of meditation, he proposes that mystic phenomena are a result of “a *de-automatization* of the psychological structures that organize, limit, select, and interpret perceptual stimuli.” He explains that his concept of de-automatization is drawn from the work of Heinz Hoffman who, in the book *Ego Psychology and the Problem of Adaptation* (New York, International Universities Press, 1958), describes how motor behavior, perception and thinking are automatized, as, with constant repetition, the intermediate

steps in such processes disappear from consciousness. He also refers to work by Merton Gill and Margaret Brenman who, in their book *Hypnosis and Related States: Psychoanalytic Studies in Regression* (New York, International Universities Press, 1958), describe de-automatization as an undoing of the automatization of hierarchically ordered psychological structures through manipulation of attention towards the functioning of those structures. Deikman suggests that meditation is just such a manipulation: “The percept receives intense attention while the use of attention for abstract categorization and thought is explicitly prohibited. Since automatization normally accomplishes the transfer of attention *from* a percept or action *to* abstract thought activity, the meditation procedure exerts a force in the reverse direction. Cognition is inhibited in favor of perception; the active intellectual style is replaced by a receptive perceptual mode.” This reversal of direction from abstract, automatized thought to unimpeded perception is a logical description of why applied meditation can be useful in seeing clearly, and, as well, it gives us another term that should appeal to our target audience.

Access to the Undermind.

The concept of de-automatization also leads us down another path worth exploring for its utility and appeal. Directions for this exploration, stated by Deikman (1966), run this way: “Automatization is a hierarchically organized developmental process, so one would expect de-automatization to result in a shift toward a perceptual and cognitive organization characterized as ‘primitive,’ that is, an organization preceding the analytic, abstract, intellectual mode typical of present-day adult thought.” A 1962 unpublished doctoral dissertation by E. W. Maupin, summarized by Terry Lesh (1970) suggests that “meditation brings about a sequence of more or less regressive states.” Maupin studied individual differences in response to Zen meditation, using the Rorschach and a test of visual imagery in free association, and found a correlation of response to meditation and test results. Maupin states that “structurally the process implies

suspension of some ego functions such as defensive or logical functions and sometimes emphasis on genetically primitive mechanisms.”

In psychoanalytic terms, the “primitive” mode of thought can be described as the “primary process” that has access to the uncensored contents of the unconscious mind, while the mode of “adult” thought can be called the secondary process. Julian Davidson, in a 1976 paper, discusses in terms valuable to our target audience how primary process thinking: has a role in our normal waking consciousness. “Apart from daydreaming and fantasy, it is a fair assumption, for instance, that intuition (decision making on the basis of ‘inadequate’ information) is an essential component of all normal thought processes and particularly of symbolizing. However, the validation of intuitions requires logical analysis, that is, secondary process cognition. The importance of the primary process in creativity is well recognized, although again it requires integration with secondary processes for expression in a work of art and science.”

Primary process thinking would have given a boost to the meeting described earlier. In fact, Davidson’s comment about it being an “essential component... particularly of symbolizing” is amazingly apt, as the meeting was part of a branding initiative. Yet the term primary process is not particularly appealing, and terms such as sub- and unconscious could suggest psychopathology to our target audience. There is, however, a term in Guy Claxton’s 1997 book *Hare Brain, Tortoise Mind* that carries the right rhetorical weight, and the context in which it is introduced is appropriate to this discussion: “Modern Western culture has so neglected the intelligent unconscious — the *undermind* I shall sometimes call it — that we no longer know that we have it, do not remember what it is for, and so cannot find it when we need it. We do not think of the unconscious as a valuable resource, but (if we think of it at all) as a wild and unruly ‘thing’ that threatens our reason and control, and lives in the dangerous Freudian dungeon of the mind.”

Applied meditation is one way to gain access to the undermind, to undermine the hegemony of analytical thought and the computer-analogy-driven emphasis on “processing speed” in today’s corporations. As Claxton (1997) suggests: “The mind needs to be *given* time; but its ingenuity also depends on the cultivation of a disposition to *take* one’s time, as much as there is. One can learn to access these other ways of knowing more fluently. One might even suggest that managers — and their workforces — might try meditation; though, as a preliminary, they would need to understand what it means, and how it helps.” Without this understanding — our sales pitch — Claxton suggests that it would go the way of all the other fashionable ideas that organizations adopt and drop, noting that “even ‘intuitive thinking’ itself can easily become yet another fad that fails — because the underlying mindset hasn’t changed.”

More real stories: Anecdotal evidence.

Problem Solving: First-year MBA students at UCLA, 230 of them, were assigned to five-person teams. Teams were given complex business problems to solve and were measured on speed and the number of “transactions” required to reach a solution. With the first problem, there was no significant difference in the measures for any of the teams. The teams were divided, as teams, into three groups: one was instructed in problem solving techniques; one heard a lecture on meditation, hypnosis and biofeedback; the third was instructed in meditation and meditated together for 10 minutes. In a second round of problem solving, the meditator group significantly outperformed both control groups in both speed of solving and number of transactions required. The meditator group also reported greater feelings of calmness and teamwork. (Kindler 1977, as reported by Collons and Bingay 1982). I have not been able to find any other studies that are directly related to business problem solving, although Collons and Bingay mention but do not specify two other studies supporting the Kindler findings.

Strategic Thinking I: The author and Zen teacher Peter Matthiessen, in a 1999 lecture (on tape), describes how his meditation practice helps in his writing. “Structure is very, very important — how the book is structured. And the problems are always different. To me, it’s the most fascinating part of doing a novel — how you structure it. I used to have such a problem, especially in the early days of practice. For some reason, sitting, in a sesshin ...the dawn sitting...a structure would just come to me. My mind had sort of been clearing up in the days before, and these very clear structural solutions would come: not only structural solutions, but patches of dialog and story and characterization. It was so strong, and it interfered with my sitting, and so I finally went to Eido Roshi and said, ‘What do I do?’ And he said ‘No,’ (and he was quite right) he said, ‘You’re doing zazen; you are fully into the structural problem on your novel, and that is your zazen for the moment. Go upstairs and write it all down. Empty your mind of that and then come back and do your normal zazen.’ I find zazen very, very good for structural problems. And I’m ashamed to say that I’ve used many a sitting period to work out my [problems].” I find it highly suggestive that Matthiessen specifies that the help is mostly with structure — the strategic underpinning of the work. Here we see dispassionate chess again.

Strategic Thinking II: Steven Keeva, in his 1999 book, *Transforming Practices*, profiles a meditating lawyer, Steven Schwartz, the founder and executive director of a public interest law firm that represents mentally disabled clients. Schwartz has a daily meditation practice, part of which he uses, almost intentionally, for what amounts to strategic thinking. Keeva describes how “for the first ten or fifteen minutes of his hour-and-a-half morning sitting...he enters what he describes as a space that allows him to think in a highly creative way about his work and specifically, about problems and obstacles he’s likely to face that day. During this period, he outlines and plans briefs, oral arguments, systemic settlement orders, and negotiations; he also plans structural changes for the firm and formulates his to do list.” Schwartz himself explains that there are two reasons he can do this: “First, my mind is not operating in a linear way. It free

associates, so I'm not trapped by the requirement that I begin by thinking of what comes first — which is hard to do when you don't know what else is coming." Second, he says, "my mind is not engaged in any dialog with the world, whether it be with my computer, with opposing counsel, or with a client." It should also be noted that he does not feel pressured to "perform" in this way. "It would never dawn on me when I sit down that I'm going to outline a brief. Sometimes it happens on the first day I sit with a problem; sometimes it's on the tenth day."

As with Matthiessen's description, the characteristic help with writing is with outline, structure, strategy. I suspect that this is where the help lies because the intelligence of the undermind is not particularly verbal. Older studies like Davidson's (1976) place the meditative or mystical state predominantly in the right hemisphere of the brain, where the mental processes are characterized by "departures from logic, independence of space and time, simultaneous (holistic) versus sequential processing, or nonverbalizable perceptions." More recent studies may not view the brain with such strong distinctions, but still support this "inarticulate" idea. Jonathan Schooler and Joseph Melcher (1995, cited in Claxton 1997), suggest that verbalization may actually interfere with the intuitive process. They devised two types of problems to study — analytical problems that required, so to speak, secondary process thinking, and insight problems that required more primary process thinking, i.e., the use of the undermind. When subjects were asked to verbalize their solution processes, those with analytical problems spoke fluently, while those with insight problems paused more frequently and for longer periods — "there were many more occasions on which there was, seemingly, nothing going on in the problem solvers' minds."

It is also interesting to note how closely these anecdotes are connected to our initial problem of selling meditation to macho types. Certainly they can relate to MBA students and lawyers, and Peter Matthiessen is a quintessential man's man as his fiction and his nature writing attest.

Conclusion: There is definitely something to sell.

To the question, “How do we present applied meditation in such a way that this skeptical, macho audience will not feel threatened by it, and, indeed, will be motivated to experience it?” we now have, if not an answer, at least some appeals to be tested. We can use Field Dependence-Independence, a well established and measurable concept, to explain a benefit that has possibilities for short- and long-term transformation of executives’ thinking and, indeed, their personalities. We can describe the benefits of applied meditation in physiological terms through de-habituation and de-linking. We can clearly and logically describe the process by which clearer thinking becomes possible, using the concept of de-automatization. We can offer “exclusive” access to ways of thinking that can provide a competitive edge, through the undermind. And we can tell meaningful stories of success in using applied meditation to solve strategic problems.

I look forward to testing these concepts in a real world sales situation.

Areas for further research and elaboration.

Reaching consensus: Moving groups towards greater field independence may have some drawbacks, in that studies have shown (Oltman et al. 1979, cited in Oltman 1986) that when asked to discuss issues about which they initially disagreed and to come to resolution, the most agreements were reached by field dependent types together, an intermediate number of agreements were reached by one field dependent and one field independent type, and the least agreements when both were field independent. In fact, the latter pairs tended to dislike each other after the discussions. On the hopeful side, I also have found studies that suggest development of a marked degree of empathy in meditating subjects (Lesh 1970). Perhaps there is an offsetting effect.

Flow: In a 1976 study that describes the same de-linking described above, Goleman and Schwartz confronted meditators and controls with a stressful laboratory

situation, showing them a film of catastrophic auto accidents, and found a significant difference in both the anticipation of the stress and the recovery from it. In an article written later that year, Goleman referred to the findings: “In response to initial threat cues the meditators showed significantly greater cortical excitation and a simultaneous limbic inhibition. This combination de-links the cortex and limbic systems, two major neurophysiologic units which more often tend to co-vary along an activation continuum, most notably at the extremes: emotional arousal and stress reactivity at the hyperarousal pole, and boredom or drowsiness at the hypoarousal pole. This de-linked neurophysiologic pattern is in contrast to Benson’s view of meditation as inculcating a “relaxation response” marked by diffuse low arousal... With appropriate situational demands, meditators may be characterized by a differentiated pattern of greater cortical alertness with limbic inhibition... I suspect that what transfers to normal waking activity from meditation is not simply a relaxed state, but in addition the capacity for focused attention, which is the basic skill acquired in meditation, and which, as Hartmann proposes [in a 1973 book, *The Function of Sleep*, from Yale University Press] is accompanied by heightened specificity of cortical excitation and inhibition. This combination of situationally appropriate arousal plus specificity of excitation areas is the most likely neurologic substrate of flow [a state described and elaborated in M. Csikzentmihalyi’s ongoing work], where attention is focused, perceptual and motor systems function optimally, and anxiety is minimal.” Given a larger scope, this paper could also have chased down the implications of the flow state for improvement of strategic thinking in business.

Creativity: Although Steven Keeva referred to “highly creative” ways of thinking when discussing Steven Schwartz’s meditation/problem solving practice, I am not certain that a claim can be made that meditation makes one more creative. I can certainly see and have experienced the fact that meditation provides one with more material to work with and helps one make more associations, more freely, and if this is what is measured

in the 15 studies listed in Murphy and Donovan (1999, 2002), I have no problem believing that 10 of the 15 studies showed that meditators improved their creativity. But if creativity is defined as doing or thinking something completely new — e.g., Einstein or Picasso or James Joyce, I would like to see the study! There is, however, a study by Colin Martindale (1995, cited by Claxton 1997) that is intriguing in its findings. Martindale recorded EEGs for two groups of people, classified as creative and non-creative, while they were taking intelligence tests and creativity tests. The creatives showed increased cortical arousal when taking intelligence tests, but showed decreased arousal (lower than the relaxed baseline) when taking the creativity test. The non-creatives showed increases in arousal to the same level when taking both tests. This suggests that creativity is linked to a state like that of meditation and opens the question, I suppose, of “Could training in “dispassionate chess” move those non-creatives into a creative mode?”

Cognitive and somatic anxiety: In this research project I ran across studies that described how individuals with low cognitive and somatic anxiety are predisposed to benefit from and maintain meditation practice. Of particular interest was a 1977 study by Davidson and Goleman, that, in looking at beginning meditators found that there was no difference in the level of cognitive anxiety to an age and education matched control group, but that the meditators had significantly more somatic anxiety symptoms. The authors suggested that “the fact that such somatic processes are usually easily discriminable may have been influential in motivating these subjects to seek a means to greater relaxation. It may be that in the absence of any discriminable anxiety, individuals would not be motivated to meditate.” This study also compared cognitive and somatic anxiety levels of two groups, those who chose to exercise regularly and those who chose meditation practice. After six months, results showed that exercisers had less somatic but more cognitive anxiety than the mediators who, in turn, had less cognitive but more somatic anxiety. Certainly these findings are logical, but they do make me want to

explore the types of anxiety most prevalent in the corporate target audience, and to consider ways to “non-threateningly” use moving meditation with such groups as necessary.

This is just one classification that is interesting in terms of selection for meditation practice, or the type of practice that should be initiated. There are many other classifications that could be looked at in terms of intellectual and spiritual needs and appropriate practices to help the person develop current strengths and open up to new modes of thinking and being. Modes of classification could include FDI, Myers-Briggs types, five-element Chinese medicine, the Tibetan five wisdom energies, Enneagrams, and a wide range of traditional Christian classifications, such as the Apophatic-Kataphatic or affective-speculative continuums. This is definitely fodder for a further paper or two.

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