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TIME



THE MINDFUL REVOLUTION

The science of finding focus in a
stressed-out, multitasking culture

BY KATE PICKERT

The Mindful Revolution

Finding peace in a stressed-out, digitally dependent culture may just be a matter of thinking differently

The raisins sitting in my sweaty palm are getting stickier by the minute. They don't look particularly appealing, but when instructed by my teacher, I take one in my fingers and examine it. I notice that the raisin's skin glistens. Looking closer, I see a small indentation where it once hung from the vine. Eventually, I place the raisin in my mouth and roll the wrinkly little shape over and over with my tongue, feeling its texture. After a while, I push it up against my teeth and slice it open. Then, finally, I chew--very slowly.

I'm eating a raisin. But for the first time in my life, I'm doing it differently. I'm doing it mindfully. This whole experience might seem silly, but we're in the midst of a popular obsession with mindfulness as the secret to health and happiness--and a growing body of evidence suggests it has clear benefits. The class I'm taking is part of a curriculum called Mindfulness Based Stress Reduction (MBSR) developed in 1979 by Jon Kabat-Zinn, an MIT-educated scientist. There are nearly 1,000 certified MBSR instructors teaching mindfulness techniques (including meditation), and they are in nearly every state and more than 30 countries. The raisin exercise reminds us how hard it has become to think about just one thing at a time. Technology has made it easier than ever to fracture attention into smaller and smaller bits. We answer a colleague's questions from the stands at a child's soccer game; we pay the bills while watching TV; we order groceries while stuck in traffic. In a time when no one seems to have enough time, our devices allow us to be many places at once--but at the cost of being unable to fully inhabit the place where we actually want to be.

Mindfulness says we can do better. At one level, the techniques associated with the philosophy are intended to help practitioners quiet a busy mind, becoming more aware of the present moment and less caught up in what happened earlier or what's to come. Many cognitive therapists commend it to patients as a way to help cope with anxiety and depression. More broadly, it's seen as a means to deal with stress.

But to view mindfulness simply as the latest self-help fad underplays its potency and misses the point of why it is gaining acceptance with those who might otherwise dismiss mental training techniques closely tied to meditation--Silicon Valley entrepreneurs, FORTUNE 500 titans, Pentagon chiefs and more. If distraction is the pre-eminent condition of our age, then mindfulness, in the eyes of its enthusiasts, is the most logical response. Its strength lies in its universality. Though meditation is considered an essential means to achieving mindfulness, the ultimate goal is simply to give your attention fully to what you're doing. One can work mindfully, parent mindfully and learn mindfully. One can exercise and even eat mindfully. The banking giant Chase now advises customers on how to spend mindfully.

There are no signs that the forces splitting our attention into ever smaller slices will abate. To the contrary, they're getting stronger. (Now arriving: smart watches and eyeglasses that will constantly beam notifications onto the periphery of our vision.) Already, many devotees see mindfulness as an indispensable tool for coping--both emotionally and practically--with the daily onslaught. The ability to focus for a few minutes on a single raisin isn't silly if the skills it requires are the keys to surviving and succeeding in the 21st century.

REWIRING YOUR BRAIN

With Tiny Bits of raisin still stuck in my teeth, I look around at the 15 other people in my MBSR class, which will meet every Monday evening for eight weeks. My classmates cite a wide variety of reasons they have plunked down \$350 to learn about meditation and mindfulness. One 20-something blond woman said back-to-back daily work meetings meant she couldn't find time to pause and reset; she had been prescribed the anti-anxiety drug Klonopin. A mother on maternity leave said "being present" with her infant seemed more important than ever, but she was struggling. One man, a social worker, said he needed help dealing with the stress of working with clients trying to get their lives on track.

Although I signed up to learn what mindfulness was all about, I had my own stressors I hoped the course might alleviate. As the working parent of a toddler, I found life in my household increasingly hectic. And like so many, I am hyperconnected. I have a personal iPhone and a BlackBerry for work, along with a desktop computer at the office and a laptop and iPad at home. It's rare that I let an hour go by without looking at a screen.

Powering down the internal urge to keep in constant touch with the outside world is not easy. At the start of each **two-hour MBSR class**, our teacher, a slight woman named Paulette Graf, hit two small brass cymbals together to indicate we should begin meditating. During this agonizingly frustrating period, which lasted up to 40 minutes, I would try to focus on my breath as Paulette advised, but I felt constantly bombarded by thoughts about my family, random sounds in the room and even how I would translate each evening's session into this story.

One evening, we were introduced to mindful walking. In our small meeting room, we formed a circle and paced together. "Feel your heel make contact with the floor, then the ball of your foot," said Paulette. "One foot, then the other." Anxious feelings about planning the week ahead and emails in my inbox that might be waiting for replies crept into my head even though my phones were off and tucked away. Mindfulness teachers say this kind of involuntary distraction is normal and that there's no point in berating ourselves for mentally veering away from the task at hand. Rather, they say, our ability to recognize that our attention has been diverted is what's important and at the heart of what it means to be mindful.

Some of this may sound like a New Age retread of previous prescriptions for stress. Mindfulness is rooted in Eastern philosophy, specifically Buddhism. But two factors set it apart and give it a practical veneer that is helping propel it into the mainstream.

One might be thought of as smart marketing. Kabat-Zinn and other proponents are careful to avoid any talk of spirituality when espousing mindfulness. Instead, they advocate a commonsense approach: think of your attention as a muscle. As with any muscle, it makes sense to exercise it (in this case, with meditation), and like any muscle, it will strengthen from that exercise. A related and potentially more powerful factor in winning over skeptics is what science is learning about our brains' ability to adapt and rewire. This phenomenon, known as neuroplasticity, suggests there are concrete and provable benefits to exercising the brain. The science--particularly as it applies to mindfulness--is far from conclusive. But it's another reason it's difficult to dismiss mindfulness as fleeting or contrived.

Precisely because of this scientific component, mindfulness is gaining traction with people who might otherwise find mind-body philosophies a tough sell, and it is growing into a sizable industry.

An NIH report found that Americans spent some \$4 billion on mindfulness-related alternative medicine in 2007, including MBSR. (NIH will release an update of this figure later this year.) There's a new monthly magazine, Mindful, a stack of best-selling books and a growing number of smartphone apps devoted to the concept.

For Stuart Silverman, mindfulness has become a way to deal with the 24/7 pace of his job consulting with financial advisers. Silverman receives hundreds of emails and phone calls every day. "I'm nuts about being in touch," he says. Anxiety in the financial industry reached a high mark in the 2008 meltdown, but even after the crisis began to abate, Silverman found that the high stress level remained. So in 2011, he took a group of his clients on a mindfulness retreat. The group left their smartphones behind and spent four days at a resort in the Catskills, in upstate New York, meditating, participating in group discussions, sitting in silence, practicing yoga and eating meals quietly and mindfully. "For just about everybody there, it was a life-changing experience," says Silverman.

The Catskills program was run by Janice Marturano, a former vice president at General Mills who began a corporate mindfulness initiative there and left the company in 2011 to run an organization she started called the Institute for Mindful Leadership. (About 500 General Mills employees have participated in mindfulness classes since Marturano introduced the concept to the company's top managers in 2006, and there is a meditation room in every building on the company's Minneapolis campus.) Marturano, who ran a well-attended mindfulness training session at Davos in 2013 and wrote a book called Finding the Space to Lead: A Practical Guide to Mindful Leadership, published in January, says most leaders she encounters feel besieged by long work hours and near constant connectivity. For these people, there seems to be no time to zero in on what's important or plan ahead.

There's evidence they're correct. Researchers have found that multitasking leads to lower overall productivity. Students and workers who constantly and rapidly switch between tasks have less ability to filter out irrelevant information, and they make more mistakes. And many corporate workers today find it impossible to take breaks. According to a recent survey, more than half of employed American adults check work messages on the weekends and 4 in 10 do so while on vacation. It's hard to unwind when your boss or employees know you're just a smartphone away. Says Marturano: "The technology has gone beyond what we are capable of handling."

It might seem paradoxical, then, that Silicon Valley has become a hotbed of mindfulness classes and conferences. Wisdom 2.0, an annual mindfulness gathering for tech leaders, started in 2009 with 325 attendees, and organizers expect more than 2,000 at this year's event, where participants will hear from Kabat-Zinn, along with executives from Twitter, Instagram and Facebook. Google, meanwhile, has an in-house mindfulness program called Search Inside Yourself. The seven-week course was started by a Google engineer and is offered four times a year on the company's Mountain View, Calif., campus. Through the course, thousands of Googlers have learned attention-focusing techniques, including meditation, meant to help them free up mental space for creativity and big thinking.

It makes sense in a way. Engineers who write code often talk about "being in the zone" the same way a successful athlete can be, which mindfulness teachers say is the epitome of being present and paying attention. (Apple co-founder Steve Jobs said

his meditation practice was directly responsible for his ability to concentrate and ignore distractions.)

Of course, much of that world-class engineering continues to go into gadgets and software that will only ratchet up our distraction level.

But lately there's been some progress in tapping technology for solutions too. There are hundreds of mindfulness and meditation apps available from iTunes, including one called Headspace, offered by a company of the same name led by Andy Puddicombe, a former Buddhist monk. Puddicombe, 40, co-founded Headspace in the U.K. in 2010 and opened a new office in Los Angeles in 2013 after attracting venture capital. The company offers free content through an app and sells subscriptions to a series of web videos, billed as a "gym membership for the mind," that are narrated by Puddicombe and explain the tenets of mindfulness and how to meditate.

"There's nothing bad or harmful about the smartphone if we have the awareness of how to use it in the right way," says Puddicombe. "It's unplugging by plugging in."

THE SCIENCE OF DESTRESSING

Jon Kabat-Zinn, the father of MBSR, doesn't look like the kind of person to be selling meditation and mindfulness to America's fast-paced, stressed-out masses. When I met him at a mindfulness conference in April, he was dressed in corduroys, a button-down shirt and a blazer, with wire-rimmed glasses and a healthy head of thick gray hair. He looked more like the professor he trained to become than the mindfulness guru he is.

But ultimately, a professor may prove more valuable than a guru in spreading the word on mindfulness. The son of an immunologist and an artist, Kabat-Zinn, now 69, was earning a doctorate in molecular biology at MIT in the early 1970s when he attended a lecture about meditation given by a Zen master. "It was very moving. I started meditating that day," he says. "And the more I meditated, the more I felt like there was something else missing that science could say in terms of, like, how we live as human beings."

By 1979, Kabat-Zinn had earned his Ph.D. and was working at the University of Massachusetts Medical Center studying muscle development and teaching anatomy and cell biology to medical students. On a meditation retreat that year, he had a revelation. What if he could use Buddhism-based meditation to help patients cope with conditions like chronic pain? Even if he couldn't alleviate their symptoms, Kabat-Zinn speculated that mindfulness training might help patients refocus their attention so they could change their response to pain and thereby reduce their overall suffering. With three physicians, Kabat-Zinn opened a stress-reduction clinic at UMass based on meditation and mindfulness. "It was just a little pilot on zero dollars," he says.

Almost immediately, some of the clinic's patients reported that their pain levels diminished. For others, the pain remained the same, but the mindfulness training made them better able to handle the stress of living with illness. They were able to separate their day-to-day experiences from their identity as pain patients. "That's what you most hope for," says Kabat-Zinn, "not that you can cure all diseases, but you could help people live in a way that didn't erode their quality of life beyond a certain point." Eventually Kabat-Zinn's program was absorbed into the UMass department of medicine and became the MBSR curriculum now used by hundreds of teachers across the country. In the years since, scientists have been able to prove that meditation and rigorous mindfulness training can lower cortisol levels and blood pressure, increase immune response and possibly even affect gene expression. Scientific study is also showing that meditation can have an impact on the

structure of the brain itself. Building on the discovery that brains can change based on experiences and are not, as previously believed, static masses that are set by the time a person reaches adulthood, a growing field of neuroscientists are now studying whether meditation--and the mindfulness that results from it--can counteract what happens to our minds because of stress, trauma and constant distraction. The research has fueled the rapid growth of MBSR and other mindfulness programs inside corporations and public institutions.

"There is a swath of our culture who is not going to listen to someone in monks' robes, but they are paying attention to scientific evidence," says Richard J. Davidson, founder and chair of the Center for Investigating Healthy Minds at the Waisman Center, at the University of Wisconsin at Madison. Davidson and a group of co-authors published a paper in the prestigious Proceedings of the National Academy of Sciences in 2004 that used electroencephalography to show that Buddhist monks who had logged at least 10,000 hours of meditation time had brains with more functional connectivity than novice meditators. The monks also had more gamma-wave activity, indicating high states of consciousness.

Of course, most people will never meditate at the level of a monk. But neuroscientists have shown that even far less experienced meditators may have more capacity for working memory and decreases in mind-wandering.

Many of the studies on mindfulness and meditation have been funded by individual private donors and have not met the highest scientific standards, leading the NIH to declare in 2007 that future research had to be "more rigorous." Perhaps to this end, the NIH has funded some 50 clinical trials in the past five years examining the effects of mindfulness on health, with about half pertaining to Kabat-Zinn's MBSR curriculum alone. The NIH trials completed or now under way include studies on how MBSR affects everything from social-anxiety disorder to the body's immune response to human papilloma virus to cancer-related fatigue. Altogether, in 2003, 52 papers were published in scientific journals on the subject of mindfulness; by 2012, that number had jumped to 477.

MINDFULNESS GOES MAINSTREAM

Tim Ryan, a democratic Congressman from Ohio, is among those pushing to use more federal funds for mindfulness research. Stressed and exhausted, Ryan attended a mindfulness retreat led by Kabat-Zinn in 2008 shortly after the election. Ryan turned over his two BlackBerrys and ended the experience with a 36-hour period of silence. "My mind got so quiet, and I had the experience of my mind and my body actually being in the same place at the same time, synchronized," says Ryan. "I went up to Jon and said, 'Oh, man, we need to study this--get it into our schools, our health care system.'"

In the years since, the Congressman has become a rock star among mindfulness evangelists. His book *A Mindful Nation* was published in 2012, and *Mindful*, launched in May 2013, put Ryan on the cover of its second issue after he secured a \$1 million federal grant to teach mindfulness in schools in his home district. Ryan has hosted meditation sessions and a mindfulness lecture series on Capitol Hill for House members and their staffs. The effort, says Ryan, is all about "little candles getting lit under the Capitol dome."

Elizabeth Stanley, an associate professor at Georgetown, is trying to do the same for those in uniform. Stanley was an Army intelligence officer deployed to the Balkans in the early 1990s. After

she left active duty, Stanley enrolled in a doctoral program at Harvard and pursued an MBA at MIT--at the same time--planning a career studying national-security issues.

But as the demands of two graduate programs combined with leftover stress from her time deployed, Stanley found herself unable to cope. "I realized my body and nervous system were constantly stuck on high," she says. She underwent therapy and started practicing yoga and mindful meditation, eventually completing both of her degree programs as well.

"On a long retreat in 2004, I realized I wanted to pull these two sides of me together and find a way to share these techniques with men and women in uniform," Stanley says. She teamed up with Amishi Jha, a neuroscientist at the University of Miami who studies attention, and together they launched a pilot study with private funding that investigated whether a mindfulness program could make Marines more resilient in stressful combat situations. The findings were so promising, according to Jha, that the Department of Defense awarded them two \$1 million grants to investigate further, using an MBSR-based curriculum Stanley developed called Mindfulness-Based Mind Fitness Training. Stanley has been involved in two additional mindfulness studies with Marines since, and Jha has been awarded \$3.4 million more in federal grants to study how mindfulness training affects stress among other populations, including undergraduates facing exams and accountants slogging through tax season.

Educators are turning to mindfulness with increasing frequency--perhaps a good thing, considering how digital technology is splitting kids' attention spans too. (The average American teen sends and receives more than 3,000 text messages a month.) A Bay Area-based program called **Mindful Schools** offers online mindfulness training to teachers, instructing them in how to equip children to concentrate in classrooms and deal with stress. Launched in 2010, the group has reached more than 300,000 pupils, and educators in 43 countries and 48 states have taken its courses online.

"It was always my intention that mindfulness move into the mainstream," says Kabat-Zinn, whose MBSR bible, *Full Catastrophe Living*, first published in 1990, was just reissued. Lately, the professor has also been spreading the gospel abroad. On a November trip to Beijing, he helped lead a mindfulness retreat for about 250 Chinese students, monks and scientists. "This is something that people are now finding compelling in many countries and many cultures, and the reason is the science," he says.

LISTENING TO LIFE

The MBSR class I took consisted of 21 hours of class time, but there was homework. One week, we were assigned to eat a snack mindfully and "remember to inhale/exhale regularly (and with awareness!)," according to a handout. Since we were New Yorkers, another week's assignment was to count fellow passengers on a subway train. One student in my class said he had a mindfulness breakthrough when he stopped listening to music and playing games on his phone while riding to work. Instead, he observed the people around him, which he said helped him be more present when he arrived at his office.

After eight weeks, we gathered one Saturday for a final exercise, a five-hour retreat. We brought our lunches, and after meditating and doing yoga, we ate together silently in a second-floor room overlooking a park. After the meal, Paulette led us into the park and told us to walk around for 30 minutes in a meditation practice known as aimless wandering. No phones and no talking. Just be present, she said.

As I looked across a vast lawn, I easily spotted my fellow MBSR students. They looked like zombies weaving and wandering alone through groups of friends and families lounging on picnic blankets or talking and barbecuing. I saw a group of 20-something men playing Frisbee, young kids riding bikes and a pair of women tanning in the sun.

I had lived close to this park for three years and spent hundreds of hours exploring it, but what struck me as different on the day of the retreat were the sounds. I noticed the clap, clap of a jogger's sneakers going by on a paved path. I saw a group playing volleyball on the lawn, and for the first time, I heard the game. The ball thudded when it hit the grass and whapped when it was being served. The players grunted when they made contact. Thud, whap, grunt. Whap, whap, thud. I heard a soft jingling, and I knew just what it was. A dog with metal ID tags came up behind me and passed by. Jingle, jingle.

After the prescribed half hour, we returned to our meeting room with Paulette. We had a brief group discussion about how we could continue our mindfulness training through other classes, and then we folded our chairs and put them away in a closet. Silently, we eased down a set of stairs and out the front door. I made it all the way home before I turned on my phones.

In the months since, I haven't meditated much, yet the course has had a small--but profound--impact on my life. I've started wearing a watch, which has cut in half the number of times a day I look at my iPhone and risk getting sucked into checking email or the web. On a tip from one of my MBSR classmates, when I'm at a restaurant and a dining companion gets up to take a call or use the bathroom, I now resist the urge to read the news or check Facebook on my phone. Instead, I usually just sit and watch the people around me. And when I walk outside, I find myself smelling the air and listening to the soundtrack of the city. The notes and rhythms were always there, of course. But these days they seem richer and more important.