

**Caring for Ourselves
(While We're Busy Caring for Others)**

*

**A Program on Mindfulness and Stress Reduction
For Professionals Involved in Conflict Resolution**

Presented by

The Multnomah Bar Association

in conjunction with the
Oregon Attorney Assistance Program

October 31, 2008
Governor Hotel
Portland, Oregon

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If the actual program length is less than the credit hours approved, Bar members are responsible for making the appropriate adjustments in their compliance reports. Adjustments must also be made for late arrival, early departure or other periods of absence or non-participation.

Program Agenda

8:30 **Welcome and Introduction** – Michael Dwyer, MBA President

8:45 **One's Judge's Journey:** How a Chief Justice of the Utah Supreme Court discovered the benefits of mindfulness training – Michael Zimmerman

1. My path to mediation
2. The impact of mindfulness on my professional work

9:30 **The Impact of Stress** -- Alan Wallace speaks on the physical and mental effects of chronic stress,

1. What happens to our bodies under chronic stress?
2. What happens to our brains/minds under chronic stress?
3. How mindfulness training improves our health; benefits for immune system, blood pressure
4. Mediation in health care settings for stress reduction.

10:30 **The Benefits of Mindfulness Training** for lawyers, judges and professionals involved in conflict resolution – Michael Zimmerman and Alan Wallace

1. Decision-making
2. Reactivity
3. Awareness
4. Listening
5. Improved Negotiations

10:15 **Morning Break**

11:00 **The Nuts and Bolts of Mindfulness Meditation**

1. What is mindfulness

2. What is mindfulness meditation?
3. What mindfulness meditation is NOT.
4. How do you meditate?

11:30 **First Practice Session** (five minutes)

11:40 **Questions and Answers.**

1. Feedback
2. Common concerns
3. Meditation does not have anything to do with Eastern religion or cults.

12:00 **Lunch Break and Table discussions**

There are various causes underlying the unhappiness and dissatisfaction and causing great stress. We will discuss among ourselves:

- The loss of time.
- The impact of technology.
- The impact of the adversary system of justice and competitiveness.
- The focus on money, billing, and productivity.
- Loss of meaning, idealism, and values.

1:00 **Lawyers in the Mirror: A Look at Ourselves** – presented by Professor Richard Birke and Michael Dwyer

1. Examination of the incidence of unhappiness and dissatisfaction among lawyers, including the incidence of depression and anxiety, divorce, and substance abuse among lawyers.
2. The lawyer's personality and the work of Susan Daicoff.
3. Lost opportunities – the work of Leonard Riskin:

- Impairment of productivity.
- Interference with relationships (family, colleagues, clients)
- Failure to recognize and address clients' needs that cannot be addressed through litigation and the adversarial system.
- Limited mindsets. Lawyers are trained to think within the adversary system; a zero sum; but without creativity or curiosity. Lawyers can pigeonhole a story into issues and legal analysis without listening for underlying interests.
- The problems of excessive adversarialism -- poor solutions, high costs, and dissatisfaction.
- Problems with settlement and negotiation. The best negotiation techniques and strategies consider the interests of the other party, but the law and lawyer's mindset discourages concern for the other party or the social effect of resolution.

1:30 **Neuroscience and Clinical Studies: The Scientific Perspective on Mindfulness** - Alan Wallace

1. How our minds heal our bodies
2. Monks in the Lab
3. Brain-imagining studies
4. Clinical studies on the effects of mindfulness training
5. The Mind and Life Institute
6. The Institute for Consciousness Studies

2:15 **Third Mindfulness Practice Session**

2:30 **Developing a Mindfulness Practice:** Alan Wallace and Michael Zimmerman discuss how to get started and the common challenges.

1. How to practice mindfulness meditation with a busy schedule.
2. Why daily mindfulness training is important.

3. Developing new habits to replace old habits.
4. Resistance -- the unique challenge of the Lawyering Mind
5. Practicing with others.
 1. Michael Zimmerman reports on Salt Lake City
 2. Report on the eight-week program held in Portland during Fall 2008 (panel discussion by participants)
 3. Announcement: Portland group forming for January 2009

3:00 **Closing Comments**

Program Presenters

Alan Wallace is a dynamic lecturer, progressive scholar, and one of the most prolific writers and translators of Tibetan Buddhism in the West. He continually seeks innovative ways to integrate contemplative practices with Western science to advance the study of the mind. Dr. Wallace devoted fourteen years to training as a Tibetan Buddhist monk, was ordained by H. H. the Dalai Lama, and went on to earn an undergraduate degree in physics and the philosophy of science at Amherst College and a doctorate in religious studies at Stanford. He is the founder of the Institute for Consciousness Studies.

Michael Zimmerman is the former Chief Justice of the Utah Supreme Court, a practicing lawyer, and a Zen teacher at Kanzeon Zen Center (KZC) located in Salt Lake City. Mr. Zimmerman has been honored as Appellate Judge of the Year by the Utah State Bar and has received the Excellence in Ethics Award from Utah Valley State College. He has received a Distinguished Service Award from the Utah State Bar, and an Honorary Doctor of Laws from the University of Utah.

* * *

Professor Richard Birke has been teaching dispute resolution for almost 15 years, starting his career at Stanford University and coming to Willamette University College of Law in 1993 to teach and direct the Center for Dispute Resolution (CDR). Under his leadership, the CDR has enjoyed high national ranking among academic dispute resolution centers in the U.S. He is an award-winning author in the field of dispute resolution, and he has been deeply involved in the practice of ADR.

Michael Dwyer specializes in mediation. He is a partner with Dwyer & Miller and the President of the Multnomah Bar Association. Over the course of thirty years as a trial lawyer, he handled litigation in a wide range of practice areas, including civil litigation, family, and criminal law. He graduated from UCLA and received his law degree from Loyola of Los Angeles.

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(2d ed., Westgroup 2005). Excerpt reprinted as *Mindfulness Meditation: Its Nature and Outcomes* in ALTERNATIVE DISPUTE RESOLUTION NEWSLETTER of the ADR Section of the Oregon Bar Association, Summer 2004, p. 1

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The Contemplative Lawyer: On the Potential Contributions of
Mindfulness Meditation to Law Students, Lawyers, and their Clients

Leonard L. Riskin

The Contemplative Lawyer: On the Potential Contributions of Mindfulness Meditation to Law Students, Lawyers, and their Clients

Leonard L. Riskin†

Editor's Note: On March 8, 2002 the Harvard Negotiation Law Review hosted a forum to discuss Prof. Riskin's article and the implications of mindfulness meditation for legal practice and alternative dispute resolution. The five comments that follow this article were solicited by the Harvard Negotiation Law Review to provide a variety of perspectives on mindfulness meditation and its implications. All five of the comment authors also participated in the March 8th forum.

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† Copyright © 2002 Leonard L. Riskin. C.A. Leedy Professor of Law and Director, Center for the Study of Dispute Resolution, University of Missouri-Columbia School of Law.

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I learned a great deal that contributed to this work at meditation retreats sponsored by the Center for Contemplative Mind in Society for Yale and Columbia law students and for lawyers and law professors; from the Teacher Development Intensive at the Center for Mindfulness in Medicine, Health Care and Society at UMass Memorial Health Center; from the meditation teacher training course led by Matthew Flickstein, director of the Forrest Way Retreat Center in Virginia; from various retreats and programs sponsored by Mid-America Dharma and the Show Me Dharma Sitting Group (especially from talks by Phil Jones and Ginny Morgan); from students in my courses on Understanding Conflict at the University of Missouri-Columbia; from participants in programs on mindfulness in law and mediation that I conducted at the Cardozo, Harvard, Marquette, and Touro Law Schools; from participants in CLE or other mediation training programs sponsored by the University of Missouri-Columbia, the Iowa Peace Institute, and Southern Methodist University, Pepperdine University, AVM (in Salzburg, Austria); and from participants in programs I presented at conferences sponsored by a variety of organizations, including the American Bar Association, the Association for Conflict Resolution, the Michigan Dispute Resolution Conference, the Nordic Mediation Conference, and Wisconsin Association of Mediators conferences, and the Alabama Mediation Conference.

I thank the editors of the HARVARD NEGOTIATION LAW REVIEW, especially Hansel Pham, for organizing this print symposium and the March 8, 2002 live symposium; the Program on Negotiation at Harvard Law School, the Harvard Negotiation Project, the Harvard Negotiation Research Project, and the Office of Student Life, for supporting that conference; those who commented, either live or in writing or both (William Blatt, Doug Codiga, Cheryl Conner, Clark Freshman, Adele Hayes, Greg Feldman, Charles Halpern, John Hamilton, Steven Keeva and Scott Peppet); and for his insightful moderating, Robert Mnookin.

INTRODUCTION

Lawyers and law students in many parts of the U.S. are gathering in dimly lit rooms, sitting down on chairs or cushions, closing their eyes, and looking inside themselves. They observe their breath, their bodily sensations, their emotions, and their thoughts. They learn how their minds work. They are doing mindfulness meditation, a method of non-judgmental, moment-to-moment attention developed some 2500 years ago by the Buddha. And sometimes they get credit—toward a law degree or Continuing Legal Education (CLE) requirements.

It seems incongruous: lawyers—whose professional work tends to focus on the external¹ and to rest on thinking, judging and action—engaging in a practice that, in contrast, focuses on the internal and rests on *not* thinking, *not* judging, and *not* acting.² Yet 70 lawyers from the Boston office of Hale and Dorr LLP participated—in varying degrees—in extensive training in this method provided by the firm.³ Yale and Columbia law students have attended meditation retreats designed for them,⁴ and students at seven other law schools—Denver, Hastings, Miami, Missouri-Columbia, North Carolina, Stanford, and Suffolk—have taken mindfulness meditation instruction on campus, sometimes as part of law school courses.⁵

These lawyers and law students are not alone. In recent years thousands of North Americans have learned mindfulness meditation—also known as insight or Vipassana meditation—through

1. In their work, lawyers tend to look toward external sources of guidance, such as rules and standards articulated by various bodies. They also tend to look toward external sources for their own satisfaction. See Lawrence S. Krieger, *What We're Not Telling Law Students—and Lawyers—That They Really Need to Know: Some Thoughts-in-Action Toward Revitalizing the Profession from Its Roots*, 13 J.L. & HEALTH 1, 18 (1998-99).

2. See *infra* Part III.

3. See FERRIS URBANOWSKI, EVALUATION OF THE *Power of Mindfulness in the Workplace*, an Eight Week Mindfulness-Based Stress Reduction Program conducted for Hale and Dorr by the Center for Mindfulness in Medicine, Health Care, and Society, University of Massachusetts Medical Center 1 (1998) [hereinafter 1998 HALE AND DORR EVALUATION]; FERRIS URBANOWSKI, EVALUATION OF THE *Power of Mindfulness in the Workplace*, an Eight Week Mindfulness-Based Stress Reduction Program conducted for Hale and Dorr by the Center for Mindfulness in Medicine, Health Care, and Society, University of Massachusetts Medical Center 1 (1999) [hereinafter 1999 HALE AND DORR EVALUATION]; see also *infra* text accompanying notes 135-36.

4. See *infra* notes 142-45 and accompanying text.

5. See *infra* notes 164-78 and accompanying text.

programs in the corporate sector⁶ (e.g., at Monsanto⁷ and BASF⁸), in athletics (the Chicago Bulls and L.A. Lakers basketball teams),⁹ and in health-care settings;¹⁰ through non-profit organizations that

6. The corporate world is experiencing a great surge of interest in matters of the spirit. Some 300 books on the subject have been published recently. See Marci McDonald, *Shush, The Guy in the Next Cubicle is Meditating*, U.S. NEWS & WORLD REPORT, May 3, 1999, at 46. Well-known titles include JOSEPH JAWORSKI, *SYNCHRONICITY: THE INNER PATH OF LEADERSHIP* (1996); DAVID WHYTE, *THE HEART AROUSED: POETRY AND THE PRESERVATION OF THE SOUL IN CORPORATE AMERICA* (1994); LEWIS RICHMOND, *WORK AS A SPIRITUAL PRACTICE: A PRACTICAL BUDDHIST APPROACH TO INNER GROWTH AND SATISFACTION ON THE JOB* (1999). International meetings of business leaders feature presentations on the topic. See McDonald, *supra*. Programs include not only meditation but also yoga and literature. Some corporate efforts are meant to enhance creativity and competitiveness. In the words of Craig Elkins, who leads training programs "designed to open spiritual dialogue": "If your people aren't allowed to bring their whole selves to work—body, mind, and soul—then you're not going to win." *Id.* Some motivation, however, comes from other human needs. William McLennan, Jr., a senior lecturer at Harvard Business School, puts it this way: "What we're seeing is an increasingly felt need from people to integrate the spiritual dimension of their lives into what they do for most of the day. People are starting to realize that if they're going to spend a good part of their lives in the offices, they'd like that time to be spiritually as well as materially rewarding." Marguerite Rigoglioso, *Spirit at Work: the Search for Meaning in the Workplace*, HARVARD BUSINESS SCHOOL BULLETIN ONLINE, Apr. 1999, at 1. For other examples, see <http://www.enlightenedbusiness.com>.

7. See McDonald, *supra* note 6; Telephone Interview with Elizabeth Freyer, St. Louis-based insight meditation teacher (July 7, 2000); MONSANTO CORPORATION, 1999 MINDFULNESS COMMUNITY PROGRAM (flyer).

8. CENTER FOR MINDFULNESS IN MEDICINE, HEALTH CARE, AND SOCIETY, STRESS REDUCTION CLINIC, UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL, THE POWER OF MINDFULNESS IN THE WORKPLACE, MINDFULNESS-BASED STRESS REDUCTION PROGRAMS FOR CORPORATIONS (Brochure, n.d., received July 1, 2000).

9. See PHIL JACKSON & HUGH DELEHANTY, SACRED HOOPS: SPIRITUAL LESSONS OF THE HARDWOOD WARRIOR 67, 118-20, *passim* (1995); PHIL JACKSON & CHARLES ROSEN, MAVERICK: MORE THAN A GAME 279, 289 (2001); David Shields, *The Good Father*, N.Y. TIMES MAG., Apr. 23, 2000, at 58; Mark Rowland, *Guru Phil*, LOS ANGELES MAG., June 2000, at 60.

10. See JON KABAT-ZINN, FULL CATASTROPHE LIVING: USING THE WISDOM OF YOUR BODY AND MIND TO FACE STRESS, PAIN, AND ILLNESS (1990) [hereinafter KABAT-ZINN, FULL CATASTROPHE]. Over 11,000 people have completed the Mindfulness-Based Stress Reduction (MBSR) program at the University of Massachusetts Medical Center in Worcester; some 240 other programs based on this model operate elsewhere. *Guidelines for Assessing the Qualifications of Mindfulness-Based Stress-Reduction (MBSR) Providers*, in CENTER FOR MINDFULNESS IN MEDICINE, HEALTH CARE, AND SOCIETY, MINDFULNESS-BASED STRESS REDUCTION PROFESSIONAL TRAINING RESOURCE MANUAL (unpaginated) (Jon Kabat-Zinn & Saki F. Santorelli, eds., 1999) [hereinafter Kabat-Zinn & Santorelli]. For a listing of such programs see *Mindfulness-Based Stress Reduction (MBSR) Programs We Know About*, in *id.* (unpaginated); "Other MBSR Programs We Know About" available at <http://www.umassmed.edu/cfm/mbsr>.

Mindfulness meditation also has been employed in conjunction with psychotherapy. See MARK EPSTEIN, THOUGHTS WITHOUT A THINKER (1995) [hereinafter MARK EPSTEIN, THOUGHTS]; MARK EPSTEIN, GOING TO PIECES WITHOUT FALLING APART (1998)

provide training and other resources to the public;¹¹ or through programs specially designed for people connected with particular groups or activities, such as environmental organizations,¹² philanthropists and leaders of foundations,¹³ journalists,¹⁴ prisoners,¹⁵ and Green

(hereinafter MARK EPSTEIN, *PIECES*); Jeremy D. Safran & J. Christopher Muran, *Negotiating the Therapeutic Alliance: A Relational Treatment Guide* (2000); ZINDEL V. SEGAL ET AL., *MINDFULNESS-BASED COGNITIVE THERAPY FOR DEPRESSION: A NEW APPROACH TO PREVENTING RELAPSE* (2002); John D. Teasdale, et al., *How Does Cognitive Therapy Prevent Depressive Relapse and Why Should Attentional Control (Mindfulness) Help?*, 33 *BEHAVIORAL RES. & THERAPY* 25 (1995).

11. For a worldwide listing of retreats and other insight meditation activities, see the most recent issue of *THE INQUIRING MIND*, a journal of the Vipassana community, available from The Inquiring Mind, P.O. Box 9999 Berkeley, CA 94709. See also <http://www.trycycle.com> and <http://midamericadharm.org> for similar listings. Major providers of insight meditation training to the general public include: Insight Meditation Society (1230 Pleasant Street, Barre, MA 01005; Tel: 978/355-4378); Spirit Rock Meditation Center (5000 Sir Francis Drake Blvd, P.O. Box 169 Woodacre, CA 94973; Tel: 415/488-0164; Fax: 415/488-017); Vipassana Meditation Centers operated by S.N. Goenka and his assistants around the world (<http://www.dhamma.org>); Mid-America Dharma Group (717 Hilltop Drive, Columbia, MO 65201; Tel 573/817-9942; email: gmorgan@coin.org; <http://midamericadharm.org>); Forest Way Insight Meditation Center, (P.O. Box 491, Ruckersville, VA 22968; Tel: 804/990-9300; Fax: 804/990-9301; <http://www.forestway.org>).

Many Americans meditate alone on a daily basis or with weekly sitting groups. For a listing of two hundred twenty-two such groups in the U.S. and Canada, see *Sitting Groups Around the U.S. and Canada*, *THE INQUIRING MIND*, Spring 1999, at 42. This listing includes only those groups that are well-organized and seeking new members. Doubtless many other sitting groups that do not have such characteristics are active.

12. The Center for Contemplative Mind in Society has conducted mindfulness retreats for heads of environmental organizations and for senior staff of such organizations. CENTER FOR CONTEMPLATIVE MIND IN SOCIETY, *A CONTEMPLATIVE APPROACH TO LAW* 35 (1999). Note from Douglas A. Codiga, Director, Law Program, Center for Contemplative Mind in Society, to Leonard L. Riskin (Dec. 19, 2000) (on file with author).

13. CENTER FOR CONTEMPLATIVE MIND IN SOCIETY, *SPIRITUALITY AND PHILANTHROPY: A GATHERING* (1997).

14. In 1998, the Fetzer Institute of Kalamazoo, Michigan hosted journalists and other members of the media, academia, and related fields at a weekend retreat that included mindfulness training as well as a focus on the spiritual aspects of the media and its possible role in the "unfolding of a deeper spiritual understanding." Joan Konner, *Good Questions*, *COLUM. JOURNALISM REV.*, Sept./Oct. 1998, at 6.

15. Indian prisons have made the most extensive use of insight meditation training. At India's largest facility, Tihar Jail, which holds 10,000 prisoners under very difficult conditions, meditation trainings for staff and inmates have operated since 1993. Vipassana Meditation Courses in Prisons, at <http://www.dhamma.org/prisons.htm>. An excellent videotape documentary of this project, *DOING TIME, DOING VIPASSANA* (1997), is available through that website. The King County (Seattle) Jail also has carried out extensive mindfulness training. See David Foster, *Meditation Taught to Prisoners*, *SEATTLE TIMES*, Mar. 22, 1998, at B1; Mieke H. Bomann, *Prison Experiments with Eastern Meditation Technique*, *American News Service*, Article No. 587, Aug. 24, 1998, available at <http://vipassana.org>; *Living Time, Not Doing Time*.

professional schools.¹⁸

Various motives impel sponsors and participants in such efforts. These motives range from relief of stress through improvements in concentration, self-awareness, and empathy, to spiritual enlightenment.¹⁹ Alice Walker, the Pulitzer-Prize-winning novelist, says that meditation helped her write on the most difficult topics, raise her child, and deal with the aftermath of a divorce.²⁰ Basketball coach Phil Jackson used mindfulness meditation in part to help the Chicago Bulls learn that "selflessness is the heart of teamwork."

This isn't always an easy task in a society where the celebration of ego is the number one national pastime. Nowhere is this more true than in the hothouse atmosphere of professional sports. Yet even in this highly competitive world, I've discovered that when you free players to use *all* their resources—

Novack, M.D., and his colleagues: "Healing involves physicians' using themselves as diagnostic and therapeutic instruments, and self-awareness facilitates this process by making available to the physician 'tacit knowledge' tapped from personal emotions, experience, and perceptions." Dennis H. Novack et al., *Toward Creating Physician-Healers: Fostering Medical Students' Self-Awareness, Personal Growth, and Well-Being*, 74 *ACADEMIC MEDICINE* 516, 517 (1999).

One medical school professor has written about the capacity for poetry to exemplify and foster mindfulness in medical practice. Julie Connelly, *Being in the Present Moment: Developing the Capacity for Mindfulness in Medicine*, 74 *ACAD. MED.* 420 (1999). In fact poetry is commonly used in mindfulness meditation training in the U.S.

18. The development of many of these courses was supported by the Contemplative Practice Fellowship Program, which was founded by the Center for Contemplative Mind in Society (CCMS), the Nathan Cummings Foundation and the Fetzer Institute in 1996 and is administered by the American Council of Learned Societies. See FREDERICK BUELL, REPORT ON THE CONTEMPLATIVE PRACTICE FELLOWSHIP PROGRAM (1999). Since 1997, the program has awarded fellowships to full-time professors in fields as diverse as religious studies, history, physics, dance, and music. See *id.* Three of the Fellowships supported courses that included mindfulness meditation at U.S. law schools, which I discuss later in this article. See *infra* Section IV.A.

The program's objective, in the words of CCMS director Mirabai Bush, is "to stimulate academic course development in the study of contemplative practice from a variety of disciplinary perspectives. This is part of a broader strategy for revealing the hidden history of contemplation and creating legitimacy for contemplation in the wider culture." BUELL, *supra*, at 5. According to Buell, the idea of the program was to "support the study of contemplation not just as a category of religious and cultural practice but as a method for developing concentration and deeper understanding—in particular, as a means of intellectual and pedagogical revitalization and change." *Id.* In this program, contemplative practices refer to "various forms of meditation, such as centering prayer, mindful sitting and other mindful actions; focused experience in nature; and certain artistic practices." *Id.*

19. For discussions of goals and outcomes of mindfulness meditation, see *infra* Part III.

20. See Alice Walker, *After 20 Years, Meditation Still Conquers Inner Space*, N.Y. TIMES, Oct. 23, 2000, at E1.

mental, physical, and spiritual—an interesting shift in awareness occurs. When players practice what is known as mindfulness—simply paying attention to what's actually happening—not only do they play better and win more, they also become more attuned with each other. And the joy they experience working in harmony is a powerful motivating force that comes from deep within, not from some frenzied coach pacing along the sidelines, shouting obscenities.²¹

Although mindfulness meditation can have many uses, I wish to focus on how it can help law students and lawyers address two related problems that many of them face. The first concerns high levels of unhappiness, stress, and depression among lawyers and law students. The second concerns the tendency of some lawyers to miss opportunities to provide the most appropriate service to some clients.²² These problems, although they have many causes, stem in part from certain narrow, adversarial mind-sets that tend to dominate the way most lawyers think and most legal education is structured.²³ Although these mind-sets have great strengths, they also have drawbacks. They tend to promote egocentric behavior, excessive adversarialism, and a lack of balance between personal and professional aspects of life, which often lead to unhealthy levels of stress, to experiences of isolation, emptiness, and absence of meaning, and to the rendering of inadequate or inappropriate services.²⁴

Individual lawyers and organizations of the profession have responded to such problems in a wide variety of ways. Many lawyers and law students have dropped out.²⁵ Professional organizations have promoted CLE programs on stress, time management²⁶ and

21. JACKSON & DELEHANTY, *supra* note 9, at 5. For an elaboration of Jackson's philosophy and methods of introducing mindfulness and other spiritual practices to the Bulls, see *id.* at 67, 118-20, *passim*. He continued using such methods, including silent basketball practice, when he began coaching the Los Angeles Lakers in 1999. See JACKSON & ROSEN, *supra* note 9; David Shields, *The Good Father*, N.Y. TIMES MAG., Apr. 23, 2000, at 58; Mark Rowland, *Sports Guru Phil*, L. A. MAG., June 2000, at 60. Jackson also used meditation to enhance the Lakers' ability to concentrate, in particular while watching game tapes. JACKSON & ROSEN, *supra* note 9, at 279.

22. See *infra* Part I.A-B.

23. See *infra* text accompanying note 54.

24. See *infra* notes 56-64 and accompanying text.

25. See DEBORAH L. ARRON, *RUNNING FROM THE LAW: WHY GOOD LAWYERS ARE GETTING OUT OF THE LEGAL PROFESSION* (1989) [hereinafter ARRON, *RUNNING*]; Robert Kurson, *Who's Killing the Great Lawyers of Harvard?*, *ESQUIRE*, Aug. 2000, at 82; Phyllis Brasch Librach, *Ill-Suited*, ST. LOUIS POST-DISPATCH, Oct. 23, 1989, at N1.

26. See Ellen Lieberman, *Professional Responsibility and Continuing Legal Education*, N.Y. STATE B.J., May-June 1997, at 16; Nora C. Porter, *Keeping Your Balance*, PA. LAW., Nov.-Dec. 1997, at 14.

professionalism (or civility) and have offered "lawyer assistance" programs.²⁷ Many law schools make counseling or psychotherapy available to students and faculty.

In addition, both lawyers and law professors have promoted "comprehensive" approaches that would "humanize" or broaden legal education or law practice.²⁸ These include some forms of mediation and negotiation, "collaborative lawyering," "problem-solving," and therapeutic jurisprudence.²⁹ Although these and similar efforts have gathered much support in recent years, they remain at the periphery of the profession, unfamiliar—if not incomprehensible—to the vast bulk of lawyers and law students who remain firmly in the grip of adversarial mind-sets.³⁰

In this article, I describe two ways in which mindfulness can assist the legal profession in addressing some of the problems mentioned above: (1) helping lawyers feel and perform better in general, and (2) weakening the dominance of adversarial mind-sets, enabling some lawyers to make more 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. Part I of this article describes a number of problems associated with law school and law practice. Part II sets forth a variety of ways in which lawyers, law schools, and professional organizations have tried to address these problems. Part III details the nature and effects of mindfulness meditation. And Part IV discusses recent programs introducing mindfulness meditation to the legal profession and the potential benefits of mindfulness meditation to lawyers and law students. It also examines possible concerns that mindfulness meditation might threaten values and practices that are important to the profession and the legal system.

I. SOME PROBLEMS IN THE LEGAL PROFESSION: DISSATISFACTION AND MISSED OPPORTUNITIES

Although many problems face the legal profession, I will focus on two that I believe mindfulness meditation can help alleviate: (1) high levels of dissatisfaction and related negative mental and physical states among law students and lawyers; and (2) a tendency among

27. A.B.A. COMMISSION ON IMPAIRED ATTORNEYS, 1996 SURVEY OF LAWYER ASSISTANCE PROGRAMS (1996).

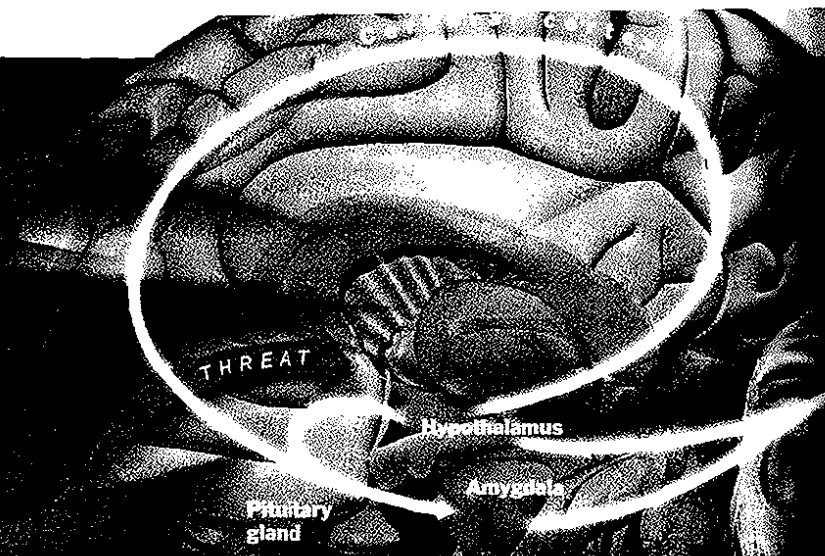
28. See *infra* text accompanying notes 92-93.

29. See *infra* notes 79-91 and accompanying text.

30. See *infra* note 56-64 and accompanying text.

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HOW STRESS TAKES ITS TOLL

Like its more severe cousin depression, ordinary stress is harmful to the body as well as the mind. Stress comes in two forms, each with its own biochemistry

ACUTE
A response to imminent danger, it turbocharges the system with powerful hormones that can damage the cardiovascular system

CHRONIC
Caused by constant emotional pressure the victim can't control, it produces hormones that can weaken the immune system and damage bones

1 A stress response starts in the brain ...

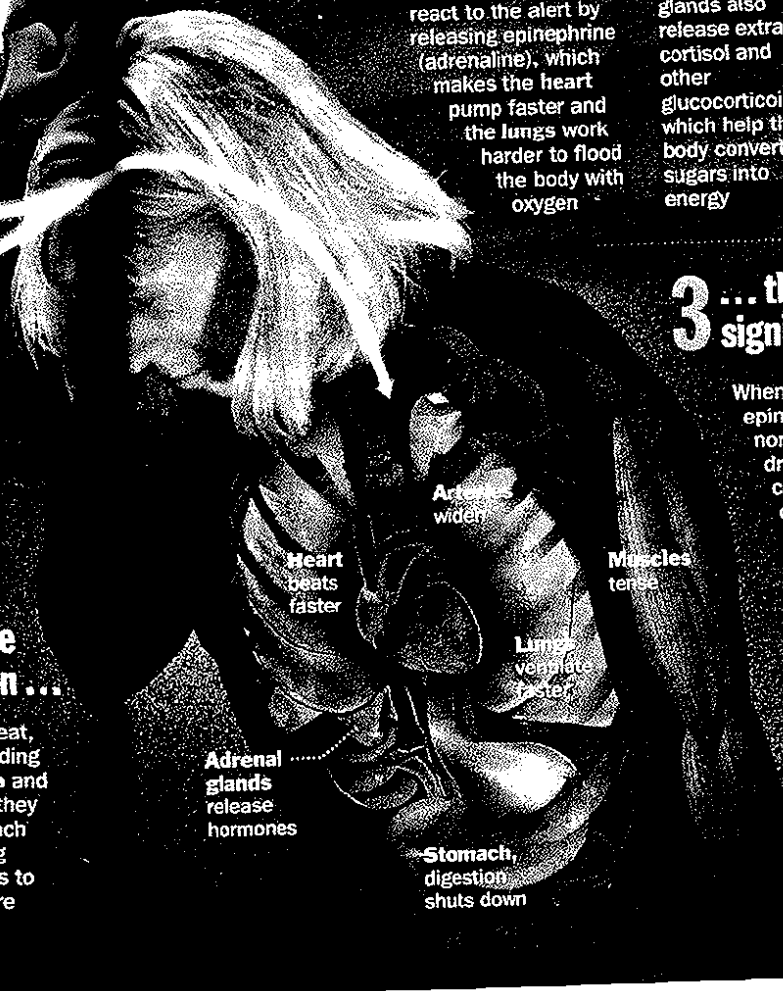
When the brain detects a threat, a number of structures, including the hypothalamus, amygdala and pituitary gland, go on alert: they exchange information with each other and then send signaling hormones and nerve impulses to the rest of the body to prepare for fight or flight

2 ... and the body unleashes a flood of hormones ...

Adrenal glands react to the alert by releasing epinephrine (adrenaline), which makes the heart pump faster and the lungs work harder to flood the body with oxygen

The adrenal glands also release extra cortisol and other glucocorticoids, which help the body convert sugars into energy

Nerve cells release norepinephrine, which tenses the muscles and sharpens the senses to prepare for action. Digestion shuts down



3 ... that can cause significant damage

When the threat passes, epinephrine and norepinephrine levels drop, but if danger comes too often they can damage the arteries. Chronic low-level stress keeps the glucocorticoids in circulation, leading to a weakened immune system, loss of bone mass, suppression of the reproductive system and memory problems

Graphic by Lon Tweeten and Joe Lortola
Text by Michael Lemonick

EVOLUTION'S ROLE

A Frazzled Mind, a Weakened Body

A major mental illness like clinical depression will send biochemical shock waves through the body. But the intimate relationship of body to mind isn't limited to serious disease. Researchers have come to understand that what lies

yoga, relaxation exercises and such—can take the heat off the body as well. Humanity's physical reaction to stress, known as the "fight or flight" response, probably evolved to help our primitive ancestors deal with a treacherous world. When confronted with

NATURAL HISTORY MUSEUM
TOM HUGHES—PHOTO R

made the senses sharper, the muscles tighter, the heart pound faster, the bloodstream fill with sugars for ready energy. Then, when the danger passed, the response would turn off.

In the modern world, stress usually takes other forms. But the fight-or-flight response hasn't changed. Sometimes it's still useful: a demanding job can lead to a sense of pride; a bout of precourt jitters can motivate a spectacular performance.

Spiegel, director of Stanford's Psychosocial Treatment Laboratory, cites a study of psoriasis patients in which half practiced meditation and half didn't; the first group healed faster. Other studies show that patients who are part of a rich social network have lower cortisol levels than loners. That people who pray regularly tend to live longer and that breast-cancer patients who have an optimistic attitude or an ability to express anger about their disease tend to live somewhat longer than those who don't.



October 31, 2007

Featured Stories

Science Explores Meditation's Effect on the Brain

by Allison Aubrey



A meditation class inside the Dharma Hall at the Barre Center for Buddhist Studies. Courtesy Barre Center for Buddhist Studies

Morning Edition, July 26, 2005 · People who meditate say it induces well-being and emotional balance. In recent years, a group of neuroscientists has begun investigating the practice, dubbed "mindfulness." As NPR's Allison Aubrey reports, they are exploring the hypothesis that meditation can actually change the way the brain works.

Web Extra: Mindfulness for the Masses

By Katie Unger

Scientists are taking advantage of new technologies to see exactly what goes on inside the brains of Buddhist monks and other so-called "Olympian" meditators -- individuals who meditate intensively and regularly. The neuroscientists hypothesize that regular meditation actually alters the way the brain is wired, and that these changes could be at the heart of claims that meditation can improve health and well-being.

But the rigors of the scientific method might never have been applied to studying the practice of meditation if it weren't for a vocal population of scientist-meditators. For decades, several of these individuals have been spreading the word about the beneficial effects of this traditional Eastern practice to the Western world.

In 1998, Dr. James Austin, a neurologist, wrote the book *Zen and the Brain: Toward an Understanding of Meditation and Consciousness*. Several mindfulness researchers cite his book as a reason they became interested in the field. In it, Austin examines consciousness by intertwining his personal experiences with Zen meditation with explanations backed up by hard science. When he describes how meditation can "sculpt" the brain, he means it literally and figuratively.

Before Austin, others had aimed to teach meditation to individuals without experience and without interest in spirituality, people who hoped to reap mental and physical health benefits. In 1975, Sharon Salzberg and Jack Kornfield co-founded the Insight Meditation Society in Barre, Mass., where they continue to practice and teach meditation. Salzberg has written several books, including *Faith and Lovingkindness: The Revolutionary Art of Happiness*. Kornfield holds a Ph.D. in clinical psychology and trained as a Buddhist monk in Thailand, Burma and India. He's written an introduction to the field, called *Meditation for Beginners*.

Jon Kabat-Zinn brought mindfulness into the mainstream by developing a standardized teaching method that has introduced multitudes of beginners to the practice of meditation. In 1979, he founded the Stress Reduction Clinic at the University of Massachusetts Memorial Medical Center in Worcester. He is professor emeritus of the university's medical school. Kabat-Zinn has written several books that show readers how to incorporate meditation into their daily lives.

One center with which Kabat-Zinn has had a long-standing association -- the Mind and Life Institute -- took a particular interest in partnering "modern science and Buddhism -- the world's two most powerful traditions for understanding the nature of reality and investigating the mind." The institute sponsors scientific conferences for

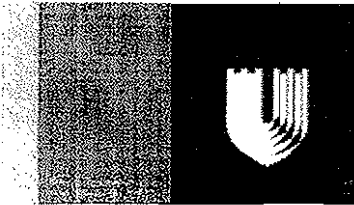
meditation researchers. At the most recent one, scientists discussed how meditation might change activity levels in the brain.

Some 150 centers around the country are shaped in the mold of Kabat-Zinn's Stress Reduction Clinic, and about 150 more teach meditation with slightly different philosophies.

More than 1,000 peer-reviewed scientific articles have been published on the subject of meditation. Until recently, most of them simply observed correlations between meditating and improved mood or decreased disease symptoms. But with so many scientists -- and thousands of consumers -- becoming "believers" in meditation, researchers seek to move beyond simply showing that meditation can influence the brain, to knowing exactly *how* that influence is accomplished.

Katie Unger is an intern for NPR's science desk.

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Health Articles

Commonly Asked Questions About Meditation and Stress Reduction

By Jeffrey Brantley, MD

About This Article

Article Details

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What is meditation?

Meditation refers to the activity of intentionally paying attention, to a particular object for a particular purpose. Spiritual practitioners and members of many faith traditions have developed meditation practices over countless years of human experience. There are literally thousands of ways to practice meditation. As it has been developed in diverse faith traditions, the purpose of all meditation practice is to awaken us. Meditation is intended to bring about transformation and change, through understanding, compassion, and clarity of seeing.

According to many authorities, meditation practices may generally be grouped into two basic categories based on the emphasis placed on directing attention as one practices meditation. First, there are "concentration" practices. In these, the practitioner focuses attention (concentrates) on a narrow field, usually a single object.

For example, in the service of spiritual practice, the person may repeat a meaningful phrase or prayer over and over or they may fix their attention on an object or sacred figure. In these concentration practices, when the attention wanders or is drawn away from the object of attention, the practitioner gently returns attention to the object. The object is selected for reasons specific to the person and to their particular faith tradition. Done for health purposes, concentration practices may select a more neutral object such as the sensation of the breath or the sensation of the body as it moves.

The second general category of meditation practice includes all forms of meditation practice, which emphasize awareness or "mindfulness." Such activities seek to develop and nourish present moment awareness. They

encourage paying attention in a way so as to be more aware in the present moment of all that is here, and of the constantly changing nature of what is here. These "mindfulness" practices are often described as "being, not doing," because mindfulness itself is the innate quality of human beings which is bare awareness. Mindfulness can be defined as careful, open-hearted, choiceless, present moment awareness.

Mindfulness benefits from the ability to concentrate attention, but is not the same as concentration. It is a quality, which human beings already have, but they have usually not been advised that they have it, that it is valuable, or that it can be cultivated. Mindfulness is the awareness that is not thinking (but that which is aware of thinking, as well as aware of each of the other ways we experience the sensory world, i.e., seeing, hearing, tasting, smelling, feeling through the body). Mindfulness is non-judgmental and open-hearted (friendly and inviting of whatever arises in awareness). It is cultivated by paying attention on purpose, deeply, and without judgment to whatever arises in the present moment, either inside or outside of us. By intentionally practicing mindfulness, deliberately paying more careful moment-to-moment attention, individuals can live more fully and less on "automatic pilot," thus, being more present for their own lives. Mindfulness meditation practices seek to develop this quality of clear, present moment awareness in a systematic way so that the practitioner may enjoy these benefits. Being more aware in each moment of life has benefits both to a person doing specific spiritual practice, and also to the same person in everyday life.

Why is meditation now offered in health care settings and for stress reduction?

The use of meditation in health care settings, and for stress reduction is related to discoveries about the mind-body connection in health and illness, which have been made in Western medicine over the last 25 to 30 years. In that time, researchers have discovered that the mind and the body are intimately connected. It is now known that thoughts, beliefs, emotions, and stress all have a great impact on health and illness. Meditation is one of a variety of so-called "self-regulatory practices" that individuals can learn to do for themselves to promote their own health and well-being. Research has shown that individuals who learn and practice these skills are likely to have a better health outcome than those who do not. In particular, research has shown that the ability to concentrate attention can promote deep relaxation in the body, and that the ability to be more mindful in each situation can help break the destructive habitual reactions to stress.

In the approach known as Mindfulness-Based Stress Reduction (MBSR), individuals are taught to practice mindfulness meditation and mindful movement/gentle stretching and yoga as ways to become more aware, more

present, and more relaxed as they face the stress of their own lives. Other examples of self-regulatory practices besides meditation are biofeedback, clinical hypnosis, and progressive relaxation exercises.

Why is daily meditation practice important?

Research has shown that meditation is similar to other lifestyle change activities in that it is only effective if you do it! Exercise, diet change, or meditation -- any lifestyle change requires consistent practice to gain results. In early studies of meditation, the cardiologist Herbert Benson, at Harvard, demonstrated that practicing meditation 20 minutes twice-a-day was sufficient to bring about significant reductions in blood pressure in many people. The exact number of minutes of daily practice to bring benefits for large populations is not well understood, and, in truth, it probably varies based on a number of considerations. Generally, however, we can say that regular, daily meditation practice of at least 30 minutes or more is very likely to bring benefits to the person who does it.

Do the meditation practices taught in this program and in other health care settings have any thing to do with "Eastern religions" or cults?

As mentioned previously, human beings of all faith traditions have practiced meditation as part of their spiritual life. The ability to develop calm and focused attention, and the cultivation of deeper and broader present moment awareness (mindfulness), are both vital supports to any genuine spiritual practice, and thus, both of these benefits of meditation have been developed and enjoyed by countless spiritual seekers.

The use of meditation practices here in the West, largely for health benefits and promoted and investigated by the emerging field of mind-body medicine, for practical purposes, is only about 25 to 30 years old at present. Because of this absence of a previously developed and mature methodology of meditation for health promotion in Western medicine, many of the meditation methods now taught in the West for health purposes owe some (or considerable) debt to the instructions and experience detailed by meditation teachers of more ancient traditions.

There already exists an enormous body of experience with meditation and yogic practice in different traditions worldwide. The challenge for those working in the emerging field of mind-body medicine in the West in the past 25-30 years has been to identify what is useful and relevant about meditation and yogic practices in those more ancient and diverse contexts, and to translate it into something practical for those in the contemporary Western health care culture who wish to utilize that information, be they consumer or provider. Those who have pioneered meditation for health purposes in Western medicine in the past

three decades, (Herbert Benson, MD, Joan Borysenko, PhD, Dean Ornish, MD, and Jon Kabat-Zinn, PhD, to name a few) have made deliberate efforts to make the meditation practices they teach non-sectarian and available to people of any and all faith traditions. This is true, for example, for Benson's method of eliciting the "relaxation response" in which instructions may have either a spiritual or secular focus depending on the individual's own preference. Likewise, the practices of mindfulness meditation and yoga/movement taught in the MBSR model (and this program) developed and taught by Jon Kabat-Zinn and his colleagues are explicitly crafted to appeal to individuals regardless of their faith tradition orientation. There is no specific religious or faith tradition emphasis, and the practices taught are offered for anyone who wishes to use them to enhance their own health.

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JOBS

Meditation builds up the brain

11:01 15 November 2005
NewScientist.com news service
Alison Motluk

Meditating does more than just feel good and calm you down, it makes you perform better – and alters the structure of your brain, researchers have found.

People who meditate say the practice restores their energy, and some claim they need less sleep as a result. Many studies have reported that the brain works differently during meditation – brainwave patterns change and neuronal firing patterns synchronise. But whether meditation actually brings any of the restorative benefits of sleep has remained largely unexplored.

So Bruce O'Hara and colleagues at the University of Kentucky in Lexington, US, decided to investigate. They used a well-established "psychomotor vigilance task", which has long been used to quantify the effects of sleepiness on mental acuity. The test involves staring at an LCD screen and pressing a button as soon as an image pops up. Typically, people take 200 to 300 milliseconds to respond, but sleep-deprived people take much longer, and sometimes miss the stimulus altogether.



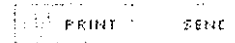
Why don't you reflect on meditation, in our new interactive forum

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an hour or so to recover from grogginess). But what astonished the researchers was that meditation was the only intervention that immediately led to superior performance, despite none of the volunteers being experienced at meditation.

"Every single subject showed improvement," says O'Hara. The improvement was even more dramatic after a night without sleep. But, he admits: "Why it improves performance, we do not know." The team is now studying experienced meditators, who spend several hours each day in practice.

Ten volunteers were tested before and after 40 minutes of either sleep, meditation, reading or light conversation, with all subjects trying all conditions. The 40-minute nap was known to improve performance (after



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Brain builder

What effect meditating has on the structure of the brain has also been a matter of some debate. Now Sara Lazar at the Massachusetts General Hospital in Boston, US, and colleagues have used MRI to compare 15 meditators, with experience ranging from 1 to 30 years, and 15 non-meditators.

They found that meditating actually increases the thickness of the cortex in areas involved in sensory processing, such as the prefrontal cortex and the right anterior insula.

"You are exercising it while you meditate, and it gets bigger," she says. The finding is in line with evidence that accomplished musicians, athletes and linguists all have thickening in relevant areas, says Lazar, that yogis "aren't just sitting there doing nothing".

The growth of the cortex is not due to the growth of new neurons, she points out, but to new blood vessels, more supporting structures such as glia and astrocytes, and increased branching.

The new studies were presented at the Society for Neuroscience annual meeting, in Washington DC.

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Mindfulness-Based Stress Reduction Course

RESEARCH ON MBSR

The Mindfulness-Based Stress Reduction (MBSR) Program was developed and taught by Jon Kabat-Zinn, PhD, at the University of Massachusetts Medical Center over 25 years ago. MBSR focuses on teaching individuals non-judgmental observation of one's constantly changing thoughts, perceptions, memories, emotions, and bodily sensations in order to develop a non-reactive, stable awareness of present-moment experience. Non-judgmental observation allows individuals to disentangle themselves from reflexive, reactive, and habitual maladaptive behaviors.^{1;2} Although other major forms of meditation have been shown to produce health benefits,^{3;4;5} MBSR may be superior for managing stress because this program avoids conceptualizing thoughts as distractions to the meditative experience, which may result in the intensification rather than the relief of stress and physical or mental symptoms.⁶

Research on meditation and relaxation has shown that practicing these techniques normalizes bodily functions, including reducing the heart rate, blood pressure, metabolism and vascular blood flow. Research studies on MBSR, in particular, conducted over the past 25 years, have shown reliable and reproducible effectiveness in reducing medical and psychological symptoms. The MBSR program has provided effective treatment for reducing stress,⁷⁻⁹ depression,⁷⁻¹⁰ and anxiety.¹⁰⁻¹¹ Participants in the MBSR program have shown improved immune function;¹² reduced chronic pain;^{2;13-14} decreased symptoms of fibromyalgia;³ and improved sleep patterns.¹⁵ Participation in MBSR has also been shown to reduce the number of primary care provider visits,¹¹ and MBSR participants maintain significant improvements in physical and emotional symptoms and functional status after the intervention is over.¹³

The effectiveness of the MBSR program on brain activity, as well as on immune function, was recently examined in a randomized clinical trial conducted by Dr. Richard Davidson of the Laboratory of Affective Neuroscience at the University of Wisconsin and the MacArthur Foundation's Mind/Body Network. This study measured brain electrical activity before and immediately after, and then 4 months after an 8-week MBSR program. Twenty-five participants were tested in the meditation group and 16 control group participants were tested at the same time points as the meditators. At the end of the 8-week period, subjects in both groups were vaccinated with influenza vaccine. Study results indicated that the meditators had significant increases in left-sided anterior activation, a pattern associated with positive affect, compared with the nonmeditators. Also, the meditators had significant increases in antibody titers to influenza vaccine compared with those in the control group. The findings of this study demonstrate that the MBSR program produces demonstrable positive effects on brain and immune function. ¹²

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Original Article: <http://www.mayoclinic.com/health/meditation/HQ01070>

Meditation: Take a stress-reduction break wherever you are

Meditation has been practiced for thousands of years. Originally, it was meant to help people deepen their understanding of the sacred and mystical forces of life. These days, many people turn to meditation for relaxation and stress reduction.

Meditation produces a deep state of relaxation and a tranquil mind. Meditation can give you a sense of calm, peace and emotional stability. And these effects don't end when your meditation session ends. Meditation can have lasting effects on your emotional and physical well-being.

Don't be daunted by meditation. Anyone can practice meditation. It's simple and inexpensive and doesn't require any special equipment. You can spend a few minutes in meditation almost anywhere — whether you're on the job, out for a walk, riding the bus, doing the laundry or waiting at the doctor's office.

Meditation and medical illnesses

Many healthy people use meditation as a way to relax the body and reduce stress. But meditation may also be useful if you have a medical disease or condition, especially one that may be worsened by stress. Scientific research about the benefits of meditation is continuing, and the results are mixed. Keeping that in mind, some research shows that meditation may help such conditions as:

- Allergies
- Anxiety
- Arthritis
- Asthma
- Cancer
- Chronic pain
- Depression
- High blood pressure
- Heart disease

Be sure to talk to your health care professional about the pros and cons of using meditation if you have any of these or other medical conditions. Meditation isn't a replacement for traditional medical treatment. But it may be useful in addition to your other treatment.

Fitting meditation into your lifestyle

When you meditate, you clear away the information overload that builds up every day. When your mind is clear of distracting thoughts, you gain new perspectives and new ways of handling stress and other problems. You become more self-aware. You focus on the here and now — not on your ever-growing to-do list.

While there are many different ways to meditate, the goal is the same — inner peace. You may have heard about transcendental meditation, Zen meditation, movement meditation and other forms of meditation. But don't let the thought of meditating the "right" way add to your stress. Sure, you can certainly attend special meditation centers or group classes led by trained instructors to practice such forms of meditation as:

- Yoga
- Tai chi
- Guided meditation
- Qi gong

But you can also practice meditation easily on your own. You can find everyday opportunities to meditate wherever you happen to be. You can also make meditation as formal or informal as you like — whatever suits your lifestyle and situation. Some people build meditation into their daily routine. For example, they may start and end each day with an hour of meditation. If you're short on time, all you really need is a few minutes.

Everyday ways to practice meditation

Here are some ways you can practice meditation on your own, whenever you choose. Take a few minutes or as much time as you like.

- **Breathe deeply.** This technique is good for beginners because breathing is a natural function. Focus all attention on your breathing. Concentrate on feeling and listening as you inhale and exhale through your nostrils. Breathe deeply and slowly. When you feel your attention wander, gently return your focus to your breathing.
- **Scan your body.** When using this technique, focus attention on different parts of your body. Become aware of your body's various sensations, whether that's pain, tension, warmth or relaxation. Combine body scanning with breathing exercises and imagine breathing heat or relaxation into and out of different parts of your

body.

- **Repeat a sacred name or phrase.** A mantra is the name of a sacred deity or a sacred phrase that you repeat silently or aloud. You can create your own mantra. Mantras are the building blocks of transcendental meditation. Examples of religious mantras include a Jesus prayer in the Christian tradition, the holy name of God in Judaism, or the Om mantra of Hinduism, Buddhism and other Eastern religions.
- **Walking meditation.** Combining a walk with meditation is an efficient and healthy way to relax. You can use this technique anywhere you're walking — in a tranquil forest, on a city sidewalk or at the mall. When you use this method, slow down the pace of walking so that you can focus on each movement of your legs or feet. Don't focus on a particular destination. Concentrate on your legs and feet, repeating action words in your mind such as lifting, moving and placing as you lift each foot, move your leg forward and place your foot on the ground.
- **Engage in prayer.** Prayer is the best known and most widely practiced example of meditation. Spoken and written prayers are found in most faith traditions. You can pray using your own words or read prayers written by others. Check the self-help or 12-step-recovery section of your local bookstore for examples. Talk with your rabbi, priest, pastor or other spiritual leader about resources.
- **Read or listen and take time to reflect.** Many people report that they benefit from reading poems or sacred texts silently or aloud, and taking a few moments to quietly reflect on the meaning that the words bring to mind. You can listen to sacred music, spoken words or any music you find relaxing or inspiring. You may want to write your reflections in a journal or discuss them with a friend or spiritual leader.
- **Focus your love and gratitude.** In this type of meditation, you focus your attention on a sacred object or being, weaving feelings of love and gratitude into your thoughts. You can also close your eyes and use your imagination or gaze at representations of the object.

Practice meditation skills

Be kind to yourself as you get started with meditation. It's common for the mind to wander during meditation, no matter how long you've been practicing meditation, and that's OK, too. If you're meditating to calm your mind and your attention wanders, slowly return to the object, sensation or movement you're focusing on. You can use an image to bring yourself back to your focus if you'd like. Try this: Picture balloons floating away with your thoughts, or imagine your thoughts as pigeons and mentally clap your hands to get them to fly away.

Experiment, and you'll likely find out what types of meditation work best for you. Adapt meditation to your needs at the moment. Remember, there's no right way or wrong way to meditate. What matters is that meditation helps you with stress reduction and feeling better overall.

By Mayo Clinic Staff

Apr 20, 2007

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May 8, 2007

Study Suggests Meditation Can Help Train Attention

By SANDRA BLAKESLEE

Correction Appended

In meditation, people sit quietly and concentrate on their breath. As air swooshes in and out of their nostrils, they attend to each sensation. As unbidden thoughts flutter to mind, they let them go. Breathe. Let go. Breathe. Let go.

According to a study published today in the online edition of the journal PloS Biology, three months of rigorous training in this kind of meditation leads to a profound shift in how the brain allocates attention.

It appears that the ability to release thoughts that pop into mind frees the brain to attend to more rapidly changing things and events in the world at large, said the study's lead author, Richard Davidson, a professor of psychology and psychiatry at the University of Wisconsin in Madison. Expert meditators, he said, are better than other people at detecting such fast-changing stimuli, like emotional facial expressions.

Dr. Ron Mangun, director of the Center for Mind and Brain at the University of California, Davis, who was not involved in the study, called the finding exciting. "It provides neuroscience evidence for changes in the workings of the brain with mental training, in this case meditation," he said. "We know we can learn and improve abilities of all sorts with practice, everything from driving to playing the piano. But demonstrating this in the context of meditation is interesting and novel."

Recent research has shown that meditation is good for the brain. It appears to increase gray matter, improve the immune system, reduce stress and promote a sense of well-being. But Dr. Davidson said this was the first study to examine how meditation affects attention.

The study exploited a brain phenomenon called the attentional blink. Say pictures of a St. Bernard and a Scottish terrier are flashed before one's eyes half a second apart, embedded in a series of 20 pictures of cats. In that sequence, most people fail to see the second dog. Their brains have "blinked."

Scientists explain this blindness as a misallocation of attention. Things are happening too fast for the brain to detect the second stimulus. Consciousness is somehow suppressed.

But the blink is not an inevitable bottleneck, Dr. Davidson said. Most people can identify the second target some of the time. Thus it may be possible to exert some control, which need not be voluntary, over the allocation of attention.

In the study, 17 volunteers with meditation experience spent three months at the Insight Meditation Society in Barre, Mass., meditating 10 to 12 hours a day. A novice control group meditated for 20 minutes a day over the same period.

Both groups were then given attentional blink tests with two numbers embedded in a series of letters. As both groups looked for the numbers, their brain activity was recorded with electrodes placed on the scalp.

Everyone could detect the first number, Dr. Davidson said. But the brain recordings showed that the less experienced meditators tended to grasp the first number and hang onto it, so they missed the second number. Those with more experience invested less attention to the first number, as if letting it go. This led to an increased ability to grasp the second number.

The attentional blink was thought to be a fixed property of the nervous system, Dr. Davidson said. But this study shows that it can change with practice. Attention is a flexible, trainable skill.

Just ask Daniel Levison, a staff researcher in the psychology department at the University of Wisconsin who meditated for three months as part of the study. "I'm a much better listener," he said. "I don't get lost in my own personal reaction to what people are saying."

Correction: May 23, 2007

An article in Science Times on May 8 about a study showing how meditation affects attention referred incorrectly to one group that was studied. The 17 volunteers who meditated for 10 to 12 hours a day as part of the research did have previous meditation experience; they were not new to meditation.

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The Meeting of Meditative Disciplines and Western Psychology

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

What 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



Shauna L. Shapiro

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 Kabalistic *dillug* and *tzeruf*, Islamic Sufism's *zikr*, Confucian quiet-sitting, Christian contemplations, and Buddhist meditations (Goleman, 1988; Walsh, 1999).¹ 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

¹ 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; Zamarrá, 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; Gelderlofs, 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 & Tanrielis, 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; Ernavardhana & 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 enlightenment 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).²

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,

² 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 (Scgal, 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 renascent 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 "metamotives," 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 stalling (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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REVIEW ARTICLE

Mechanisms of Mindfulness



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Recently, the psychological construct *mindfulness* has received a great deal of attention. The majority of research has focused on clinical studies to evaluate the efficacy of mindfulness-based interventions. This line of research has led to promising data suggesting mindfulness-based interventions are effective for treatment of both psychological and physical symptoms. However, an equally important direction for future research is to investigate questions concerning mechanisms of action underlying mindfulness-based interventions. This theoretical paper proposes a model of mindfulness, in an effort to elucidate potential mechanisms to explain how mindfulness affects positive change. Potential implications and future directions for the empirical study of mechanisms involved in mindfulness are addressed. © 2005 Wiley Periodicals, Inc. *J Clin Psychol*

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Recently, the psychological construct *mindfulness* has received a great deal of attention, and has even been proposed as a common factor across all schools of psychotherapy (Martin, 1997). Mindfulness has its roots in Eastern contemplative traditions and is most often associated with the formal practice of mindfulness meditation. In fact, mindfulness has been called the “heart” of Buddhist meditation (Kabat-Zinn, 2003; Thera, 1962). Mindfulness, however, is more than meditation. It is “inherently a state of consciousness” which involves consciously attending to one’s moment-to-moment experience (Brown & Ryan, 2003). Meditation practice is simply a “scaffolding” used to develop the state, or skill, of mindfulness (Kabat-Zinn, 2005). The intention of this paper is to refine the exploration of this particular state of mindfulness and to explore the questions: “What exactly is mindfulness? And, how does it work?”

Over the past 20 years, the majority of research has focused on clinical intervention studies to evaluate the efficacy of mindfulness-based interventions such as the Mindfulness Based Stress Reduction (MBSR) program (Kabat-Zinn, 1990). This line of research has primarily addressed the first order question “Are mindfulness-based interventions effective?” These studies have led to promising data suggesting that MBSR is an effective intervention for treatment of both psychological and physical symptoms (see Baer 2003; Bishop 2002; Grossman, Niemann, Schmidt, & Walach, 2004). Clearly this line of research is fundamental to validating mindfulness as an efficacious psychological intervention, and controlled clinical trials across diverse populations should continue. However, an equally important direction for future research is to address the second order question “How do mindfulness-based interventions actually work?”

Investigating questions concerning the mechanisms of action underlying mindfulness based interventions will require two different but complementary lines of inquiry. Dismantle studies are necessary in order to separate and compare the various active ingredients in mindfulness-based interventions such as social support, relaxation, and cognitive behavioral elements. A second line of inquiry is examining the central construct of *mindfulness* itself to determine if the development of “mindfulness” is what actually leads to the positive changes that have been observed. This step can be facilitated through the recent development of valid and reliable measures of mindfulness (see Baer, 2003; Bishop, 2002; Brown & Ryan, 2003—the KIMS), allowing measurement of mindfulness for use in statistical models of mediation. A testable theory of the *mechanisms* involved in the process of mindfulness itself is needed to explicate whether and how mindfulness affects change and transformation. The aim of this paper is to propose a first draft of such a theory, focusing on the construct of mindfulness itself, as opposed to the whole package of MBSR and other mindfulness-based interventions. We would like to emphasize that this is a beginning, a first attempt at understanding the mysterious and complex process that is mindfulness. Further, it is “a” theory, not “the” theory—it is a search for common ground on which to build a more precise understanding of the primary mechanisms of action involved in mindfulness practices that have become increasingly prominent in contemporary psychology and behavioral medicine. Our intention is to open a dialogue.

How does mindfulness work? We posit three components (axioms) of mindfulness: (1) intention, (2) attention, and (3) attitude (IAA). We then introduce a meta-mechanism of action, “reperceiving” and discuss the significance of this shift in perspective in terms of the transformational effects of mindfulness. Finally, we highlight four potential mechanisms, which may stem from reperceiving.

A Model Of Mindfulness

The Axioms. In an attempt to break mindfulness down into a simple, comprehensible construct, we reflected on the core components of the practice, the essential building

blocks of mindfulness, and examined the literature on this topic. An often cited definition of mindfulness—"paying attention in a particular way: on purpose, in the present moment, and non-judgmentally" (Kabat-Zinn, 1994, p. 4)—embodies the three axioms of mindfulness:

1. "On purpose" or intention,
2. "Paying attention" or attention,
3. "In a particular way" or attitude (mindfulness qualities).

Axioms are fundamental building blocks out of which other things emerge. From an understanding of IAA, we can deduce how mindfulness might work. Intention, attention, and attitude are not separate processes or stages—they are interwoven aspects of a single cyclic *process* and occur simultaneously (See Figure 1). Mindfulness is this moment-to-moment process.

Axiom I. Intention

When Western psychology attempted to extract the essence of mindfulness practice from its original religious/cultural roots, we lost, to some extent, the aspect of intention, which for Buddhism was enlightenment and compassion for all beings. It seems valuable to explicitly bring this aspect back into our model (Shapiro & Schwartz, 2000). As Kabat-Zinn writes, "Your intentions set the stage for what is possible. They remind you from moment to moment of why you are practicing in the first place" (p. 32). He continues, "I used to think that meditation practice was so powerful . . . that as long as you did it at all, you would see growth and change. But time has taught me that some kind of personal vision is also necessary" (p.46, 1990). This personal vision, or intention, is often dynamic and evolving (Freedman, 2005). For example, a highly stressed businessman may begin a mindfulness practice to reduce hypertension. As his mindfulness practice continues, he may develop an additional intention of relating more kindly to his wife.

The role of intention in meditation practice is exemplified by Shapiro's study (1992), which explored the intentions of meditation practitioners and found that as meditators continue to practice, their intentions shift along a continuum from self-regulation, to

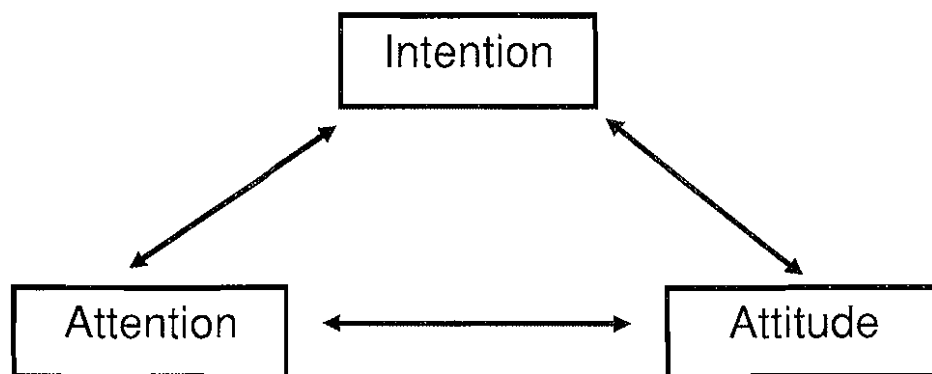


Figure 1. The three axioms of mindfulness, Intention, Attention, and Attitude, are not separate stages. They are interwoven aspects of a single cyclic process and occur simultaneously. Mindfulness is this moment-to-moment process.

self-exploration, and finally to self-liberation.¹ Further, the study found that outcomes correlated with intentions. Those whose goal was self-regulation and stress management attained self-regulation, those whose goal was self-exploration attained self-exploration, and those whose goal was self-liberation moved toward self-liberation and compassionate service. These findings correspond with our definition of intentions as dynamic and evolving, which allows them to change and develop with deepening practice, awareness, and insight. The inclusion of intention (i.e., *why* one is practicing) as a central component of mindfulness is crucial to understanding the process as a whole, and often overlooked in other contemporary definitions (Bishop et al., 2004).

Axiom II. Attention

A second fundamental component of mindfulness is *attention*. In the context of mindfulness practice, paying attention involves observing the operations of one's moment-to-moment, internal and external experience. This is what Husserl refers to as a "return to things themselves," that is, suspending all the ways of interpreting experience and attending to experience itself, as it presents itself in the here and now. In this way, one learns to attend to the contents of consciousness, moment by moment. Attention has been suggested in the field of psychology as critical to the healing process. For example, Gestalt therapy emphasizes present moment awareness, and its founder, Fritz Perls claimed that, "attention in and of itself is curative." The importance of attention can also be seen in cognitive-behavior therapy, which is based on the capacity to attend to (i.e., observe) internal and external behaviors. At the core of mindfulness, is this practice of paying attention.

Cognitive psychology delineates many different aspects of attentional abilities, including the capacity to attend for long periods of time to one object (vigilance or sustained attention, Parasuraman, 1998; Posner & Rothbart, 1992), the ability to shift the focus of attention between objects or mental sets at will (switching; Posner, 1980), and the ability to inhibit secondary elaborative processing of thoughts, feelings and sensations (cognitive inhibition; Williams, Mathews, & MacLeod, 1996). The self-regulation of attention as described in this mindfulness axiom would be predicted to result in the enhancement of all three of these skills.

Axiom III. Attitude

How we attend is also essential. The *qualities* one brings to attention have been referred to as the attitudinal foundations of mindfulness (Kabat-Zinn, 1990, Shapiro & Schwartz, 1999, 2000). This axiom asserts that the attitude one brings to the attention is essential. Often, mindfulness is associated with bare awareness, but the quality of this awareness is not explicitly addressed. However, the qualities one brings to the act of paying attention is crucial. For example, attention can have a cold, critical quality, or it can include an "an affectionate, compassionate quality . . . a sense of openhearted, friendly presence and interest" (Kabat-Zinn, 2003, p. 145). It is helpful to note the Japanese characters of mindfulness are composed of two interactive figures: one mind, and the other heart (Santorelli, 1999). Therefore, perhaps a more accurate translation of "mindfulness" from the Japanese is heart-mindfulness (Shapiro & Schwartz, in preparation), which underlines

¹Self-liberation refers to the experience of transcending (i.e., becoming free of or dis-identifying from) the sense of being a separate self.

the importance of including “heart” qualities in the attentional practice of mindfulness (see Shapiro & Schwartz, 2000, for review).

We posit that persons can learn to attend to their own internal and external experiences, without evaluation or interpretation, and practice acceptance, kindness and openness even when what is occurring in the field of experience is contrary to deeply held wishes or expectations. However, it is essential to make the attitudinal quality of attention explicit. It is important for the practitioner to consciously commit, e.g. “may I bring kindness, curiosity, and openness to my awareness, may I infuse my awareness with . . .”

With intentional training, one becomes increasingly able to take interest in each experience as it arises and also allow what is being experienced to pass away (i.e., not be held on to). Through intentionally bringing the attitudes of patience, compassion and non-striving to the attentional practice, one develops the capacity not to continually strive for pleasant experiences, or to push aversive experiences away. In fact, attending without bringing the heart qualities into the practice may result in practice that is condemning or judgmental of inner experience. Such an approach may well have consequences contrary to the intentions of the practice; for example cultivating the patterns of judgment and striving instead of equanimity and acceptance.

Bishop et al. (2004) also propose an attitudinal component in the operational definition of mindfulness, referred to as the *orientation to experience*, which involves curiosity, nonstriving and acceptance.

Proposing “a” Theory

We suggest that the three axioms, IAA, are the fundamental components (or internal behaviors from a Behaviorist perspective) of mindfulness. We posit that they account directly or indirectly for a large amount of the variance in the transformations that are observed in mindfulness practice. Building on these behaviors, we propose a model of the potential mechanisms of mindfulness, which suggests that intentionally (I) attending (A) with openness and non-judgmentalness (A) leads to a significant shift in perspective, which we have termed *reperceiving*. We believe reperceiving is a meta-mechanism of action, which overarches additional direct mechanisms that lead to change and positive outcome. We highlight four of these additional mechanisms: (1) self-regulation, (2) values clarification, (3) cognitive, emotional, and behavioral flexibility, and (4) exposure. These variables can be seen as both potential mechanisms for other outcomes, such as psychological symptom reduction, or as outcomes in and of themselves. Furthermore, this is by no means a linear pathway; each variable supports and affects the others.

Reperceiving as Meta Mechanism

Through the process of mindfulness, one is able to disidentify from the contents of consciousness (i.e., one’s thoughts) and view his or her moment-by-moment experience with greater clarity and objectivity. We term this process *reperceiving* as it involves a fundamental *shift in perspective*. Rather than being immersed in the drama of our personal narrative or life story, we are able to stand back and simply witness it. As Goleman suggests, “The first realization in “meditation” is that the phenomena contemplated are distinct from the mind contemplating them” (1980, p. 146).

Reperceiving is akin to the western psychological concepts of *decentering* (Safran & Segal, 1990), *deautomatization* (Deikman, 1982; Safran & Segal, 1990) and *detachment* (Bohart, 1983). For example, Safran and Segal define decentering as the ability to “step

outside of one's immediate experience, thereby changing the very nature of that experience." (117). Deikman describes deautomatization as "an undoing of the automatic processes that control perception and cognition." (p. 137). And according to Bohart (1983), detachment "encompasses the interrelated processes of gaining 'distance,' 'adopting a phenomenological attitude,' and the expansion of 'attentional space'" (see Martin, 1997, for review). All of these concepts share at their core a fundamental *shift in perspective*. This shift, we believe, is facilitated through mindfulness—the process of intentionally attending moment by moment with openness and nonjudgmentalness (IAA).

Reperceiving as Developmental Process

Reperceiving can be described as a rotation in consciousness in which what was previously "subject" becomes "object." This shift in perspective (making what was subject, object) has been heralded by developmental psychologists as key to development and growth across the lifespan (Kegan, 1982). Therefore, if reperceiving is in fact a meta-mechanism underlying mindfulness, then the practice of mindfulness is simply a continuation of the naturally occurring human developmental process whereby one gains an increasing capacity for objectivity about one's own internal experience.

This natural developmental process is illustrated in the classic example of a mother's birthday, in which her eight-year son gives her flowers, while her three-year old gives her his favorite toy. Although developmentally appropriate, the three-year old is basically caught in the limits of his own self-centered (i.e., narcissistic) perspective. For him, the world is still largely "subjective," that is, an extension of his self. And as a result, he cannot clearly differentiate his own desires from those of another. However, as he develops, a shift in perspective occurs such that there is an ever-increasing capacity to take the perspective of another (e.g., "my mother's needs are different from mine"), precisely because what was previously subject (identification with the mother) has now become an object which he subsequently realizes he is now separate from (no longer fused with). This is the dawning of empathy, the awareness of his mother as a *separate* person with her own needs and desires. The example demonstrates that as individuals are able to shift their perspective away from the narrow and limiting confines of their own personal points of reference, development occurs.

Mindfulness Practice Continues Developmental Process

This shift in perspective, which we have termed reperceiving, naturally occurs in the developmental process. We suggest, however, that mindfulness practice continues and accelerates this shift. Reperceiving, in which there is increasing capacity for objectivity in relationship to one's internal/external experience, is in many ways the hallmark of mindfulness practice. Through the process of intentionally focusing nonjudgmental attention on the contents of consciousness, the mindfulness practitioner begins to strengthen what Deikman refers to as "the observing self" (Deikman, 1982). To the extent that we are able to observe the contents of consciousness, we are no longer completely embedded in or fused with such content. For example, if we are able to see *it*, then we are no longer merely *it*; i.e., we must be *more* than *it*. Whether the *it* is pain, depression, or fear, reperceiving allows one to dis-identify from thoughts, emotions, and body sensations as they arise, and simply be with them instead of being defined (i.e., controlled, conditioned, determined) by them. Through reperceiving one realizes, "this pain is not me," "this depression is not me," "these thoughts are not me," as a result of being able to observe them from a meta-perspective.

The shift in perspective we are describing is analogous to our earlier example of the young toddler who over time is eventually able to see himself as separate from the objective world in which he had previously been embedded. However, in this case, the disidentification is from the content of one's mind (e.g., thoughts, feelings, self-concepts, memories) rather than one's physical environment. Through reperceiving brought about by the cultivation of mindfulness, the stories (e.g., about who we are, what we like or dislike, our opinions about others, etc.) that were previously identified with so strongly become simply "stories." In this way, there is a profound shift in one's relationship to thoughts and emotions, the result being greater clarity, perspective, objectivity, and ultimately equanimity.

This process is similar to Hayes, Strosahl, and Wilson's (1999) concept of cognitive defusion, in which the emphasis is on changing one's relationship to thought rather than attempting to alter the content of thought itself. As Hayes, Strosahl, and Wilson note, as one strengthens the capacity for mindful observing or witnessing of mental activity, there is often a corresponding shift in the self-sense. The "self" starts to be seen through or deconstructed—i.e., it is realized to be a psychological construction, an ever-changing system of concepts, images, sensations and beliefs. These aggregates, or constructs, that were once thought to comprise the stable self, are eventually seen to be impermanent and fleeting. Through reperceiving, not only do we learn to stand back from and observe our inner commentary about life and the experiences encountered, we also begin to stand back from (witness) our "story" about who and what *we* ultimately are. Through this change in perspective, identity begins to shift from the contents of awareness to awareness itself. Hayes et al. (1999) describe this as the shift from "self as content" (that which can be witnessed or observed as an object in consciousness) to "self as context" (that which is observing or witnessing—i.e., consciousness itself). It is this figure/ground shift that may, in part, be responsible for the transformations facilitated through mindfulness practice.

Reperceiving vs. Detachment

Reperceiving can easily be confused with an attempt to detach from one's experience, distancing to the point of apathy or numbness. However, this is in sharp contrast with the actual experience of reperceiving, which engenders a deep knowing and intimacy with whatever arises moment by moment. Reperceiving does indeed facilitate greater distance in terms of clarity. And yet, this does not translate as disconnection or dissociation. Instead, reperceiving simply allows one to deeply experience each event of the mind and body without identifying with or clinging to it, allowing for "a deep, penetrative non-conceptual seeing into the nature of mind and world" (Kabat-Zinn, 146, 2003). Through this process we are actually able to connect more intimately with our moment-to-moment experience, allowing it to rise and fall naturally with a sense of non-attachment. We experience what *is* instead of a commentary or story about what is. Therefore, reperceiving, in this hypothesized model, does not create apathy or indifference, but instead allows one to experience greater richness, texture, and depth, moment by moment, what Peters refers to as "intimate detachment" (Peters, 2004).

Additional Mechanisms

Reperceiving, and the "shift in perspective" it fosters, may lead to additional mechanisms that in turn contribute to the positive outcomes produced by mindfulness practice. We

highlight four: (1) self-regulation and self-management, (2) emotional, cognitive and behavioral flexibility, (3) values clarification and, (4) exposure. Inherent in all of these mechanisms are the three axioms of intention, attention, and attitude.

Self-Regulation and Self-Management. Self-regulation is the process whereby systems maintain stability of functioning and adaptability to change. Self-regulation is based on feedback loops. According to Shapiro and Schwartz (1999, 2000) both intention and attention function to enhance these feedback loops and create health:

intention → attention → connection → regulation → order → health.

Intentionally cultivating nonjudgmental attention leads to connection, which leads to self-regulation and ultimately to greater order and health. Through the process of re-perceiving, we are able to attend to the information contained in each moment. We gain access to more data, even those data that may have previously been too uncomfortable to examine. As Hayes asserts, “experiential avoidance becomes less automatic and less necessary.” (2002 p. 104) Through this process, dysregulation and subsequent disease can be avoided. In addition, re-perceiving interrupts automatic maladaptive habits. We become less controlled by particular emotions and thoughts that arise, and in turn are less likely to automatically follow them with habitual reactive patterns. For example, if anxiety arises, and we strongly identify with it, there will be a greater tendency to react to the anxiety unskillfully and subsequently regulate it by some behavior such as drinking, smoking, or overeating. Re-perceiving allows us to step back from the anxiety, to see it clearly as simply an emotional state that is arising and will in time pass away. Thus, this knowledge of the impermanence of all mental phenomena allows a higher level of tolerance for unpleasant internal states.

By developing the capacity to stand back and witness emotional states such as anxiety, we increase our “degrees of freedom” in response to such states, effectively freeing ourselves from automatic behavioral patterns. Through re-perceiving, we are no longer controlled by states such as anxiety or fear but are instead able to use them as information. We are able to attend to the emotion, and choose to self-regulate in ways that foster greater health and well-being. Through consciously (intention) bringing awareness (attention) and acceptance (attitude) to experience in the present moment, we will be better able to use a wider, more adaptive range of coping skills. Preliminary support for this hypothesis can be found in a study by Brown and Ryan in which they demonstrated that people who scored higher on a valid and reliable measure of mindfulness reported significantly greater self-regulated emotion and behavior (Brown & Ryan, 2003).

Values Clarification. Re-perceiving may also help people recognize what is meaningful for them and what they truly value. Often values have been conditioned by family, culture, and society, so that we may not realize whose values actually drive our choices in life. We become the value, instead of *the one who observes* the value. Frequently, we are pushed and pulled by what we believe (based on cultural or familial conditioning) is most important, but fail to reflect upon whether it is truly important in the context of our own lives. However, when we are able to separate from (observe) our values and reflect upon them with greater objectivity, we have the opportunity to rediscover and choose values that may be truer for us. In other words, we become able to *reflectively* choose what has been previously *reflexively* adopted or conditioned. The literature suggests that automatic processing often limits considerations of options that would be more congruent with needs and values (Brown & Ryan, 2003; Ryan, Kuhl, & Deci, 1997). However, an open, intentional awareness can help us choose behaviors that are congruent with our needs,

interests and values (Brown & Ryan, 2003; Ryan & Deci, 2000). A recent study found that when subjects are “acting mindfully,” as assessed by the Mindful Attention Awareness Scale (MAAS) state measure, individuals act in ways that are more congruent with their actual values and interests. (Brown & Ryan, 2003).

Cognitive, Emotional and Behavioral Flexibility. Reperceiving may also facilitate more adaptive, flexible responding to the environment in contrast to the more rigid, reflexive patterns of reactivity that result from being overly identified with one’s current experience. If we are able to see a situation and our own internal reactions to it with greater clarity, we will be able to respond with greater freedom of choice (i.e., in less conditioned, automatic ways). As Borkovec points out, research from cognitive and social psychology demonstrates, “existing expectations or beliefs can distort the processing of newly available information.” (2002, p. 78). Learning to see clearly (and learning in general) depends upon the ability to disidentify from prior patterns and beliefs.

Reperceiving facilitates this capacity to observe one’s mental commentary about the experiences encountered in life. It enables us to see the present situation as it is in this moment and to respond accordingly, instead of with reactionary thoughts, emotions and behaviors triggered by prior habit, conditioning, and experience. Reperceiving affords a different place from which to view the present moment. For example, when we are caught on the surface of the ocean, and the waves are thrashing us about, it is difficult to see clearly. However when we drop down beneath the surface of the waves (which is analogous to observing and disidentifying from the movement of one’s thoughts and emotional reactions), we enter a calmer, clearer space (Deikman’s (1982) “observing self,” or what contemplative traditions refer to as “the Witness”). From this new vantage point, we can look up to the surface and see whatever is present more clearly—and therefore respond with greater consciousness and flexibility. Reperceiving enables the development of this capacity to observe our ever-changing inner experience and thereby see more clearly our mental-emotional content, which in turn fosters greater cognitive-behavioral flexibility and less automaticity or reactivity.

Exposure. The literature is replete with evidence of the efficacy of exposure in treating a variety of disorders (Barlow & Craske, 2000). Reperceiving—the capacity to dispassionately observe or witness the contents of one’s consciousness—enables a person to experience even very strong emotions with greater objectivity and less reactivity. This capacity serves as a counter to the habitual tendency to avoid or deny difficult emotional states thereby increasing exposure to such states. Through this direct exposure, one learns that his or her emotions, thoughts, or body sensations are not so overwhelming or frightening. Through mindfully attending to negative emotional states, one learns experientially and phenomenologically that such emotions need not be feared or avoided and that they eventually pass away (Segal, Williams, & Teasdale, 2002). This experience eventually leads to the “extinction of fear responses and avoidance behaviors previously elicited by these stimuli” (Baer, 2003). Goleman suggests that meditation provides a “global desensitization” as meditative awareness can be applied to all aspects of one’s experience (Goleman, 1971).

Baer provides an example of this process with chronic pain patients: “. . . prolonged exposure to the sensations of chronic pain, in the absence of catastrophic consequences, might lead to desensitization, with a reduction over time in the emotional responses elicited by the pain sensations. Thus the practice of mindfulness skills could lead to the ability to experience pain sensations without excessive reactivity” (Baer, 2003). Indeed, one of the first successful clinical applications of mindfulness was in the context of

chronic pain (Kabat-Zinn, 1990). Another example of how facilitation of exposure to internal stimuli can help therapeutically comes from the literature on interoceptive exposure to physical sensations in panic disorder. Reperceiving allows one to explore and tolerate a broad range of thoughts, emotions, and sensations, which may in turn positively impact a number of debilitating conditions.

Building on Previous Models

Other theorists have developed models of the role of attention and meta-cognition in the development and maintenance of mental disorders, for example, Wells' Self-Regulatory Executive Function (S-REF) model (Myers & Wells, 2005; Wells, 1999) and Teasdale's Differential Activation Hypothesis (DAH) (Sheppard & Teasdale, 1996; Lau, Segal, & Williams, 2004; Teasdale, et al., 2002).

Specifically, Wells describes a cognitive-attentional syndrome characterized by heightened self-focused attention, threat monitoring, ruminative processing, and activation of dysfunctional beliefs. These are measured in the Metacognitions Questionnaire (Cartwright-Hatton & Wells, 1997; Wells & Cartwright-Hatton, 2004). Wells and colleagues have shown that dysfunctional metacognitions are associated with disorders and symptoms including psychosis, generalized anxiety disorder, obsessive-compulsive symptoms, hypochondriasis, and PTSD. The S-REF model emphasizes the importance of self-directed attention in potentially enhancing anxiety, by focusing attention on internal sensations associated with the experience of anxiety. This internal focus might engender fears of losing control, fear of the anxiety symptoms themselves, heightened awareness of dissatisfaction with the self, and negative cognitive activity (Wells, 1990). Wells suggests that an external attentional focus might help people with anxiety disorders, rather than an internal focus as one would use in mindfulness training. His intervention consists of external attentional monitoring and attention switching in an auditory mode.

Unlike the IAA model we have been describing, the S-REF model of therapy applies attentional abilities of focusing, switching and divided attention externally, rather than internally. An obvious empirical test of this would be to directly compare the efficacy of treatments based on the IAA model of mindfulness to the S-REF model in patients with anxiety disorders.

Another model that emphasizes attention is Teasdale's DAH theory, which describes vulnerability to depressive relapse by activation of dysfunctional negative cognitions, many of which may be comparable to the dysfunctional metacognitions described by Wells. This model of relapse to depression posits that transient negative moods evoke these characteristic negative thought patterns, which can spiral and trigger a relapse. This group has developed a Mindfulness Based Cognitive Therapy (MBCT) intervention focusing on the idea of "decentering" from the cascade of automatic negative thoughts associated with negative moods, a concept very similar to reperceiving. In their model, practicing mindfulness allows people to become aware of negative thoughts and feelings that signify potential relapse, and to relate to them in a new way. Participants learn, through mindfulness practice, to disengage from ruminative processing, observing thoughts as simply thoughts, thereby increasing metacognitive awareness. In this respect, the target is not the content of the thoughts per se, but the relationship of the individual to the process of thinking. Using Wells' terminology, through mindfulness practice the metacognitions shift from evaluating thoughts as personal and dangerous, to seeing thoughts as impersonal and part of the passing show, from a decentered perspective.

The IAA model is not contradictory to either of these models; in fact the richness of the S-REF and DAH models help to elucidate the manner by which attention is important

in engendering the positive effects of mindfulness practice in the context of mental health. Indeed, the attentional component of the IAA model could be tested using the Metacognitions Questionnaire in MBSR program participants, investigating changes that may occur over the course of mindfulness training. This could help to determine if, in fact, a shift in metacognitive awareness is occurring, as postulated.

Although IAA is not in contradiction with these two models, it is distinct from them. IAA emphasizes a tri-axiomatic model, as opposed to a purely attentional model. IAA defines mindfulness as a state involving the simultaneous arising of a particular intention, attention and attitude. The S-REF and the DAH models do not explicitly discuss intention. Further, although the DAH does talk about a “friendly” attitude toward one’s experience, the IAA model makes the attitudinal component of mindfulness more explicit and essential. IAA can be seen as an expansion of the above two models; an attempt to continue the process of developing a theoretical model of mindfulness.

Suggestions for Future Research

In summary, we posit the state of mindfulness arises when IAA are simultaneously cultivated. Through this process, *reperceiving* occurs, facilitating a shift in perspective. This shift, we suggest, is at the heart of the change and transformation affected by mindfulness practice. We hypothesize that multiple mechanisms may be facilitated by this shift, including (1) self-regulation, (2) values clarification, (3) cognitive-behavioral flexibility, and (4) exposure. Future research on mindfulness could begin by developing a measure of *reperceiving* and then examine whether this shift in perspective occurs in mindfulness-based interventions and if it is related to well-being outcomes.

Further, it will be important to determine the pathways by which change occurs. We have proposed four possible mechanisms. Future research could examine if any of these proposed mechanisms do indeed account for a significant amount of the variance in change observed. Models linking mindfulness practice to outcomes of interest such as reduction in psychopathological symptoms and cultivation of positive psychological qualities could investigate the role of the proposed direct mechanisms described above using statistical tests of mediating and moderating effects. Using longitudinal designs of mindfulness training would allow for clarification of the pathways of causality between practice and outcomes. Large sample sizes would allow for simultaneous investigation of several possible pathways and mechanisms, while controlling for the effects of other factors that may also be important in the cultivation of mindfulness. An important step in research of this nature will be to devise sound measures not only for the concept of mindfulness, but for the other proposed mediating factors of self-regulation, flexibility, values clarification and exposure. Well-considered measures are currently available in the literature for some, but not all, of these constructs (see Bishop, et al., 2004; Brown & Ryan, 2003).

Mediation and Moderation

Statistical models of mediation and moderation could be tested to determine if any of the three axioms account for change in outcomes, or if interventions are differentially effective for groups of people with varying backgrounds. For example, to test mediation of attention using the Baron and Kenny model (Baron & Kenny, 1986), if a relationship is established between a mindfulness-training intervention and improvement on the outcome of stress symptoms, three conditions need to be met to determine mediation: (1) the

initial variable (program attendance) is associated with outcome (decreased stress); (2) the initial variable (program attendance) is correlated with the mediator variable (enhanced attention); (3) the mediator variable (attention) affects the outcome variable. This is established by entering both the initial variable and mediator in a regression equation or structural equation model and showing that the mediator is correlated with the outcomes, after controlling for effects of the initial variable. The relationships between the initial variable and the outcome may be partially or fully mediated. In a fully mediated model, the relationship between program attendance and the outcome of decreased stress drops to nonsignificance in the equation when the mediator of attentional skills is added. Partial mediation results when the coefficient between the initial variable and the outcome drops, but still explains some significant variance in outcome, while the mediator also explains a significant amount of variance. This type of analysis can be done with latent constructs using structural equation modeling, or with measured variables using multiple regression, and could be highly beneficial to future research in determining models of mindfulness.

In contrast to mediation, a moderated effect occurs when the moderator variable completely changes the causal relationship between the initial variable (program attendance) and the outcome (stress symptoms). This is usually the case with fixed moderator variables such as age, gender or ethnicity. In the case of moderation, the initial variable is usually randomized, and hence there is no correlation between the initial variable and the moderator. A classic example is that an intervention (mindfulness training) may be moderated by gender (more effective for women than men). It is unlikely that assignment to mindfulness training would be correlated with gender, as people would be randomly assigned to treatment groups and both genders equally represented across groups. The main distinction between moderation and mediation is that mediation is an attempt to establish *mechanisms* by which one variable may be affecting another, whereas moderation is looking for differences in the relationship between group assignment and outcomes based on *pre-existing* variables.

The most likely use of these models in investigating the IAA constructs may be as tests of mediational effects of intention, attention and attitude between mindfulness training and outcomes. For example, improvements in the outcome of self-compassion might be mediated by an attitude of non-judging, such that program participants who fail to develop a non-judgmental attitude might show little change in self-compassion and empathy, while larger changes may be associated with consistent application of an open, non-judgmental attitude. Similarly, an explicit intention of enhancing spirituality through mindfulness training may mediate the effect of training on measures of spirituality.

A moderational effect might be found if baseline characteristics of people affect their ability to benefit from mindfulness training. For example, people with obsessive-compulsive disorder may find that techniques of mindfulness training exacerbate rather than ameliorate certain compulsive anxiety-relieving behaviors. If this were the case, an OCD diagnosis would be a moderating variable in the relationship between program participation and the outcome of anxiety level. Other personality characteristics, such as emotional repression, might also be moderating variables between mindfulness training and specific outcomes.

Conclusion

The investigation of mindfulness is still in its infancy and requires great sensitivity and a range of theoretical and methodological glasses to illuminate the richness and complexity of this phenomenon. We have attempted to provide a first formulation of a model to

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Sunday, Jul. 27, 2003

Just Say Om

By Joel Stein

The one thought I cannot purge, the one that keeps coming back and getting between me and my bliss, is this: What a waste of time. I am sitting cross-legged on a purple cushion with my eyes closed in a yoga studio with 40 people, most of them attractive women in workout outfits, and it is accomplishment enough that I am not thinking about them. Or giggling. I have concentrated on the sounds outside and then on my breath and then, supposedly, just on the present reality of my physical state—a physical state concerned increasingly with the lack of blood in my right foot. But I let that pass, and then I let my thoughts of the hot women go, and then the future and the past, and then my worries about how best to write this article and, for just a few moments, I hit it. It looks like infinite blackness, feels like a separation from my body and seems like the moment right before you fall asleep, only I'm completely awake. It is kind of nice. And then, immediately, I have this epiphany I could be watching television.

After 20 minutes we stop for a break, which surprises me, since I would not have guessed that sitting on a cushion is an activity that requires a break. Before we begin again, our instructor, Sharon Salzberg, a cofounder of the Insight Meditation Society in Barre, Mass., and the author of *Faith: Trusting Your Own Deepest Experience*, asks for questions or comments. Four are about breathing. "Breathing is too complicated for me to concentrate on," one woman complains. "I mean, breathing must be the most complex thing we do." I briefly consider waiting outside and mugging the lot of them.

But as pitifully muggable as these people may appear, the latest science says they've got something on my judgmental self. For one thing, they will probably outlive me by quite a few years. Not only do studies show that meditation is boosting their immune system, but brain scans suggest that it may be rewiring their brains to reduce stress. Meanwhile, we nonbelievers are becoming the minority. Ten million American adults now say they practice some form of meditation regularly, twice as many as a decade ago. Meditation classes today are being filled by mainstream Americans who don't own crystals, don't subscribe to New Age magazines and don't even reside in Los Angeles. For upwardly

mobile professionals convinced that their lives are more stressful than those of the cow-milking, soapmaking, butter-churning generations that preceded them, meditation is the smart person's bubble bath.

And they no longer have to go off to some bearded guru in the woods to do it. In fact, it's becoming increasingly hard to avoid meditation. It's offered in schools, hospitals, law firms, government buildings, corporate offices and prisons. There are specially marked meditation rooms in airports alongside the prayer chapels and Internet kiosks. Meditation was the subject of a course at West Point, the spring 2002 issue of the *Harvard Law Review* and a few too many locker-room speeches by Lakers coach Phil Jackson. At the Maharishi University schools in Fairfield, Iowa, which include college, high school and elementary classes, the entire elementary school student body meditates together twice daily. The Shambhala Mountain Center in the Colorado Rockies, a sprawling, gilded campus that looks like casino magnate Steve Wynn's take on Tibet, has gone from 1,342 visitors in 1998 to a projected 15,000 this year. The Catskills hotels in New York are turning into meditation retreats so quickly that the Borscht Belt is being renamed the Buddhist Belt. And, as with any great American trend that finds its way onto the cover of TIME, many of these meditators are famous. To name just a few: Goldie Hawn, Shania Twain, Heather Graham, Richard Gere and Al Gore, if he still counts as famous.

But the current interest is as much medical as it is cultural. Meditation is being recommended by more and more physicians as a way to prevent, slow or at least control the pain of chronic diseases like heart conditions, AIDS, cancer and infertility. It is also being used to restore balance in the face of such psychiatric disturbances as depression, hyperactivity and attention-deficit disorder (ADD). In a confluence of Eastern mysticism and Western science, doctors are embracing meditation not because they think it's hip or cool but because scientific studies are beginning to show that it works, particularly for stress-related conditions. "For 30 years meditation research has told us that it works beautifully as an antidote to stress," says Daniel Goleman, author of *Destructive Emotions*, a conversation among the Dalai Lama and a group of neuroscientists. "But what's exciting about the new research is how meditation can train the mind and reshape the brain." Tests using the most sophisticated imaging techniques suggest that it can actually reset the brain, changing the point at which a traffic jam, for instance, sets the blood boiling. Plus, compared with surgery, sitting on a cushion is really cheap.

As meditation is demystified and mainstreamed, the methods have become more streamlined. There's less incense burning today, but there remains a nugget of Buddhist philosophy: the belief tha

by sitting in silence for 10 minutes to 40 minutes a day and actively concentrating on a breath or a word or an image, you can train yourself to focus on the present over the past and the future, transcending reality by fully accepting it. In its most modern, Americanized forms, it has dropped the creepy mantra bit that has you memorize a secret phrase or syllable; instead you focus on a sound or on your breathing. It's a practice of repetition found somewhere in the history of most religions. There are dozens of flavors, from the Relaxation Response to *gtum-mo*, a technique practiced by Tibetan monks in eight-hour sessions that allows them to drive their core body temperature high enough to overcome earthly defilements or—even cooler—to dry wet sheets on their backs in the freezing temperatures of the Himalayas.

The brain, like the body, also undergoes subtle changes during deep meditation. The first scientific studies, in the '60s and '70s, basically proved that meditators are really, really focused. In India a researcher named B.K. Anand found that yogis could meditate themselves into trances so deep that they didn't react when hot test tubes were pressed against their arms. In Japan a scientist named T. Hirai showed that Zen meditators were so focused on the moment that they never habituated themselves to the sound of a ticking clock (most people eventually block out the noise, but the meditators kept hearing it for hours). Another study showed that master meditators, unlike marksmen, don't flinch at the sound of a gunshot. None of this, oddly, has been duplicated for a Vegas show.

In 1967 Dr. Herbert Benson, a professor of medicine at Harvard Medical School, afraid of looking too flaky, waited until late at night to sneak 36 transcendental meditators into his lab to measure their heart rate, blood pressure, skin temperature and rectal temperature. He found that when they meditated, they used 17% less oxygen, lowered their heart rates by three beats a minute and increase their theta brain waves—the ones that appear right before sleep—without slipping into the brain-wave pattern of actual sleep. In his 1970s best seller, *The Relaxation Response*, Benson, who founded the Mind/Body Medical Institute, argued that meditators counteracted the stress-induced fight-or-flight response and achieved a calmer, happier state. "All I've done," says Benson, "is put a biological explanation on techniques that people have been utilizing for thousands of years."

Several years later, Dr. Gregg Jacobs, a professor of psychiatry at Harvard Medical School who worked with Benson, recorded EEGs of one group of subjects taught to meditate and another given books on tape with which to chill out. Over the next few months, the meditators produced far more theta waves than the book listeners, essentially deactivating the frontal areas of the brain that receive and process sensory information. They also managed to lower activity in the parietal lobe, a section of

the brain located near the top of the head that orients you in space and time. By shutting down the parietal lobe, you can lose your sense of boundaries and feel more "at one" with the universe, which probably feels a lot less boring than it sounds when you try to tell your friends about it.

Studies of the meditating brain got much more sophisticated after brain imaging was discovered. Or maybe not. In 1997 University of Pennsylvania neurologist Andrew Newberg hooked up a group of Buddhist meditators to IVs containing a radioactive dye that he hoped would track blood flow in the brain, lighting up the parts that were the most active. But the only way for Newberg to freeze-frame the exact moment when they reached their meditative peak was to sit in the next room, tie a string around his finger and snake the other end under the door and leave it next to the meditators. When they reached meditative Nirvana, they pulled the string, and Newberg released the dye into the subjects' arms. His results showed that the brain doesn't shut off when it meditates but rather blocks information from coming into the parietal lobe. Meanwhile, Benson took a group of highly focused Sikhs who could meditate while an fMRI machine clanked away, and he measured the blood flow in their brains. Overall blood flow was down, but in certain areas, including the limbic system (which generates emotions and memories and regulates heart rate, respiratory rate and metabolism), it was up.

At the University of Wisconsin at Madison, Richard Davidson has used brain imaging to show that meditation shifts activity in the prefrontal cortex (right behind our foreheads) from the right hemisphere to the left. Davidson's research suggests that by meditating regularly, the brain is reoriented from a stressful fight-or-flight mode to one of acceptance, a shift that increases contentment. People who have a negative disposition tend to be right-prefrontal oriented; left-prefrontals have more enthusiasms, more interests, relax more and tend to be happier, though perhaps with less real estate.

Studies on meditation moved into the modern era in March 2000, when the Dalai Lama met with Western-trained psychologists and neuroscientists in Dharamsala, India, and urged the Mind and Life Institute to organize studies of highly accomplished meditation masters using the most advanced imaging technology, the results of which will be discussed in September at a conference at M.I.T. (which will also plan the next stages of research). Not only did these studies allow for a more detailed understanding of how the brain works during meditation, but they also provided a lot of cool shots of monks wearing electrodes.

What scientists are discovering through these studies is that with enough practice, the neurons in the

brain will adapt themselves to direct activity in that frontal, concentration-oriented area of the brain. It's what samurais and kamikaze pilots are trained to do and what Phil Jackson preaches: to learn to be totally aware of the moment. "Meditation is like gasoline," says Robert Thurman, director of the Tibet House (and father of actress Uma Thurman). "In Asia meditation was a sort of a natural tool anyone could use. We should detach it from just being Buddhist."

Increasingly it is being detached from Buddhism. Along with the more obscure Zen techniques (such as sitting for hours in positions that look painful to me and asking to be hit with sticks if you feel you are about to doze off), Americans are trying Vipassana (which begins by focusing on your breath), walking meditation (at first walking really, really slowly and then being hyperaware of each step), Transcendental Meditation (or TM, repeating a Sanskrit syllable over and over), Dzogchen (cultivating a clear but even-keeled awareness) and even trance dance (spinning with a blindfold on for an hour to dance music). And early next year a new book, *Eight Minutes That Will Change Your Life*, by Victor Davich, will advocate the most American form of meditation yet: a daily practice that he claims takes just eight minutes. That, it turns out, is exactly how long we're conditioned by modern society to concentrate, since it's the amount of time between TV commercials.

Josh Baran, author of the upcoming book *365 Nirvana Here and Now*, says when his brain wanders in a distinctly unfocused, nonmeditative way—that deal when you've flipped five pages of a book and read nothing—it actually causes him discomfort. Roger Walsh, a professor of psychiatry, philosophy and anthropology at the University of California at Irvine, has been studying the extent to which meditators can control their psychological states. "Only in recent years has Western psychiatry recognized attention-deficit disorder, but the meditative-contemplative traditions have maintained for thousands of years that we all suffer from some kind of ADD and just don't recognize it." It's the kind of basic human attention deficit that makes it hard to keep reading a paragraph if it doesn't end with a joke.

Psychologists are trying to discover whether meditation can reprogram minds with an antisocial bent. A study at the Kings County North Rehabilitation Facility, a jail near Seattle, asked prisoners serving time for nonviolent drug- or alcohol-related crimes to sit through Vipassana meditation for 10 days, 11 hours a day, alternating sitting and walking meditations. They were chosen for their extreme rehabilitation needs and because, really, who else are you going to get to bear with 11-hour meditation sessions? Approximately 56% of the newly enlightened prisoners returned to jail within two years, compared with a 75% recidivism rate among nonmeditators. The meditating cons also used fewer drugs, drank less and experienced less depression. At Cambridge University, John

Teasdale found that mindfulness helped chronically depressed patients, reducing their relapse rate by half. Wendy Weisel, the daughter of two Holocaust survivors and author of *Daughters of Absence*, took anxiety medication for most of her life until she started meditating two years ago. "There's an astounding difference," she reports. "You don't need medication for depression or for tension. I'm or nothing for the first time in my life."

Contentment and inner peace are nice, but think how many Americans would start meditating if you could convince them they would live longer without having to jog or eat broccoli rabe. More than a decade ago, Dr. Dean Ornish argued that meditation, along with yoga and dieting, reversed the buildup of plaque in coronary arteries. Last April, at a meeting of the American Urological Association, he announced his most recent findings that meditation may slow prostate cancer. While his results were interesting, it's important to note that those patients were also dieting and doing yoga. Jon Kabat-Zinn, who studied Buddhism in the '60s and founded the Stress Reduction Clinic at the UMass Medical Center in 1979, has been trying to find a more scientific demonstration of the healing power of meditation.

Over the years, he has helped more than 14,000 people manage their pain without medication by teaching them to focus on what their pain feels like and accept it rather than fight it. "These people have cancer, AIDS, chronic pain," he says. "If we think we can do something for them, we're in deep trouble. But if you switch frames of reference and entertain the notion that they may be able to do something for themselves if we put very powerful tools at their disposal, things shift extraordinarily."

Lately Kabat-Zinn has been studying a group of patients with psoriasis, an incurable skin disease that is often treated by asking patients to go to a hospital, put goggles on and stand naked in a hot, loud ultraviolet light box. Apparently, many people find this stressful. So Kabat-Zinn randomly picked half the patients and taught them to meditate in order to reduce their stress levels in the light box. In two experiments, the meditators' skin cleared up at four times the rate of the nonmeditators. In another study, conducted with Wisconsin's Richard Davidson, Kabat-Zinn gave a group of newly taught meditators and nonmeditators flu shots and measured the antibody levels in their blood. Researchers also measured their brain activity to see how much the meditators' mental activity shifted from the right brain to the left. Not only did the meditators have more antibodies at both four weeks and eight weeks after the shots, but the people whose activity shifted the most had even more antibodies. The better your meditation technique, Kabat-Zinn suggests, the healthier your immune system.

Meanwhile, the evidence from meditation researchers continues to mount. One study, for example,

shows that women who meditate and use guided imagery have higher levels of the immune cells known to combat tumors in the breast. This comes after many studies have established that meditation can significantly reduce blood pressure. Given that 60% of doctor visits are the result of stress-related conditions, this isn't surprising. Nor is it surprising that meditation can sometimes be used to replace Viagra.

But meditation does more than reduce stress, bring harmony and increase focus. As the Beatles demonstrated in 1968 when they visited the Maharishi Mahesh Yogi in his Himalayan ashram (they had met him in London in 1967), it can also give you much needed gravitas.

Actress Heather Graham started meditating at the suggestion of director David Lynch, another Maharishi student, 12 years ago on the set of his studiously bizarre *Twin Peaks* TV series. "It's easy to spend a lot of time worrying and obsessing, but meditation puts me in a blissful place," says Graham who typically meditates for 20 minutes when she wakes up and then again in the afternoon. "At the end of the day, all that star stuff doesn't mean anything.

Transcendental Meditation reminds you that it's how you feel inside that's important. If you have that, you have everything." Lynch, who also directed *Eraserhead* and *Blue Velvet*, has been sitting for 90 minutes twice a day since 1973. "I catch more ideas at deeper and deeper levels of consciousness, and they have more clarity and power," he says. Imagine the messed-up stuff Lynch might come up with if he meditated for four hours a day.


Goldie Hawn, who says she has been practicing for 31 years, has a dedicated meditation room in her house filled with her favorite crystals, flowers, incense and pictures of the Dalai Lama and Mother Teresa. She meditates twice a day for at least 30 minutes. "How do you learn to witness your destructive emotions?" she asks. "You can only do this by being able to sit quietly and quiet your mind."

More recent devotees are decisively noncrystal. Eileen Harrington, who runs the hard-boiled consumer-fraud group of the Federal Trade Commission in Washington, invited a meditation speaker to give a presentation after 9/11. Roughly half her staff is still at it. Bill Ford, the head of Ford Motors meditates, as does a former chief of England's top-secret MI-5. Hillary Clinton has talked about meditating, and the Gores are converts. "We both believe in regular prayer, and we often pray together. But meditation—as distinguished from prayer—I highly recommend it," says the man who

nearly became our President. Gore's TM mantra is not, as rumored, Florida.

Though I don't meditate as religiously, I can see Gore's point. Taking time out of our video- and Wi-Fi-drenched lives to rediscover the present is a worthwhile activity. And I felt a tangible difference when, in my postmeditative buzz, I would walk down the street hyperaware of my surroundings, like some not particularly useful superhero power. I could even get myself to not need to go to the bathroom if I concentrated on my bladder and accepted its fullness, though I'm not really sure this is a health benefit. But if I weren't one of the few people I know who need to be more active and less chill—I could use an anger-training class—I would meditate more. And if I ever find myself faced with trauma or disease, I think I'll pursue meditation. That's what Buddhists meant it for, after all, since they believe that life inevitably entails suffering. My only counterargument is that they came up with that suffering idea before television was invented.

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HOW LAWYERS DIFFER FROM THE GENERAL POPULATION

In Early Childhood	As Pre-Law Students	Effects of Law School	As Lawyers
1. Scholastic achievement orientation, reading			Need for achievement
2. Leadership, authoritarian male dominance emphasis Active approach to life, emphasis on self-discipline instead of submission to authority	Need for dominance, leadership, and attention Less subordinate and deferent, more authoritarian	Increased aggression and ambition when under stress Preference for competitive peer relations, failure to rely on peers for social support	Extroversion and sociability Competitiveness, masculinity, argumentativeness, aggression, dominance, cold and quarrelsome, and less warm and agreeable
3. Low interest in emotions or concern for others' feelings	Low interest in emotions, interpersonal concerns, and others' feelings	Increased "rights" focus (justice, rationality, etc.) as opposed to an "ethic of care"	Low interest in people, emotional concerns, and interpersonal matters; disproportionate preference for "Thinking" vs. "Feeling;" conventional, rules/rights-based morality
4.	Higher socioeconomic status; materialistic motives	Decreased interest in public interest work; increased interest in private practice	Materialism; focus on economic bottom-line
5.	Normal levels of psychological distress	Increased psychological distress and substance abuse, increased tension and insecurity	Higher incidence of psychological distress and substance abuse; pessimistic outlook on life

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The "Lawyer Attributes"

Lawyer Attributes

These are characteristics which *distinguish lawyers from the general population*. They may exist prior to law school but have only been documented during law school or thereafter and in some cases they may be intensified in law school. These are:

1. low interest in people, emotional concerns, and interpersonal matters;
2. less humanitarianism;
3. cold and quarrelsome, and less warm and agreeable;
4. extroversion and sociability;
5. masculinity (including argumentativeness, competitiveness, aggression, and dominance);
 6. high need for achievement based on an external or internal standard of excellence (includes competitiveness);
7. Myers-Briggs dimension of "Thinking" vs. "Feeling" (approach to making decisions);
8. preference for Myers-Briggs dimensions of Introversion, Intuition, Thinking, and Judging;
9. conventional, law and order approach to moral decision-making; and
10. greater than normal incidence of psychological distress (including depression) and substance abuse.

Attributes of Pre-Law Students

Lawyer attributes which appear to be pre-existing *before law school* are:

1. interest in school, reading, and scholastic achievement;
2. leadership and social skills;
3. need for dominance, leadership, and attention;
4. more authoritarian;
5. less subordinate or deferent;
6. low interest in emotions, interpersonal concerns, and in others' feelings;
7. less humanitarianism;
8. normal levels of psychological problems;
9. initiative-taking, active approach to life (rather than passive); and
10. higher socioeconomic level than the general population.

Motives For Selecting the Law

Law students report the following motives for choosing the law (these may suggest something about pre-existing, pre-law school characteristics):

1. interest in the subject matter;
2. desire for intellectual stimulation; and
3. money and prestige.

Gender differences: men more likely to admit materialism; women more likely to cite altruistic motives.

Effects of Law School

Characteristics which appear to be *developed or amplified in law school* are:

1. greater than normal emphasis on logic, thinking, rationality, justice, fairness, and rights (a "rights" orientation as opposed to an "ethic of care");
2. preference for Myers-Briggs "Thinking" vs. "Feeling" personality dimension;
3. authoritarianism;
4. the experience of feeling internally insecure, awkward, defensive;
5. a decrease in dominance, confidence, and sociability;
6. if tense and anxious, then an increase in ambitiousness and aggressiveness;
7. greater than normal incidence of psychological distress;*
8. a decrease in altruism and an increased interest in private practice with a firm (coupled with a decrease in interest in public service);
9. an increase in cynicism about the legal profession, but at the same time an increased protectiveness of the profession;
10. becoming less intellectual, less philosophical and introspective, less interested in abstractions, ideas, and the scientific method (perhaps becoming more realistic and pragmatic).

*This distress seems to be associated with interpersonal concerns, a failure to use social systems as support, overuse of thinking as a coping strategy, overuse of compensatory increases in aggression and ambition, pressure to professionalize and compete in relationships with peers, alienation, and substance abuse. It may also be associated with subtle pressure to adopt a "rights" orientation in making moral decisions if one comes to law school with an "ethic of care."

Attributes Associated With Career Satisfaction

Career satisfaction among lawyers has been correlated with:

1. Myers-Briggs Extraversion, Thinking, and Judging personality dimensions:
2. absence of neuroses;
3. broad range of interests; and
4. pragmatic, realistic motives for going to law school.

NOTE: Please see Professor Daicoff for proper citations to authority for each of the assertions above. All of the foregoing is based on empirical studies of lawyers and law students. I can be reached at (614) 236-6273 or by e-mail to sdaicoff@law.capital.edu.

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Asking Leopards to Change Their Spots: Can Lawyers Change?

(An outline of a talk based on an article in Geo. J. Legal Ethics)

The Tripartite Crisis

1. Decline in Professionalism

Number of disciplinary cases and malpractice claims against attorneys

Lawyer advertising

Scorched earth, "Rambo"-style litigation

Lack of civility

"Bottom-line" emphasis on money, business, and commercialism

2. Low Public Opinion

Peter D. Hart Survey, 1993

Gallup Poll, 1992

U.S. News & World Report Poll, 1996

Decline in applications to law school, 1993-97

3. Lawyer Distress

Career dissatisfaction — ABA/YLD Surveys, 1984 & 1990; California Poll, 1992

Benjamin, et al.'s psychological distress studies, 1986, 1990, & 1995

Substance abuse twice that of general population, 1988

Relationship of lawyer distress to discipline and malpractice, 1986, 1988, 1991, & 1994.

Causes of the Tripartite Crisis

Hypothesized External Causes:

1. Litigiousness
2. Competition among lawyers for clients
3. Win-at-all-costs mentality
4. Uncivil and/or unethical lawyer behavior
5. Poor treatment of clients
6. Lack of lawyer discipline
7. Materialistic or business orientation
8. Law firm changes
9. Lawyer advertising
10. Media
11. Legal education

Hypothesized Internal Causes:

12. Conflicts inherent in the practice of law
13. The hired-gun approach (amoral professional role)
14. Decline or shift in values

Popular Solutions to the Tripartite Crisis

External, Behavioral Solutions:

1. Work less and diversify activities
2. Make less money
3. Manage stress more effectively
4. Provide more legal services to the community
5. Provide more pro bono work
6. Charge for services differently
7. Mentor new lawyers and provide peer support
8. Regulate lawyer misbehavior

Internal, Psychological Solutions:

9. Discard the "hired-gun" approach and adopt "moral lawyering"
10. Adopt "caring lawyering" (ethic of care, open lawyer/client dialogue, renegotiate lawyer's role with client, focus on solving problems instead of creating conflict)
11. Shift values

Dissenters' Solutions:

12. Do nothing; redefine professionalism and celebrate diversity

Lawyer Attributes Which Would Have to Change or Moderate in Order to Implement the Popular Solutions

1. Attributes Related to Personal Drive to Achieve

1. Competitiveness
 - b. Desire to make money/materialism
3. Need for achievement
2. Attributes Related to Interpersonal Relating Style
 - a. Interpersonal insensitivity
 2. Preference for "Thinking"
 3. "Rights" orientation
 4. Aggressive and ambitious coping styles
 5. Preference for dominance

Implementing Change: What Won't Work

The following are unlikely to be effective in changing the lawyer personality as outlined above:

1. Mandating change through rules
2. Limiting lawyers' income
3. Increasing negative consequences of the current situation
4. Providing leadership from within the legal profession
5. Relying on legal education
6. Redefining professionalism to encompass the lawyer attributes

Should Lawyers Change?

Here, I argue that perhaps lawyers should not change their personalities:

1. Lawyer attributes may be adaptive to the practice of law
2. Lawyer attributes may facilitate equal access to justice
3. Lawyer attributes may allow lawyers to escape painful moral conflicts
4. Long-standing, ingrained personality characteristics present long before law school

Possible relationships of the lawyer attributes or atypical traits to lawyer distress and thus to deprofessionalism (need for further research)