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# The Meeting of Meditative Disciplines and Western Psychology

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## *A Mutually Enriching Dialogue*

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*Meditation is now one of the most enduring, widespread, and researched of all psychotherapeutic methods. However, to date the meeting of the meditative disciplines and Western psychology has been marred by significant misunderstandings and by an assimilative integration in which much of the richness and uniqueness of meditation and its psychologies and philosophies have been overlooked. Also overlooked have been their major implications for an understanding of such central psychological issues as cognition and attention, mental training and development, health and pathology, and psychological capacities and potentials. Investigating meditative traditions with greater cultural and conceptual sensitivity opens the possibility of a mutual enrichment of both the meditative traditions and Western psychology, with far-reaching benefits for both.*

**Keywords:** meditation, attention, mental training, consciousness discipline, contemplation

The history of science is rich in the example of the fruitfulness of bringing two sets of techniques, two sets of ideas, developed in separate contexts for the pursuit of new truth, into touch with one another.

—J. Robert Oppenheimer,  
*Science and the Common Understanding*

**W**hat happens when two major intellectual and practical disciplines from separate cultures and contexts—both of which seek to understand, heal, and enhance the human mind—first come into contact after centuries of separate development? This is one of the questions of our time, a question which is increasingly pressing as the meditative and Western psychological disciplines now meet, challenge, and enrich one another in ways that are only beginning to be understood.

### **The Evolution of a Relationship**

This meeting has already progressed through three discernible stages. The first was a prolonged period of mutual ignorance in which each tradition remained blissfully or willfully ignorant of the other. Ignorance, of course, bred misunderstanding, and the second stage—from which we have not yet fully emerged—was one of paradigm clash. Practitioners of each discipline tended to dismiss or pathologize the other, using the distorting lens of their own

unquestioned cultural and paradigmatic assumptions, a process sociologists call nihilation.

For example, many meditation teachers dismissed Western psychology and psychotherapy as superficial, claiming they overlooked the deeper levels and potentials of the mind. Likewise, some mental health practitioners initially pathologized meditation, as well as disciplines such as yoga and shamanism. Consider, for example, the classic text *The History of Psychiatry*, which pointed to “the obvious similarities between schizophrenic regressions and the practices of Yoga and Zen” (F. Alexander & Selesnick, 1966, p. 372).

However, with greater knowledge has come greater open-mindedness and mutual exploration. With an estimated 10 million practitioners in the United States and hundreds of millions worldwide, meditation is now one of the world’s most widely practiced, enduring, and researched psychological disciplines (Deurr, 2004). The result is the third and currently dominant stage of growing détente and *assimilative integration*.

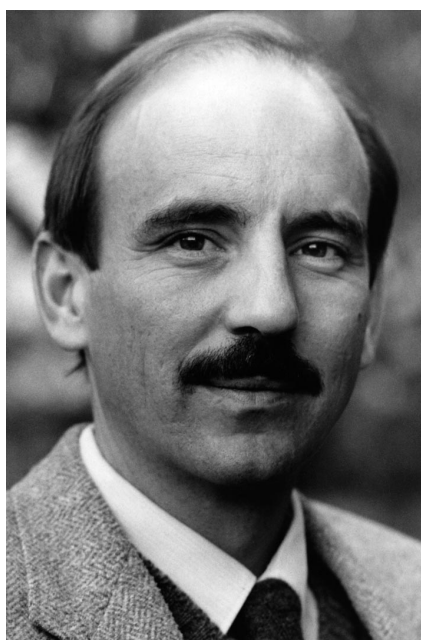
Nevertheless, much misunderstanding remains. Contemplatives often still view Western psychology and psychotherapy as limited adjuncts to meditation practice, and psychologists usually regard meditation as just another therapeutic technique to be applied and investigated in conventional ways. However, the applications and investigative measures have usually been very different from the classic goals of practice. Moreover, research findings have been interpreted almost exclusively within Western psychological frameworks, ignoring meditation’s complementary psychological and philosophical perspectives. This has been widely described as a necessary “decontextualiza-

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tion,” but it is actually far more. It is also a major recontextualization and revisioning of the practices within an exclusively Western psychological and philosophical framework. In anthropological terms, this is the trap of adopting a purely etic (outsider) perspective rather than both etic and emic (insider or native) perspectives.

The result is an assimilative integration that feeds the global “colonization of the mind” by Western psychology that “undermines the growth and credibility of other psychologies” (Marsella, 1998, p. 1286). As such, it overlooks much of the richness and uniqueness of the meditative disciplines and the valuable complementary perspectives they offer. For example, there is little appreciation of the major implications that meditation holds for an understanding of such central psychological issues as cognitive and attentional processes, mental training and development, psychological capacities and potentials, health and pathology, and therapeutic and social practices.

This is an understandable early stage in investigating a new and very different kind of practice. However, if the prevailing kinds of research and theorizing are continued exclusively, they may prove limiting, distorting, and ethnocentric, as researchers themselves have begun to point out (e.g., Kabat-Zinn, 2003). Eleanor Rosch (1999, p. 224) put it this way: “Yes, research on the meditation traditions can provide data to crunch with the old mind-set. But they have much more to offer, a new way of looking.”

In other words, further stages in the meeting of meditative and Western psychological disciplines are possible. We suggest that at least three further stages await—the beginnings of which are already visible. The first is one of mutual enrichment via *pluralism and accommodation*, moving from, to use Piagetian terms, assimilation (forcing novel ideas into preformed conceptual categories) to ac-

commodation (expanding and enriching conceptual categories). The second is an *integrative* stage in which the process of mutual enrichment, both theoretical and therapeutic, becomes increasingly systematic. The third stage is *integral* (Wilber, 2000) as the processes of mutual enrichment and integration lead to, and are conducted within, an increasingly comprehensive, coherent, and holistic conceptual framework, adequate to both meditative and psychological traditions.

Consciously engaging these further stages can create a more sensitive, systematic, and mutually enriching dialogue. While continuing to conduct basic research, investigators can also examine the foci and goals of the meditative traditions themselves, assess the accompanying psychologies and philosophies, and explore the many implications for an understanding of human nature, pathology, therapy, and potentials. Such a research program may offer far-reaching benefits. These include facilitating such emerging movements as positive psychology and the psychology of spirituality and health, as well as such integrative movements as cross-cultural psychology, integral psychology, and integrative psychotherapy (e.g., Arkowitz & Mannon, 2002; Snyder & Lopez, 2002).

This research program could also facilitate one of the defining processes and opportunities of our time—namely, the global cross-fertilization and mutual enrichment of cultures. Something much larger than the mere introduction of a new therapeutic technique is potentially available.

Consequently, this article aims to investigate and foster these larger processes. To do so, we first examine the definition and varieties of meditation. We then assess current research findings and limitations and investigate how meditation produces its diverse effects. We next examine meditation’s psychologies and philosophies, as well as some of its many theoretical, clinical, and cultural implications; finally, we explore the implications for understanding human nature and potentials.

## **Definitions and Varieties of Meditation**

### **Definitions**

There are many definitions of *meditation*. Nevertheless, common themes are apparent. Western definitions emphasize that meditation is a self-regulation strategy with a particular focus on training attention. The meditative traditions themselves say that there are multiple meditations and that they emphasize mental development, such as *bhavana* (mental cultivation) in Buddhism and *lien-hsin* (refining the mind) in Taoism. This refining is said to cultivate beneficial mental capacities such as calm and concentration and positive emotions such as love and joy; it is also said to reduce negative emotions such as fear and anger (Goleman, 1988). By integrating these common themes and others developed throughout the article, we offer the following definition:

The term *meditation* refers to a family of self-regulation practices that focus on training attention and awareness in order to bring

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mental processes under greater voluntary control and thereby foster general mental well-being and development and/or specific capacities such as calm, clarity, and concentration.

This definition differentiates meditation from a variety of other therapeutic and self-regulation strategies such as self-hypnosis, visualization, and psychotherapies. In general, these do not focus primarily on training attention and awareness. Rather, they aim primarily at changing mental contents (objects of attention and awareness) such as thoughts, images, and emotions.

Likewise, the definition distinguishes related practices such as yoga, Tai Chi, and Chi gong that incorporate meditation. However, these practices also include additional elements such as controlled breathing and body postures (yoga), or body movement and supposed energy manipulation (Tai Chi and Chi gong) (Feuerstein, 1996; Wong, 1997). As such, the above definition seems to meet key definitional requirements of identifying essential elements and differentiating related phenomena.

### **Varieties**

Despite having common features, meditation practices come in many varieties, and no adequate taxonomy has been devised. For simplicity and the purposes of this article, we point out that meditations vary in terms of the following:

1. *The type of attention:* Concentration meditations aim for continuous focus primarily on one object, such as the breath or an inner sound. Awareness or open meditations aim for fluid attention to multiple or successively chosen objects.

2. *The relationship to cognitive processes:* Some practices simply observe cognitions such as thoughts or images, whereas others deliberately modify them.

3. *The goal:* Some practices aim to foster general mental development and well-being, whereas others focus primarily on developing specific mental qualities, such as concentration, love, or wisdom.

Meditation is most often associated with India but is actually a worldwide practice found in every major religion and in most cultures. Examples include Taoist and Hindu yogas, Jewish Hassidic and Kabbalistic *dillug* and *tzeruf*, Islamic Sufism's *zikr*, Confucian quiet-sitting, Christian contemplations, and Buddhist meditations (Goleman, 1988; Walsh, 1999).<sup>1</sup> In their traditional settings, such practices are usually embedded in supportive lifestyles (such as ethics) and practices (such as the body postures of yoga) designed to optimize development.

By far the most researched practices are mindfulness and Transcendental Meditation (TM). Mindfulness is an open focus or awareness practice usually identified with Buddhist mindfulness or *vipassana* (clear seeing) insight meditation but also central to Taoist "internal observation" practice (Wong, 1997). TM is a mantra (inner sound) practice that researchers sometimes describe as concentrative, but in advanced stages awareness becomes increasingly panoramic. Hundreds of other meditation practices await research.

## **Meditation Research: The State of the Art**

Several hundred studies conducted over four decades have identified a wide array of meditation-responsive variables that range across psychological, physiological, and chemical parameters in both clinical and nonclinical populations. Here our aim is not an extensive review of 40 years of research but rather an examination of the varieties of psychological and somatic effects that any investigation of the implications of meditation must consider. (For research reviews of TM, see C. Alexander, Rainforth & Gelderloos, 1991; C. Alexander, Robinson, Orme-Johnson, Schneider, & Walton, 1994; C. Alexander, Walton, Orme-Johnson, Goodman, & Pallone, 2003; Canter & Ernst, 2003. For recent reviews—including meta-analyses—of mindfulness meditation, see Baer, 2003; Germer, Siegel, & Fulton, 2005; Grossman, Niemann, Schmidt, & Walach, 2004; Kabat-Zinn, 2003. For electroencephalogram [EEG] and brain-imaging studies, see Cahn & Polich, 2006. For general reviews of research, see Andresen, 2000; Kristeller, in press; Murphy & Donovan, 1997; D. H. Shapiro & Walsh, 1984; S. Shapiro & Walsh, 2003.)

### **Somatic Therapeutic Responses**

Research suggests that meditation can ameliorate a variety of psychological and psychosomatic disorders, especially those in which stress plays a causal or complicating role. For example, cardiovascular disorders responsive to TM

<sup>1</sup> Here, as elsewhere, we primarily cite review articles and books because of space limitations, the many hundreds of primary sources from which this review draws, ease of retrievability for readers, and to minimize the "reference explosion" (Adair & Vohra, 2003).

include hypertension and hypercholesterolemia (Schneider et al., 2005). Other medical conditions responsive to meditation include asthma and stuttering, as well as hormonal disorders such as type 2 diabetes, primary dysmenorrhea, and premenstrual syndrome (now called premenstrual dysphoric disorder) (Murphy & Donovan, 1997). Meditation has also proved effective in enhancing immune function in cancer patients, reducing symptoms of distress in fibromyalgia and cancer patients, and decreasing pain in multiple chronic pain syndromes (Carlson, Speca, Patel, & Goodey, 2003; Davidson et al., 2003; Kabat-Zinn, 2003; Weissbecker et al., 2002; Williams, Kolar, Reger, & Pearson, 2001). Meditation may also enhance treatments for psoriasis, prostate cancer, and atherosclerosis (Kabat-Zinn, 2003; Zamarra, Schneider, Besseghini, Robinson, & Salerno, 1996). A dramatic finding that clearly warrants replication was improved psychological functioning and reduced mortality among individuals in a nursing home who were taught TM (C. Alexander, Langer, Newman, Chandler, & Davies, 1989).

### **Psychotherapeutic Effects**

Several clinical populations appear to benefit; the most studied have been those with stress disorders. For example, mindfulness meditation appears to ameliorate insomnia, eating, anxiety, panic, and phobic disorders (Kristeller, in press; Miller, Fletcher, & Kabat-Zinn, 1995; S. Shapiro, Schwartz, & Bonner, 1998). Likewise, TM is reported to alleviate anxiety, aggression, and recidivism in prisoners and to reduce the use of both legal and illegal drugs (C. Alexander et al., 2003; Gelderloos, Walton, Orme-Johnson, & Alexander, 1991). However, TM subjects are required to cease drug use for several days before training, so they may be a particularly responsive population. Stress-related benefits are consistent with classic claims that a central effect of meditation is “calming the mind and the elimination of anxiety” (Taylor, 1988, p. 35), a claim popularized in the West as the (overly reductionistic) idea that meditation is a “relaxation response” (Benson, 1984). Additional disorders respond to combination treatments that combine mindfulness with Western therapies; we describe these in later sections.

### **Positive Well-Being**

Few researchers have examined meditation’s original purpose as a self-actualization strategy to enhance qualities such as wisdom and compassion. However, some pioneering studies provide a valuable foundation.

Mindfulness appears to enhance perception as measured by perceptual sensitivity, processing speed, empathy, and synesthesia (Murphy & Donovan, 1997; S. Shapiro et al., 1998; Walsh, 2005). Several kinds of meditation may improve concentration, reaction time, motor skills, and field independence (Andresen, 2000; Murphy & Donovan, 1997). Likewise, it is claimed that cognitive performance is enhanced on measures of learning ability, short- and long-term memory recall, academic performance, performance on subscales of the Wechsler Adult Intelligence Scale, and some measures of creativity (Cranson et al., 1991;

Dillbeck, Assimakis, & Raimondi, 1986; S. Shapiro et al., 1998; So & Orme-Johnson, 2001). However, for a critical review that attributes much of the cognitive benefits claimed for TM to expectancy and design factors, see Canter and Ernst (2003).

Personality variables are also modified. Not surprisingly, several kinds of meditation appear to reduce trait anxiety (Andresen, 2000). A study of the Big Five personality factors found that conscientiousness was unchanged, but the other four factors—extraversion, agreeableness, openness to experience, and especially emotional stability—all increased (Travis, Arenander, & DuBois, 2004).

Because meditation is a self-regulation strategy, it is not surprising that practitioners report feelings of improved self-control and self-esteem (Andresen, 2000). Given that several studies have found that participants practicing meditation had higher empathy ratings, it is also not surprising that measures of interpersonal functioning and marital satisfaction increased (Tloczynski & Tantielli, 1998). Finally, several studies, most using TM, have suggested that meditation may foster maturation, because meditators tend to score higher on measures of ego, moral and cognitive development, self-actualization, coping skills and defenses, and states and stages of consciousness (C. Alexander & Langer, 1990; C. Alexander et al., 1991; Emavardhana & Tori, 1997; Nidich, Ryncarz, Abrams, Orme-Johnson, & Wallace, 1983; Travis et al., 2004).

### **Research Limitations**

Meditation research has suffered from significant methodological and conceptual limitations (for critical reviews see Baer, 2003; Canter & Ernst, 2003). Methodological limitations fall into three broad categories: design, assessment, and subjects.

Common experimental design problems include small sample sizes, suboptimal controls, and relatively few randomized controlled trials. Many early TM studies were published by enthusiastic advocates using self-selected subjects, although standards have now tightened considerably. Nevertheless, questions still remain in some studies—and not only for TM—about subject selection bias and expectancy effects (Canter & Ernst, 2003). Unfortunately, some studies do not explicitly state the type or details of meditation used, and to date there have been few comparisons of different types of meditation or comparisons of meditation with other self-regulation strategies.

Assessment problems include widespread reliance on self-report methods and short-term follow-ups. Most studies have investigated the effects of relatively small amounts of practice in beginners, even though the most intriguing effects in classic reports occur in advanced practitioners.

A significant caveat is that some therapeutic effects may dissipate if practice is discontinued, and, as with so many self-regulation strategies, adherence and compliance can be major issues. However, a meta-analytic review of 13 studies reported a mean completion rate of 85% (Baer, 2003). Follow-up studies found that 75% of former participants were still practicing meditation 6–48 months postintervention, and 56% were still practicing after three

years (Kabat-Zinn, Massion, Hebert, & Rosenbaum, 1997; Miller et al., 1995).

Despite conceptual and methodological flaws, the current literature suggests that meditation can have significant psychological and somatic effects and therapeutic benefits. However, as yet it is largely unclear how much of the reported effects reflect uncontrolled nonspecific factors, how meditation compares with other self-regulation strategies, or how different meditations compare with one another. Definitive answers to many important questions await more methodologically sophisticated studies that also consider overlooked conceptual and contextual issues that we discuss in later sections.

## How Does Meditation Work? Metaphors, Mechanisms, and Processes

Research has so far focused on the first-order question, Does meditation work? Such research obviously needs to continue but also needs to be complemented by the second-order question, How does meditation work? Three kinds of explanations have been proffered: metaphoric, mechanistic, and process. All can be valuable, because each illuminates a different facet of the many factors possibly involved.

### Metaphors

Traditional contemplative explanations are usually metaphoric. Classic therapeutic metaphors include *purifying* the mind of toxic qualities, *freeing* it of illusions and conditioning, *awakening* it from its usual trance, and *healing* pathology. Others include *calming* disturbances, rebalancing mental elements, *unfolding* innate potentials, *enlightening* practitioners, and *uncovering* true identity (Walsh, 1999).

Examining these metaphors reveals several implications. They imply that meditation sets in motion processes that are organic, developmental, therapeutic, and self-actualizing. Researchers and therapists might therefore be usefully guided by these perspectives and by looking for these kinds of processes and effects.

### Mechanisms

Mechanistic explanations are more common among contemporary researchers. As linguists point out, such explanations are themselves partly metaphoric, though not usually recognized as such, except here the metaphors imply that the mind and/or brain are a machine. Suggested psychological mechanisms include relaxation, exposure, desensitization, dehypnosis, deautomatization, catharsis, and counterconditioning (Murphy & Donovan, 1997). Others include cognitive mechanisms such as insight, self-monitoring, self-control, self-acceptance, and self-understanding (e.g., Baer, 2003). Suggested physiological mechanisms include reduced arousal, modified autonomic nervous system activity, stress immunization, and hemispheric synchronization and laterality shifts (e.g., Cahn & Polich, 2006; Davidson et al., 2003).

Because they imply that higher order changes and processes can be understood in terms of lower order ones, mechanistic explanations sometimes lend themselves to inappropriate reductionism. Consequently, mechanistic accounts have at times been misused to reduce meditative phenomena to (nothing but) the suggested mechanisms (Wilber, 2000). This misuse can be particularly problematic when pathological mechanisms or analogies are involved. Examples of psychological reductionism include meditation described as self-hypnosis or as a relaxation response (Benson, 1984). Pathological reductionisms include yogic practice as dissociation and psychoanalytic interpretations of meditative experiences as defensive regression. Neural reductionisms include unitive and enlightening experiences analyzed in terms of neural deficits such as amnesias and disordered spatial processing. Examples such as these suggest the potential dangers of forcing meditation into conventional categories, especially into pathological categories and “nothing but” reductionisms. (For effective critiques of these and other problematic reductionisms, see Rosch, 1999, and Wilber, 2000.)

### Processes

Whereas mechanistic explanations attempt to explain phenomena in terms of lower levels of a system, processes can refer to any level and are therefore less susceptible to inappropriate reductionism. One important process that may be central both to meditations and to psychotherapies is *refining awareness*, a process that may, of course, incorporate and facilitate several of the mechanisms and metaphoric processes already discussed.

Heightened awareness is an aspect of many meditative practices, as, for example, in the Sufi’s “watchfulness of the moment” and the Christian contemplative’s “guarding the intellect” (Walsh, 1999), and it is the primary focus in Buddhist mindfulness and Taoist internal observation (Wong, 1997). Likewise, many clinicians regard it as central to psychotherapy—for example, Eugene Gendlin’s “experiencing,” James Bugental’s “inward sense,” and the Jungian Edward Whitmont’s (1969, p. 293) claim that “therapeutic progress depends on awareness.” Similarly, Fritz Perls (1969, p. 16), the founder of Gestalt therapy, claimed that “awareness—by and of itself—is curative,” and Carl Rogers defined fully functioning people as “allowing awareness to flow freely in and through their experiences” (Raskin & Rogers, 1995, p. 146).<sup>2</sup>

Refinement of awareness may therefore be a central process mediating the therapeutic benefits both of meditations and of psychotherapies and may also be a necessary precondition for a further important meditative process: *disidentification*. Disidentification is the process by which awareness (mindfulness) precisely observes, and therefore ceases to identify with, mental content such as thoughts,

<sup>2</sup> Martin (1997) has suggested mindfulness as a possible common therapeutic factor but defines it idiosyncratically, not as a specific kind of awareness but rather as a specific state of mind: “A state of *psychological freedom* that occurs when attention remains quiet and limber, *without attachment* to any particular point of view” (pp. 291–292).

feelings, and images. This process is similar to Piaget's "decentration," Safran's "decentering," Bohart's "detachment," Deikman's "observing self," Tart's "dehypnosis," Teasdale's "metacognitive awareness," Wilber's "differentiation and transcendence," and Kegan's "de-embedding" (Martin, 1997; Wilber, 2000). Robert Kegan (1982, pp. 33–34) suggested that the process of disidentification "is the most powerful way I know to conceptualize the growth of the mind . . . [and] is as faithful to the self-psychology of the West as to the 'wisdom literature' of the East."

Consider, as a practical example, the thought "I'm scared." Meditators report that if they are clearly aware of such a thought, then they do not identify with it (assume it to be a valid statement about themselves). Rather, they simply observe it, recognize it as merely a thought, and are unaffected by it (Segal, William, & Teasdale, 2002; Walsh, 1977).

However, meditation disciplines claim to carry these metacognitive processes of heightened awareness and disidentification significantly further than psychotherapy. Dramatic heightening and continuity of awareness are said to allow meditators to recognize and disidentify, not just from a problematic subset of thoughts, emotions, or images, but from *all* of them. The result is said to be the ability to observe all experiences with imperturbable calm and equanimity, in a state of mind variously described as "transcendental consciousness" (TM), "mind-body drop" (mind-body disidentification—Zen), *Xujing* (calm stillness—Taoism), "divine *apatheia*" (Christian contemplation) or equanimous "witnessing" (yoga) (Feuerstein, 1996; Goleman, 1988; Schumacher & Woerner, 1989).

Perhaps the most encompassing explanation of meditation's effects may be a classic higher order process one—namely, that meditation catalyzes certain developmental processes by restarting and/or accelerating them (Wilber, 2000). These ideas are consistent with both previously discussed research findings of increased scores on developmental scales in meditators and with classic texts that map out meditative progress in explicitly developmental terms. Classic examples include the Sufi stages of selfhood and *nafs* (drives), Taoism's "five periods" of increasing calm, yogic levels of *samadhi* (concentration), Jewish "stages of ascent," Buddhist "stages of insight," and Zen's "Ten Ox Herding Pictures" (Fadiman & Frager, 1997; Goleman, 1988; Schumacher & Woerner, 1989). After reviewing both classic claims and recent research, Ken Wilber (2000, p. 248) concluded that "meditation can profoundly accelerate the unfolding of a given line of development, but it does not significantly alter the sequence or the form of the basic stages in that developmental line." We hope that future research will test this conclusion and, if the conclusion is validated, begin to map the relative responsiveness of specific developmental lines and then determine how development is enhanced. This returns us to the further search for participating processes, guiding metaphors, and underlying mechanisms, now viewed from a developmental perspective.

## Implications, Integrations, and Mutual Enrichment

The meeting of meditative and Western psychological disciplines holds major theoretical and practical implications for each, as well as the promise of mutual enrichment and potential integrations.

### *Meditative and Western Psychologies*

Like Western psychotherapies, meditation practices have generated corresponding psychologies and philosophies to conceptualize and frame their insights. Like Western psychology, schools of meditation differ in various ways but also share important themes. Aspects of these psychologies and philosophies may be highly sophisticated, and studying them offers multiple benefits. As well as offering insights into meditation and related practices, they provide novel perspectives on human nature, health, potential, pathology, and therapy.

In addition, studying meditative psychologies and philosophies with sensitivity to cultural and conceptual differences can unveil limiting and ethnocentric assumptions. For example, anthropologists point out that Western culture—and therefore its intellectual disciplines—is predominantly "monophasic." This means that Western systems are almost exclusively drawn from, centered on, and conceptualized in the usual waking state of consciousness. By contrast, meditative cultures, psychologies, and philosophies tend to be both multistate (polyphasic) and multistage (drawing on and investigating multiple states and adult developmental stages, including postconventional stages) (Laughlin, McManus, & d'Aquili, 1992; Wilber, 2000).

If differences such as these are not recognized, problems arise. For example, comparing Western psychological and meditative psychologies may result in a paradigm clash. When this goes unrecognized, data and interpretations from one system can initially seem incompatible or even nonsensical from the perspective of the other (Walsh, 1992). Likewise, assimilative integration (Arkowitz & Mannon, 2002) of meditative disciplines into psychological ones may result in what mathematicians call "degeneracy": the collapse of multiple dimensions into fewer, with resultant loss of richness and multidimensionality (Tart, 1992).

However, when such differences are appreciated, meditative and Western systems can then be seen as partly complementary and even synergistic. For example, meditative traditions clearly lack many major areas of Western psychological expertise, such as laboratory science, child development, psychopathology, and psychodynamics. They may, however, offer complementary theoretical understandings, overlapping areas of expertise, rich reservoirs of phenomenological data, and expanded frameworks for such areas as states of consciousness and adult development. We next consider, as an example, states of consciousness.

**States of consciousness.** Western psychology recognizes few additional states beyond the usual waking and sleep states, and many of these additional states—such as intoxication or delirium—are dysfunctional. By contrast,

meditative psychologies—as well as other disciplines such as yoga and shamanism—describe whole families of functional nonordinary states, such as states marked by heightened concentration, insight, and beneficial emotions (Goleman, 1988; Tart, 1992).

Meditative disciplines particularly value and cultivate transpersonal states in which the sense of identity extends beyond (trans) the individual person or personality to encompass wider aspects of humankind, life, and even cosmos. Western psychologists periodically rediscover some of these transpersonal states. Examples include Maslow's "peak" and "plateau" experiences, Jung's "numinous experience," Grof's "holotropic experience," Fromm's "atonement," and James's "cosmic consciousness" (Walsh & Vaughan, 1993). Such experiences can occur spontaneously, especially in exceptionally healthy individuals, and may confer significant psychological benefits (C. Alexander et al., 1991; Maslow, 1971). However, without practices to systematically induce them or conceptual frameworks to understand them, such experiences have languished at the margins of Western psychology and philosophy (Wilber, 2000). Meditation disciplines offer the necessary practices and frameworks to help induce and research them.

**Topics of overlapping expertise.** Although both traditions have areas of unique expertise, they also share areas of expertise, and exploring these offers further possibilities for mutual enrichment. Four such topics, and the Western psychologies that have especially focused on them, are fundamental life concerns (existential psychology), health and human potential (humanistic, transpersonal, and positive psychologies), archetypal imagery (Jungian psychology), and the power and therapeutic potential of thought (cognitive psychology and therapy). On their side, meditative psychologies offer complementary insights into existential issues, exceptional psychological health, rich archetypal imagery, and a deep appreciation of the power of thought, as summarized in the Buddha's words "We are what we think. All that we are arises with our thoughts. . . . Be the witness of your thoughts" (as cited in Byrom, 1976/1993, pp. 1, 122).

An example of the benefits of exploring topics of mutual interest is the classic Buddhist model of psychological health. This model views health as a function of the strength and balance of seven beneficial mental qualities—the "seven factors of enlightenment." These seven qualities comprise clear awareness (mindfulness), three arousing factors (investigation, energy/effort, and rapture), and three calming factors (calm, equanimity, and concentration). Western therapies have emphasized the importance of awareness and the arousing factors of investigation and effort, but unlike Buddhist psychology, they have failed to appreciate the synergistic power of also fostering the calming qualities (Walsh & Vaughan, 1993).

### **Clinical Collaborations**

**Mutual therapeutic enrichment.** An obvious implication of this Buddhist model is that meditation might facilitate psychotherapy, and, as we discuss later, the

effectiveness of multiple mindfulness-based therapies supports this idea. However, the potential therapeutic enrichment is clearly mutual, and growing numbers of therapists and meditation teachers have concluded that meditation and psychotherapy can be mutually facilitative. Meditators seem to progress more quickly in therapy, whereas psychotherapy—particularly by meditatively experienced therapists—may speed meditation progress (Germer et al., 2005). In the words of Jack Kornfield (1993), who is both a psychologist and a meditation teacher,

For most people, meditation practice doesn't "do it all". . . [T]here are many areas of growth (grief and other unfinished business, career and work issues, certain fears and phobias, early wounds, and more) where good Western therapy is on the whole much quicker and more successful than meditation. . . . Does this mean we should trade meditation for psychotherapy? Not at all. (pp. 67, 68)

Kornfield's statement points to two of the most pressing clinical research questions:

1. What is the relative effectiveness of specific meditations and psychotherapies (and pharmacotherapies) for healing specific pathologies and for facilitating different kinds of growth?
2. How can these approaches be best combined?

Meditative traditions would clearly benefit from incorporating Western expertise in such clinical areas as psychodynamics, psychopathology, diagnostics, pharmacotherapy, and further outcome studies. If they can be developed, biofeedback systems that alert practitioners when they drift into mindless fantasy could be very helpful, given that beginners spend so much time lost in mindless distraction. The exploration of ways to mutually facilitate meditation and Western psychological methods has only just begun.

**Complications of meditation practice.** A general principle in medicine states that any therapy powerful enough to heal is also powerful enough to harm, and meditation is no exception. Collaboration here can offer considerable benefits to both meditative and psychological disciplines, particularly because they have specialized in opposite ends of the spectrum of developmental pathology (Wilber, Engler, & Brown, 1986).

Western psychology has focused primarily on major pathology. By contrast, meditative disciplines have directed attention to the existential and spiritual challenges confronting advanced practitioners; the best known such challenge is probably the Christian contemplative's "dark night of the soul." Recently, Western researchers have begun to draw from these accounts to create their own maps of, for example, "metapathologies" (Maslow, 1971), "spiritual emergencies" (Grof & Grof, 1989), and "spectrum of pathologies" (Wilber et al., 1986).

However, meditative texts have surprisingly little to say about beginners' difficulties, who is at risk, or severe psychopathology. Fortunately, most complications in beginners—such as the emergence of traumatic memories or existential anxieties—are mild and transient (Germer et al., 2005; Walsh, 2000). Occasionally severe pathologies



emerge, usually in practitioners with prior severe pathology who are involved in intensive retreats (Walsh & Vaughan, 1993; Wilber et al., 1986).

If approached skillfully, many difficulties can offer opportunities for learning or healing, similar to catharsis or “working through” in psychotherapy. In fact, meditative traditions view many difficulties as opportunities for purification (Christian contemplation) or “unstressing” (TM), and Buddhism describes such challenges picturesquely as “manure for awakening.” In short, growth at any stage can be challenging, but many challenges may be potentially therapeutic, and clinicians have therefore described them as, for example, “crises of renewal,” “positive disintegration,” “creative illness,” and “spiritual emergences” (Grof & Grof, 1989).

Western mental health professionals have much to offer here. The area cries out for systematic research to develop more sophisticated maps of such emergencies, establish diagnostic criteria, identify at-risk populations, and refine treatment strategies. In the meantime, clinicians—especially those with significant meditation experience themselves—can offer diagnostic and therapeutic skills that the meditative traditions lack. Appropriate therapies can range across the pharmacological–psychological–spiritual spectrum. However, we have observed an “increasing symptom subtlety principle” such that the more advanced the practitioner, the more subtle the symptoms and the more appropriate the interventions are likely to be.

### **Integrations**

Integrations across different Western psychologies and therapies are usually divided into three kinds: theoretical integration, technical eclecticism (combining techniques), and the search for underlying common factors (Arkowitz & Mannon, 2002). Likewise, the stage now seems set for attempts at integrating aspects of meditative and psychological systems.

In fact, this project is already underway. Possible therapeutic factors common to both meditations and psychotherapies have been discussed earlier in this article and elsewhere (e.g., Baer, 2003; Kabat-Zinn, 2003; Walsh, 1999, 2000). Initial theoretical integrations have already produced the fields of, for example, psychosynthesis, Diamond/Ridhwan, transpersonal, and integral psychologies (Walsh & Vaughan, 1993; Wilber, 2000).

Technical eclecticism is proceeding rapidly. The most common approaches combine mindfulness with psychotherapeutic techniques. The original inspiration was Jon Kabat-Zinn’s (2003) now widely used mindfulness-based stress reduction (MBSR). Recent combinations include mindfulness-based cognitive therapy for depression, mindfulness-based sleep management, dialectical behavior therapy for borderline disorders, relapse prevention for drug abuse, mindfulness-based art therapy, acceptance and commitment therapy, and control therapy (Dimidjian & Linehan, 2003; Segal et al., 2002; D. Shapiro & Astin, 1998). All these approaches have initial research support, and some, such as MBSR, already meet the criteria for “probably efficacious” treatments (Baer, 2003; Grossman et al.,

2004). More generic eclecticism includes transpersonal and integral therapies; non-Western psychotherapies that incorporate meditative elements include Japanese Morita and Naikan therapies (Corsini, 2001).

These findings raise several intriguing questions. An obvious question concerns what other combinations will prove efficacious. A more provocative question may be whether there are mainstream therapies that would *not* benefit from the addition of mindfulness training given that enhanced awareness (mindfulness) may be a common therapeutic factor across meditations and psychotherapies and that meditation enhances awareness. Perhaps in the long-term the most important question has to do with the possibilities for using meditation—perhaps even on a widespread social scale such as in educational systems—as prophylaxis for conditions for which it has already proved therapeutic (Deurr, 2004).

### **Implications for Research**

**Studying meditation’s effects.** In an earlier section we discussed the methodological limitations of current research, but there are also conceptual and programmatic issues. With important exceptions, research has largely been what Maslow (1971) called “means oriented” rather than “goal oriented.” In other words, most researchers have focused on familiar variables rather than on those valued by the meditation traditions themselves. Consequently, the classic goals of meditation—such as the cultivation of compassion and wisdom, maturation to postconventional stages, and the attainment of “enlightenment” or “liberation”—have gone largely unexamined. Gordon Allport’s decades-old lament that Western psychology has “on the psychology of liberation—nothing” remains largely true today (Smith, 1976, p. 161).

Of course, this is understandable, particularly at this early stage of investigation. The difficulties of studying rare capacities and developmental stages, especially capacities resistant to objective, quantitative measures, are not to be underestimated. The optimal strategy may be to adopt an epistemological pluralism in which basic research on familiar variables continues, complemented by research on classic variables in advanced practitioners. This trend is beginning and has already revealed previously unrecognized psychological capacities that are the focus of our concluding section. The meditative disciplines contain a wealth of psychological, phenomenological, and philosophical insights accumulated over centuries that await assimilation and assessment by psychologists.

**New approaches to research: Meditators as gifted subjects.** Meditation offers not only a new area for research but also new approaches to research in other areas. To begin with, because of their unusual psychological capacities, meditators may prove to be uniquely valuable subjects. For example, their introspective sensitivity may make them exceptional observers of subjective states and mental processes. Clinically, they may provide precise phenomenological accounts of the subjective effects of pharmacological and other therapies, as already

demonstrated for antidepressants (Bitner, Hillman, Victor, & Walsh, 2003).

This raises the intriguing possibility of a partial renaissance of phenomenology and introspectionism (Wallace, 2000). Psychology was largely born from introspectionism, which remains central to depth psychotherapies. However, introspectionism faltered as a research movement—a victim of apparently conflicting findings between laboratories, although in retrospect some conflicts reflected different methodologies (Hunt, 1995).

However, from a meditative perspective such failures are understandable because although the subjects were well trained, they were still, by contemplative standards, relative beginners compared with advanced meditators who log tens of thousands of hours of training. These advanced meditators, it is claimed, “learned to make a science and art and craft of insight” (Easwaran, 1987, p. 17). This craft resulted in sophisticated introspectionist psychologies such as the yogic and Buddhist Abidharma systems that have guided meditators for centuries (Goleman, 1988; Tart, 1992). Phenomenology and meditative psychologies share overlapping methods and conclusions (Hunt, 1995), so perhaps phenomenology and a nascent psychological introspectionism could benefit from meditative practice and psychologies and could facilitate such areas as cognitive psychology (Wallace, 2000).

However, the potential value of meditators as subjects extends beyond their introspective sensitivities. Their ability to generate and stabilize specific mental states may allow for more sensitive investigation of such states and their neural correlates, as in the nascent field of neurophenomenology (Goleman, 2003; Lutz, Greischar, Rawlings, Ricard, & Davidson, 2004).

Likewise, the development of unusual capacities such as volitional peak experiences, dream lucidity, and post-conventional developmental stages may make these otherwise rare abilities more readily available for investigation. People who are both experienced meditators and researchers might make uniquely valuable, but obviously rare, subjects. The Dalai Lama expressed the hope that “we may be able to produce a scientist who is also a Buddhist practitioner” (Goleman, 2003, p. 332), but the possibilities obviously extend much further—for example, to yogi scientists and contemplative philosophers (Tart, 1992).

### **Meditation Practice for Health Professionals**

Clinical observations and initial research suggest that a personal meditation practice can benefit both clinicians and researchers. Costs of professional stress on clinicians can include burnout, depression, job dissatisfaction, reduced effectiveness, and relationship difficulties (S. Shapiro, Astin, Bishop, & Cordova, 2005). Meditation may reduce measures of stress—such as anxiety and depression—while enhancing empathy, life satisfaction, and self-compassion among students and professionals in health care fields (S. Shapiro et al., 1995, 1998).

Meditation may also enhance essential therapist qualities. Examples include Rogers’s “accurate empathy,” as well as attentional qualities such as Bugental’s “presence,”

Freud’s “evenly hovering attention,” and Horney’s “whole-hearted attention.” Over half a century ago Karen Horney (1952/1998, p. 36) observed that although “such whole-heartedness is a rare attainment,” it is “commonplace in Zen.” Other capacities enhanced by meditation, such as calm, self-actualization, and self-acceptance, may also benefit clinicians (Germer et al., 2005).

Without direct experience, some meditative descriptions and concepts may remain what Immanuel Kant called “empty,” and what Buddhism calls “self-secret.” This reduces *adequatio*: the capacity to comprehend their deeper meanings and “grades of significance” (Walsh, 1992). It is therefore not surprising that the personal practice of meditation is reported to deepen clinicians’ understanding of contemplative experiences, increase their ability to diagnose and work with meditators’ difficulties, and enhance therapeutic effectiveness (Germer et al., 2005; Kabat-Zinn, 2003; Segal et al., 2002).

Personal meditation practice can also spark ideas for research projects. Examples include studies of synesthesia, stress management, and antidepressant use by meditators (Bitner et al., 2003; S. Shapiro et al., 1998; Walsh, 2005). Practice also allows direct experiential testing of many contemplative claims for oneself, an approach long advocated by meditative traditions. Health professionals wishing to learn meditation might begin with the book *Mind Science* by psychologist Charles Tart (2001) or *Meditation for Dummies* (Bodian, 1999). Personal instructors can be helpful, and both instructors and meditation groups are now widespread.

## **The Farther Reaches of Human Nature**

Meditative disciplines offer a good news–bad news view of the mind. The bad news is that our usual state of mind is significantly underdeveloped, uncontrolled, and dysfunctional and that the extent of these dysfunctions usually goes unrecognized. Freud (1935/1962, p. 252) shocked the Western world with his claim that “man is not even master in his own house, his own mind.” However, meditators have made similar claims for millennia. They have suggested that the untrained mind is so unruly that “the wind is no wilder” (Prabhavananda & Isherwood, 1972, p. 85) and that this lack of control underlies considerable psychological suffering and pathology. Indeed, the first response to beginning meditation is usually one of shock—shock at how out of control, fantasy filled, distracted, and dreamlike one’s usual mind state is. After participating in a meditation retreat for the first time, one of us (Walsh, 1977, p. 161) wrote that “shorn of all my props and distractions, there was just no way to pretend that I had even the faintest inkling of self-control over either thoughts or feelings.”

The good news is that meditation traditions claim to be able to heal much of this “normal” dysfunction, and more. In fact, the most radical of meditation’s implications concern psychological potentials and what Abraham Maslow (1971) famously called “the farther reaches of human nature.” Meditative disciplines claim to be able to

enhance multiple psychological capacities, some even beyond levels currently recognized by Western psychology. However, researchers now recognize postconventional stages on multiple developmental lines, such as postformal operational cognition, Kohlberg's "postconventional morality," Fowler's "universalizing faith," Maslow's "meta-motives," and Loevinger's "integrated ego" (for reviews see C. Alexander & Langer, 1990; Wilber, 2000). Meditative disciplines claim to facilitate maturation to these kinds of stages and beyond, and growing research offers initial support. The following section includes a partial list of enhanced capacities.

### **Enhanced Capacities**

**Attention.** A century ago, William James (1910/1950, p. 424) wrote that the ability to control attention "is the very root of judgment, character and will" and that to "improve this faculty would be the education par excellence." Yet he lamented that "it is easier to define this ideal than to give practical directions for bringing it about." His despairing conclusion was that "attention cannot be continuously sustained" (James, 1899/1962, p. 51), a conclusion that Western psychology adopted.

Meditative disciplines agree completely that (without training) attention cannot be sustained, and they suggest that we all suffer from some degree of attentional deficit disorder. However, meditative disciplines claim unequivocally that attention *can* be trained, albeit with difficulty, even to the point of unbroken continuity over hours, as in advanced Christian *contemplatio*, yogic *samadhi*, and TM's "cosmic consciousness." In Tibetan Buddhism's "calm abiding" according to the Dalai Lama (2001, p. 144), "your mind remains placed on its object effortlessly, for as long as you wish." Both psychometric and sensory-evoked-potential studies offer initial support of enhanced concentration, but there has been little research on advanced practitioners (Cahn & Polich, 2006; Murphy & Donovan, 1997).

**Sense withdrawal.** When highly developed concentration is directed internally on the mind itself, the result can be what yoga calls an "inward-facing consciousness." Here attention is so focused that awareness of somatic sensory stimuli is dramatically reduced or even entirely eliminated, as in Buddhist "absorption," Jewish hitbodeduth (self-isolation), Sufic *muraqaba* (contemplation), and yogic *pratyahara* (sense withdrawal) (Feuerstein, 1996; Goleman, 1988). Freed from external distractions, introspection and cognitive control are said to be significantly enhanced. Early EEG studies of sensory-stimulus-induced alpha blocking were supportive, but subsequent findings have been more variable (Cahn & Polich, 2006).

**Thought and cognition.** Cognitive therapies draw attention to the possibility and therapeutic power of recognizing and changing thoughts. For centuries, meditative traditions have concurred and have combined contemplative introspection with thought control. Examples include the Jewish practice of "elevating strange thoughts," the intellectual analysis of *jnana yoga*, or the Buddhist

repetition of thoughts of love or compassion to cultivate corresponding emotions (Walsh, 1999).

But the meditative disciplines go further. Cognitive therapy recognizes the possibility of brief "thought stopping." However, meditative traditions suggest the possibility of learning to slow, and even to stop, the usually incessant flow of subliminal thoughts for prolonged periods, not by suppression but by deep calm. This is said to permit easier recognition and substitution of thoughts and to facilitate disidentification from them and their self-hypnotic power. It is also said to calm and clarify awareness, thereby revealing depths of the psyche usually obscured by thought, just as, according to a classic metaphor, the depths of a lake are only revealed when surface waves are stilled. Taoism's greatest philosopher, Chuang Tzu, wrote that "if water derives lucidity from stillness, how much more the faculties of the mind?" (Giles, 1926/1969, p. 47). Initial laboratory support comes from TM practitioners who display distinctive autonomic and EEG correlates during reported episodes of thought stilling (Travis & Pearson, 2000).

**Lucidity.** Several meditation traditions claim that clear awareness can eventually be maintained through dreams (lucid dreaming) and even nondream sleep (nondream lucidity), possibilities discounted by Western psychologists until recently. Sufism's greatest philosopher, Ibn Arabi, lauded lucid dreaming as "providing great benefits" (Shah, 1971, p. 160). Continuous 24-hour-a-day "ever present wakefulness," as Plotinus called it, is described in yoga as *Turiya* (the fourth)—a fourth state of consciousness beyond the usual three of waking, dreaming, and nondream sleep (Feuerstein, 1996). Unbroken lucidity throughout sleep is recognized in yoga and Christian contemplation, is a goal of Tibetan dream yoga, and in TM marks the maturation of sporadic "transcendental consciousness" into unbroken "cosmic consciousness" (C. Alexander & Langer, 1990; Walsh & Vaughan, 1993). In Western terms, this is the transition from a peak to a plateau experience and from an altered state to an altered trait (Maslow, 1971; Wilber, 2000). Confirmatory studies of TM practitioners have yielded sleep EEG profiles consistent with alert awareness throughout sleep (e.g., Mason, Alexander, Travis, Marsh, Orme-Johnson, & Gackenbach, 1997). For Freud, dreams were a royal road to the unconscious. For meditative traditions, lucid dream and nondream sleep are a royal road to consciousness, allowing meditation and maturation to continue throughout the night.

**Emotional intelligence.** Meditative traditions aim for a twofold process of emotional rebalancing. Like Western therapies, they aim to reduce destructive emotions. Going beyond most Western therapies, they also aim to cultivate positive affects such as joy, love, and compassion, even to the point where they become nonexclusive and unconditional. Examples include the all-encompassing love of Buddhist *metta*, yogic *bhakti*, and Christian contemplative *agape*, as well as the compassion of Confucian *jen*. For Taoists, a goal is "emotions but no ensnarement" (Yu-lan, 1948, p. 438); for the Dalai Lama "the true mark of a

meditator is that he has disciplined his mind by freeing it from negative emotions” (Goleman, 2003, p. 26). An implication is that long-term meditation can raise the happiness set point, which psychologists usually assume to be tightly genetically constrained.

There is initial experimental support for such shifts. Meditators show reduced anxiety, hostility, and depression, together with enhanced subjective well-being (e.g., S. Shapiro et al., 1998). In addition, advanced meditators display unique degrees of lateralization of prefrontal cortical activity, which may be a neural indicator of positive affect, and a unique high gamma EEG profile when cultivating compassion (Davidson et al., 2003; Goleman, 2003; Lutz et al., 2004).

**Equanimity.** Emotional transformation is facilitated by equanimity—the ability to experience provocative stimuli nondefensively and with minimal psychological disturbance. Equanimity is the opposite of reactivity and emotional lability, is highly valued across meditative traditions, and is said to be “the characteristic temperament of the sages” (Aurobindo, 1922, p. 181). It is, for example, a basis of the Sufi’s “contented self,” yogic *samatva* (evenness), Buddhist *upekkha* (equanimity), the Hasidic Judaism contemplative’s goal of *hishtavut*, the Christian contemplative’s “divine apatheia,” and Taoism’s “principle of the equality of things” (Bitner et al., 2003). Equanimity overlaps but extends beyond Western concepts of “affect tolerance” and “emotional resilience” to include not only tolerance but even serenity in the face of provocative stimuli, and it has obvious clinical potential. Preliminary experimental support comes from measures of emotional stability and startle response (Goleman, 2003; Travis et al., 2004).

**Motivation.** Meditators aim for several distinct but related motivational shifts. These include a reduction of the mirror-image compulsions of addiction and aversion and a redirection of dominant motives similar to movement up Maslow’s (1971) hierarchy of needs. The aim is to couple these with a shift away from “the obscuration of selfish desires” (Chan, 1963, p. 660) toward altruistic motives. Western psychologists have now moved beyond the once-dominant philosophical stance of psychological egoism to acknowledge altruism as a significant human motive, but they lament their lack of effective tools to cultivate it. By contrast, meditative traditions contain literally dozens of such practices that await research (Dalai Lama, 2001; Davidson & Harrington, 2002).

**Moral maturity.** Few questions in psychology are of greater social and global significance than how to foster moral maturity, but unfortunately traditional interventions, such as instruction in moral thinking, usually produce only modest gains. Meditative traditions agree completely on the importance of moral development and regard moral maturity as both an essential foundation and a product of practice. Meditation is said to enhance ethical motivation and behavior via several mechanisms. These include sensitizing awareness to the costs of unethical acts (such as guilt in oneself and pain produced in others), reducing problematic motives and emotions (such as greed

and anger), strengthening morality-supporting emotions (such as love and compassion), cultivating altruism, and identifying with others via transpersonal experience (Dalai Lama, 2001; Walsh, 1999).

Western theory and research offer partial support. Carol Gilligan (1982) concluded that women can develop along a moral trajectory—maturing from selfishness to care giving to universal care giving—similar to the path of maturation that meditation traditions aim to foster. Likewise, Laurence Kohlberg eventually grounded his highest stage of moral maturity (his “metaphorical stage 7”) in the kinds of transpersonal experiences that meditation aims for (C. Alexander & Langer, 1990). Initial research support comes from reports of TM practitioners whose increased scores on scales of moral development correlate with duration of practice and with EEG measures (Nidich et al., 1983; Travis et al., 2004). Further research on this topic obviously deserves high priority.

### Unique Capacities

In addition to the capacities described previously, advanced meditators have also demonstrated preliminary evidence of 12 capacities that Western researchers once dismissed as impossible. These include voluntary control of the autonomic nervous system and lucid dream and lucid nondream sleep (Mason et al., 1997); Rorschach testing has revealed a unique integrative cognitive capacity and a dramatic reduction—possibly even an eradication—of drive conflicts (Jonte-Pace, 1998; Wilber et al., 1986). Unique perceptual capacities include control of binocular rivalry and motion-induced blindness (Carter et al., 2005) and the development of synesthesia, which was formerly thought to be a rare, uncultivable capacity (Walsh, 2005). In addition, some advanced practitioners exhibited increased cortical thickness (Lazar et al., 2005) and detected fleeting facial microexpressions of emotion more effectively than any other group (including the top scorers—CIA agents).

Likewise, initial studies, as yet limited to a single advanced Tibetan Buddhist practitioner, found two further unique capacities. The first was almost complete inhibition of the startle response. The second was an ability to respond with subjective compassion together with objective relaxation while observing a video of a severely burned patient that ordinarily elicits intense disgust. Paul Ekman, who conducted the studies of facial microexpressions, startle response, and video observation, stated that these were “findings that in 35 years of research I’d never seen before” (Goleman, 2003, p.19).

### Conclusions

Clearly, further research is necessary, but to date the findings imply multiple unusual or even unique capacities in some advanced meditators. This suggests that the extent to which certain psychological capacities can be developed has been underestimated and lends preliminary support to Maslow’s (1968) provocative claim that “what we call ‘normal’ in psychology is really a psychopathology of the average, so undramatic and so widely spread that we don’t even notice it ordinarily” (p. 16).

Whatever the extent to which such ideas prove valid, it seems clear that the meeting of meditation disciplines and Western psychology is well underway. If handled skillfully, this meeting may prove remarkably enriching for both, enabling them to become partners in one of the greatest of human quests—the exploration, understanding, healing, and enhancement of the human mind.

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