In Defense of Distraction Twitter, Adderall, lifehacking, mindful jogging, power browsing, Obama's BlackBerry, and the benefits of overstimulation.

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I. The Poverty of Attention

I'm going to pause here, right at the beginning of my riveting article about attention, and ask you to please get all of your precious 21st-century distractions out of your system now. Check the score of the Mets game; text your sister that pun you just thought of about her roommate's new pet lizard ("iguana hold vr hand LOL get it like Beatles"); refresh vour work e-mail, vour home e-mail, your school e-mail; upload pictures of yourself reading this paragraph to your "me reading magazine articles" Flickr photostream; and alert the fellow citizens of whatever Twittertopia you happen to frequent that you will be suspending your digital presence for the next twenty minutes or so (I know that seems drastic: Tell them you're having an appendectomy or something and are about to lose consciousness). Good. Now: Count your breaths. Close your eyes. Do whatever it takes to get all of your neurons lined up in one direction. Above all, resist the urge to fixate on the picture, right over there, of that weird scrambled guy typing. Do not speculate on his ethnicity (German-Venezuelan?) or his backstory (Witness Protection Program?) or the size of his monitor. Go ahead and cover him with your hand if you need to. There. Doesn't that feel better? Now it's just you and me, tucked like fourteenth-century Zen masters into this sweet little nook of pure mental focus. (Seriously, stop looking at him. I'm over here.)

Over the last several years, the problem of attention has migrated right into the center of our cultural attention. We hunt it in neurology labs, lament its decline on op-ed pages, fetishize it in grassroots quality-of-life movements, diagnose its absence in more and more of our children every year, cultivate it in yoga class twice a week, harness it as the engine of self-help empires, and pump it up to superhuman levels with drugs originally intended to treat Alzheimer's and narcolepsy. Everyone still pays some form of attention all the time, of course"it's basically impossible for humans not to but the currency in which we pay it, and the goods we get in exchange, have changed dramatically.

Back in 1971, when the web was still twenty years off and the smallest computers were the size of delivery vans, before the founders of Google had even managed to get themselves born, the polymath economist Herbert A. Simon wrote maybe the most concise possible description of our modern struggle: "What information consumes is rather obvious: It consumes the attention of its recipients. Hence a wealth of information creates a poverty of attention, and a need to allocate that attention efficiently among the overabundance of information sources that might consume it." As beneficiaries of the greatest information boom in the history of the world, we are suffering, by Simon's logic, a correspondingly serious poverty of attention.

If the pundits clogging my RSS reader can be trusted (the ones I check up on occasionally when I don't have any new e-mail), our attention crisis is already chewing its hyperactive way through the very foundations of Western civilization. Google is making us stupid, multitasking is draining our souls, and the "dumbest generation" is leading us into a "dark age" of bookless "power browsing." Adopting the Internet as the hub of our work, play, and commerce has been the intellectual equivalent of adopting corn syrup as the center of our national diet, and we've all become mentally obese. Formerly well-rounded adults are forced to MacGyver worldviews out of telegraphic blog posts, bits of YouTube videos, and the first nine words of Times editorials. Schoolkids spread their attention across 30 different programs at once and interact with each other mainly as sweatless avatars. (One recent study found that American teenagers spend an average of 6.5 hours a day focused on the electronic world, which strikes me as a little low; in South Korea, the most wired nation on earth, young adults have actually died from exhaustion after multiday online-gaming marathons.) We are, in short, terminally distracted. And distracted, the alarmists will remind you, was once a synonym for insane. (Shakespeare: "poverty hath distracted her.")

This doomsaying strikes me as silly for two reasons. First, conservative social critics have been blowing the apocalyptic bugle at every large-scale tech-driven social change since Socrates' famous complaint about the memory-destroying properties of that newfangled technology called "writing." (A complaint we remember, not incidentally, because it was written down.) And, more practically, the virtual horse has already left the digital barn. It's too late to just retreat to a quieter time. Our jobs depend on connectivity. Our pleasure-cycles"no trivial matter are increasingly tied to it. Information rains down faster and thicker every day, and there are plenty of non-moronic reasons for it to do so. The question, now, is how successfully we can adapt.

The complex process of attention.

Although attention is often described as an organ system, it's not the sort of thing you can pull out and study like a spleen. It's a complex process that shows up all over the brain, mingling inextricably with other quasi-mystical processes like emotion, memory, identity, will, motivation, and mood. Psychologists have always had to track attention secondhand. Before the sixties, they measured it through easy-to-monitor senses like vision and hearing (if you listen to one voice in your right ear and another in your left, how much information can you absorb from either side?), then eventually graduated to PET scans and EEGs and electrodes and monkey brains. Only in the last ten years"thanks to neuroscientists and their functional MRIs"have we been able to watch the attending human brain in action, with its coordinated storms of neural firing, rapid blood surges, and oxygen flows. This has yielded all kinds of fascinating insights"for instance, that when forced to multitask, the overloaded brain shifts its processing from the hippocampus (responsible for memory) to the striatum (responsible for rote tasks), making it hard to learn a task or even recall what you've been doing once you're done.

When I reach David Meyer, one of the world's reigning experts on multitasking, he is feeling alert against all reasonable odds. He has just returned from India, where he was discussing the nature of attention at a conference with the Dalai Lama (Meyer gave a keynote speech arguing that Buddhist monks multitask during meditation), and his trip home was hellish: a canceled

flight, an overnight taxi on roads so rough it took thirteen hours to go 200 miles. This is his first full day back in his office at the University of Michigan, where he directs the Brain, Cognition, and Action Laboratory"a basement space in which finger-tapping, card-memorizing, tone-identifying subjects help Meyer pinpoint exactly how much information the human brain can handle at once. He's been up since 3 a.m. and has by now goosed his attention several times with liquid stimulants: a couple of cups of coffee, some tea. "It does wonders," he says.

My interaction with Meyer takes place entirely via the technology of distraction. We scheduled and rescheduled our appointment, several times, by e-mail. His voice is now projecting, tinnily, out of my cell phone's speaker and into the microphone of my digital recorder, from which I will download it, as soon as we're done, onto my laptop, which I currently have open on my desk in front of me, with several windows spread across the screen, each bearing nested tabs, on one of which I've been reading, before Meyer even had a chance to tell me about it, a blog all about his conference with the Dalai Lama, complete with RSS feed and audio commentary and embedded YouTube videos and pictures of His Holiness. As Meyer and I talk, the universe tests us with a small battery of distractions. A maximum-volume fleet of emergency vehicles passes just outside my window; my phone chirps to tell us that my mother is calling on the other line, then beeps again to let us know she's left a message. There is, occasionally, a slight delay in the connection. Meyer ignores it all, speaking deliberately and at length, managing to coordinate tricky subjectverb agreements over the course of multi-clause sentences. I begin, a little sheepishly, with a question that strikes me as sensationalistic, nonscientific, and probably unanswerable by someone who's been professionally trained in the discipline of cautious objectivity: Are we living through a crisis of attention?

Before I even have a chance to apologize, Meyer responds with the air of an Old Testament prophet. "Yes," he says. "And I think it's going to get a lot worse than people expect." He sees our distraction as a full-blown epidemic" a cognitive plague that has the potential to wipe out an entire generation of focused and productive thought. He compares it, in fact, to smoking. "People aren't aware what's happening to their mental processes," he says, "in the same way that people years ago couldn't look into their lungs and see the residual deposits."

I ask him if, as the world's foremost expert on multitasking and distraction, he has found his own life negatively affected by the new world order of multitasking and distraction.

"Yep," he says immediately, then adds, with admirable (although slightly hurtful) bluntness: "I get calls all the time from people like you. Because of the way the Internet works, once you become visible, you're approached from left and right by people wanting to have interactions in ways that are extremely time-consuming. I could spend my whole day, my whole night, just answering e-mails. I just can't deal with it all. None of this happened even ten years ago. It was a lot calmer. There was a lot of opportunity for getting steady work done."

Is multitasking a myth?

Over the last twenty years, Meyer and a host of other researchers have proved again and again that multitasking, at least as our culture has come to know and love and institutionalize it, is a myth. When you think you're doing two things at once, you're almost always just switching

rapidly between them, leaking a little mental efficiency with every switch. Meyer says that this is because, to put it simply, the brain processes different kinds of information on a variety of separate "channels" a language channel, a visual channel, an auditory channel, and so on each of which can process only one stream of information at a time. If you overburden a channel, the brain becomes inefficient and mistake-prone. The classic example is driving while talking on a cell phone, two tasks that conflict across a range of obvious channels: Steering and dialing are both manual tasks, looking out the windshield and reading a phone screen are both visual, etc. Even talking on a hands-free phone can be dangerous, Meyer says. If the person on the other end of the phone is describing a visual scene say, the layout of a room full of furniture that conversation can actually occupy your visual channel enough to impair your ability to see what's around you on the road.

The only time multitasking does work efficiently, Meyer says, is when multiple simple tasks operate on entirely separate channels"for example, folding laundry (a visual-manual task) while listening to a stock report (a verbal task). But real-world scenarios that fit those specifications are very rare.

This is troubling news, obviously, for a culture of BlackBerrys and news crawls and Firefox tabs"tools that, critics argue, force us all into a kind of elective ADHD. The tech theorist Linda Stone famously coined the phrase "continuous partial attention" to describe our newly frazzled state of mind. American office workers don't stick with any single task for more than a few minutes at a time; if left uninterrupted, they will most likely interrupt themselves. Since every interruption costs around 25 minutes of productivity, we spend nearly a third of our day recovering from them. We keep an average of eight windows open on our computer screens at one time and skip between them every twenty seconds. When we read online, we hardly even read at all"our eyes run down the page in an F pattern, scanning for keywords. When you add up all the leaks from these constant little switches, soon you're hemorrhaging a dangerous amount of mental power. People who frequently check their e-mail have tested as less intelligent than people who are actually high on marijuana. Meyer guesses that the damage will take decades to understand, let alone fix. If Einstein were alive today, he says, he'd probably be forced to multitask so relentlessly in the Swiss patent office that he'd never get a chance to work out the theory of relativity.

II. The War on the Poverty of Attention

For Winifred Gallagher, the author of Rapt, a new book about the power of attention, it all comes down to the problem of jackhammers. A few minutes before I called, she tells me, a construction crew started jackhammering outside her apartment window. The noise immediately captured what's called her bottom-up attention"the broad involuntary awareness that roams the world constantly looking for danger and rewards: shiny objects, sudden movements, pungent smells. Instead of letting this distract her, however, she made a conscious choice to go into the next room and summon her top-down attention"the narrow, voluntary focus that allows us to isolate and enhance some little slice of the world while ruthlessly suppressing everything else.

This attentional self-control, which psychologists call executive function, is at the very center of our struggle with attention. It's what allows us to invest our focus wisely or poorly. Some of us, of course, have an easier time with it than others.

Gallagher admits that she's been blessed with a naturally strong executive function. "It sounds funny," she tells me, "but I've always thought of paying attention as a kind of sexy, visceral activity. Even as a kid, I enjoyed focusing. I could feel it in almost a mentally muscular way. I took a lot of pleasure in concentrating on things. I'm the sort of irritating person who can sit down to work at nine o'clock and look up at two o'clock and say, "Oh, I thought it was around 10:30."

Gallagher became obsessed with the problem of attention five years ago, when she was diagnosed with advanced and aggressive breast cancer. She was devastated, naturally, but then realized, on her way out of the hospital, that even the cancer could be seen largely as a problem of focus" a terrifying, deadly, internal jackhammer. It made her realize, she says, that attention was "not just a latent ability, it was something you could marshal and use as a tool." By the time she reached her subway station, Gallagher had come up with a strategy: She would make all the big pressing cancer-related decisions as quickly as possible, then, in order to maximize whatever time she had left, consciously shift her attention to more positive, productive things.

The most promising (and ancient) solution to our attention problem.

One of the projects Gallagher worked on during her recovery (she is now cancer free) was Rapt, which is both a survey of recent attention research and a testimonial to the power of top-down focus. The ability to positively wield your attention comes off, in the book, as something of a panacea; Gallagher describes it as "the sine qua non of the quality of life and the key to improving virtually every aspect of your experience." It is, in other words, the Holy Grail of self-help: the key to relationships and parenting and mood disorders and weight problems. (You can apparently lose seven pounds in a year through the sheer force of paying attention to your food.)

"You can't be happy all the time," Gallagher tells me, "but you can pretty much focus all the time. That's about as good as it gets."

The most promising solution to our attention problem, in Gallagher's mind, is also the most ancient: meditation. Neuroscientists have become obsessed, in recent years, with Buddhists, whose attentional discipline can apparently confer all kinds of benefits even on non-Buddhists. (Some psychologists predict that, in the same way we go out for a jog now, in the future we'll all do daily 20-to-30-minute "secular attentional workouts.") Meditation can make your attention less "sticky," able to notice images flashing by in such quick succession that regular brains would miss them. It has also been shown to elevate your mood, which can then recursively stoke your attention: Research shows that positive emotions cause your visual field to expand. The brains of Buddhist monks asked to meditate on "unconditional loving-kindness and compassion" show instant and remarkable changes: Their left prefrontal cortices (responsible for positive emotions) go into overdrive, they produce gamma waves 30 times more powerful than novice meditators, and their wave activity is coordinated in a way often seen in patients under anesthesia.

Gallagher stresses that because attention is a limited resource"one psychologist has calculated that we can attend to only 110 bits of information per second, or 173 billion bits in an average lifetime"our moment-by-moment choice of attentional targets determines, in a very real sense, the shape of our lives. Rapt's epigraph comes from the psychologist and philosopher William James: "My experience is what I agree to attend to." For Gallagher, everything comes down to that one big choice: investing your attention wisely or not. The jackhammers are everywhere"iPhones, e-mail, cancer"and Western culture's attentional crisis is mainly a widespread failure to ignore them.

"Once you understand how attention works and how you can make the most productive use of it," she says, "if you continue to just jump in the air every time your phone rings or pounce on those buttons every time you get an instant message, that's not the machine's fault. That's your fault."

Making the responsible attention choice, however, is not always easy. Here is a partial list, because a complete one would fill the entire magazine, of the things I've been distracted by in the course of writing this article: my texting wife, a very loud seagull, my mother calling from Mexico to leave voice mails in terrible Spanish, a man shouting "Your weed-whacker fell off! Your weed-whacker fell off!" at a truck full of lawn equipment, my Lost-watching wife, another man singing some kind of Spanish ballad on the sidewalk under my window, streaming video of the NBA playoffs, dissertation-length blog breakdowns of the NBA playoffs, my toenail spontaneously detaching, my ice-cream-eating wife, the subtly shifting landscapes of my three different e-mail in-boxes, my Facebooking wife, infinite YouTube videos (a puffin attacking someone wearing a rubber boot, Paul McCartney talking about the death of John Lennon, a chimpanzee playing Pac-Man), and even more infinite, if that is possible, Wikipedia entries: puffins, MacGyver, Taylorism, the phrase "bleeding edge," the Boston Molasses Disaster. (If I were going to excuse you from reading this article for any single distraction, which I am not, it would be to read about the Boston Molasses Disaster.)

When the jackhammers fire up outside my window, in other words, I rarely ignore them"I throw the window open, watch for a while, bring the crew sandwiches on their lunch break, talk with them about the ins and outs of jackhammering, and then spend an hour or two trying to break up a little of the sidewalk myself. Some of my distractions were unavoidable. Some were necessary work-related evils that got out of hand. Others were pretty clearly inexcusable. (I consider it a victory for the integrity of pre-web human consciousness that I was able to successfully resist clicking on the first "related video" after the chimp, the evocatively titled "Guy shits himself in a judo exhibition.") In today's attentional landscape, it's hard to draw neat borders.

Can we dope our brains into focus?

I'm not ready to blame my restless attention entirely on a faulty willpower. Some of it is pure impersonal behaviorism. The Internet is basically a Skinner box engineered to tap right into our deepest mechanisms of addiction. As B. F. Skinner's army of lever-pressing rats and pigeons taught us, the most irresistible reward schedule is not, counterintuitively, the one in which we're rewarded constantly but something called "variable ratio schedule," in which the rewards arrive at random. And that randomness is practically the Internet's defining feature: It dispenses its

never-ending little shots of positivity"a life-changing e-mail here, a funny YouTube video there"in gloriously unpredictable cycles. It seems unrealistic to expect people to spend all day clicking reward bars "searching the web, scanning the relevant blogs, checking e-mail to see if a co-worker has updated a project and then just leave those distractions behind, as soon as they're not strictly required, to engage in "healthy" things like books and ab crunches and undistracted deep conversations with neighbors. It would be like requiring employees to take a few hits of opium throughout the day, then being surprised when it becomes a problem. Last year, an editorial in the American Journal of Psychiatry raised the prospect of adding "Internet addiction" to the DSM, which would make it a disorder to be taken as seriously as schizophrenia.

A quintessentially Western solution to the attention problem"one that neatly circumvents the issue of willpower"is to simply dope our brains into focus. We've done so, over the centuries, with substances ranging from tea to tobacco to NoDoz to Benzedrine, and these days the tradition seems to be approaching some kind of zenith with the rise of neuroenhancers: drugs designed to treat ADHD (Ritalin, Adderall), Alzheimer's (Aricept), and narcolepsy (Provigil) that can produce, in healthy people, superhuman states of attention. A grad-school friend tells me that Adderall allowed him to squeeze his mind "like a muscle." Joshua Foer, writing in Slate after a weeklong experiment with Adderall, said the drug made him feel like he'd "been bitten by a radioactive spider" he beat his unbeatable brother at Ping-Pong, solved anagrams, devoured dense books. "The part of my brain that makes me curious about whether I have new e-mails in my in-box apparently shut down," he wrote.

Although neuroenhancers are currently illegal to use without a prescription, they're popular among college students (on some campuses, up to 25 percent of students admitted to taking them) and"if endless anecdotes can be believed"among a wide spectrum of other professional focusers: journalists on deadline, doctors performing high-stakes surgeries, competitors in poker tournaments, researchers suffering through the grind of grant-writing. There has been controversy in the chess world recently about drug testing at tournaments.

In December, a group of scientists published a paper in Nature that argued for the legalization and mainstream acceptance of neuroenhancers, suggesting that the drugs are really no different from more traditional "cognitive enhancers" such as laptops, exercise, nutrition, private tutoring, reading, and sleep. It's not quite that simple, of course. Adderall users frequently complain that the drug stifles their creativity"that it's best for doing ultrarational, structured tasks. (As Foer put it, "I had a nagging suspicion that I was thinking with blinders on.") One risk the scientists do acknowledge is the fascinating, horrifying prospect of "raising cognitive abilities beyond their species-typical upper bound." Ultimately, one might argue, neuroenhancers spring from the same source as the problem they're designed to correct: our lust for achievement in defiance of natural constraints. It's easy to imagine an endless attentional arms race in which new technologies colonize ever-bigger zones of our attention, new drugs expand the limits of that attention, and so on.

One of the most exciting"and confounding solutions to the problem of attention lies right at the intersection of our willpower and our willpower-sapping technologies: the grassroots Internet movement known as "lifehacking." It began in 2003 when the British tech writer Danny O'Brien, frustrated by his own lack of focus, polled 70 of his most productive friends to see how they

managed to get so much done; he found that they'd invented all kinds of clever little tricks"some high-tech, some very low-tech"to help shepherd their attention from moment to moment: ingenious script codes for to-do lists, software hacks for managing e-mail, rituals to avoid sinister time-wasting traps such as "yak shaving," the tendency to lose yourself in endless trivial tasks tangentially related to the one you really need to do. (O'Brien wrote a program that prompts him every ten minutes, when he's online, to ask if he's procrastinating.) Since then, lifehacking has snowballed into a massive self-help program, written and revised constantly by the online global hive mind, that seeks to help you allocate your attention efficiently. Tips range from time-management habits (the 90-second shower) to note-taking techniques (mind mapping) to software shortcuts (how to turn your Gmail into a to-do list) to delightfully retro tech solutions (turning an index card into a portable dry-erase board by covering it with packing tape).

One of the weaknesses of lifehacking.

When I call Merlin Mann, one of lifehacking's early adopters and breakout stars, he is running late, rushing back to his office, and yet he seems somehow to have attention to spare. He is by far the fastest-talking human I've ever interviewed, and it crosses my mind that this too might be a question of productivity"that maybe he's adopted a time-saving verbal lifehack from auctioneers. He talks in the snappy aphorisms of a professional speaker ("Priorities are like arms: If you have more than two of them, they're probably make-believe") and is always breaking ideas down into their atomic parts and reassessing the way they fit together: "What does it come down to?" "Here's the thing." "So why am I telling you this, and what does it have to do with lifehacks?"

Mann says he got into lifehacking at a moment of crisis, when he was "feeling really overwhelmed by the number of inputs in my life and managing it very badly." He founded one of the original lifehacking websites, 43folders.com (the name is a reference to David Allen's Getting Things Done, the legendarily complex productivity program in which Allen describes, among other things, how to build a kind of "three-dimensional calendar" out of 43 folders) and went on to invent such illustrious hacks as "in-box zero" (an e-mail-management technique) and the "hipster PDA" (a stack of three-by-five cards filled with jotted phone numbers and to-do lists, clipped together and tucked into your back pocket). Mann now makes a living speaking to companies as a kind of productivity guru. He Twitters, podcasts, and runs more than half a dozen websites.

Despite his robust web presence, Mann is skeptical about technology's impact on our lives. "Is it clear to you that the last fifteen years represent an enormous improvement in how everything operates?" he asks. "Picasso was somehow able to finish the Desmoiselles of Avignon even though he didn't have an application that let him tag his to-dos. If John Lennon had a BlackBerry, do you think he would have done everything he did with the Beatles in less than ten years?"

One of the weaknesses of lifehacking as a weapon in the war against distraction, Mann admits, is that it tends to become extremely distracting. You can spend solid days reading reviews of filing techniques and organizational software. "On the web, there's a certain kind of encouragement to never ask yourself how much information you really need," he says. "But when I get to the point where I'm seeking advice twelve hours a day on how to take a nap, or what kind of notebook to

buy, I'm so far off the idea of lifehacks that it's indistinguishable from where we started. There are a lot of people out there that find this a very sticky idea, and there's very little advice right now to tell them that the only thing to do is action, and everything else is horseshit. My wife reminds me sometimes: "You have all the information you need to do something right now."

For Mann, many of our attention problems are symptoms of larger existential issues: motivation, happiness, neurochemistry. "I'm not a physician or a psychiatrist, but I'll tell you, I think a lot of it is some form of untreated ADHD or depression," he says. "Your mind is not getting the dopamine or the hugs that it needs to keep you focused on what you're doing. And any time your work gets a little bit too hard or a little bit too boring, you allow it to catch on to something that's more interesting to you." (Mann himself started getting treated for ADD a year ago; he says it's helped his focus quite a lot.)

Mann's advice can shade, occasionally, into Buddhist territory. "There's no shell script, there's no fancy pen, there's no notebook or nap or Firefox extension or hack that's gonna help you figure out why the fuck you're here," he tells me. "That's on you. This makes me sound like one of those people who swindled the Beatles, but if you are having attention problems, the best way to deal with it is by admitting it and then saying, "From now on, I'm gonna be in the moment and more cognizant.' I said not long ago, I think on Twitter"God, I quote myself a lot, what an asshole"that really all self-help is Buddhism with a service mark.

"Where you allow your attention to go ultimately says more about you as a human being than anything that you put in your mission statement," he continues. "It's an indisputable receipt for your existence. And if you allow that to be squandered by other people who are as bored as you are, it's gonna say a lot about who you are as a person."

Is the time we waste actually being wasted?

III. Embracing the Poverty of Attention

Sometimes I wonder if the time I'm wasting is actually being wasted. Isn't blowing a couple of hours on the Internet, in the end, just another way of following your attention? My life would be immeasurably poorer if I hadn't stumbled a few weeks ago across the Boston Molasses Disaster. (Okay, seriously, forget it: I hereby release you to go look up the Boston Molasses Disaster. A giant wave of molasses destroyed an entire Boston neighborhood 90 years ago, swallowing horses and throwing an elevated train off its track. It took months to scrub all the molasses out of the cobblestones! The harbor was brown until summer! The world is a stranger place than we will ever know.)

The prophets of total attentional meltdown sometimes invoke, as an example of the great culture we're going to lose as we succumb to e-thinking, the canonical French juggernaut Marcel Proust. And indeed, at seven volumes, several thousand pages, and 1.5 million words, À la Recherche du Temps Perdu is in many ways the anti-Twitter. (It would take, by the way, exactly 68,636 tweets to reproduce.) It's important to remember, however, that the most famous moment in all of Proust, the moment that launches the entire monumental project, is a moment of pure distraction: when the narrator, Marcel, eats a spoonful of tea-soaked madeleine and finds himself instantly

transported back to the world of his childhood. Proust makes it clear that conscious focus could never have yielded such profound magic: Marcel has to abandon the constraints of what he calls "voluntary memory" the kind of narrow, purpose-driven attention that Adderall, say, might have allowed him to harness" in order to get to the deeper truths available only by distraction. That famous cookie is a kind of hyperlink: a little blip that launches an associative cascade of a million other subjects. This sort of free-associative wandering is essential to the creative process; one moment of judicious unmindfulness can inspire thousands of hours of mindfulness.

My favorite focusing exercise comes from William James: Draw a dot on a piece of paper, then pay attention to it for as long as you can. (Sitting in my office one afternoon, with my monkey mind swinging busily across the lush rain forest of online distractions, I tried this with the closest dot in the vicinity: the bright-red mouse-nipple at the center of my laptop's keyboard. I managed to stare at it for 30 minutes, with mixed results.) James argued that the human mind can't actually focus on the dot, or any unchanging object, for more than a few seconds at a time: It's too hungry for variety, surprise, the adventure of the unknown. It has to refresh its attention by continually finding new aspects of the dot to focus on: subtleties of its shape, its relationship to the edges of the paper, metaphorical associations (a fly, an eye, a hole). The exercise becomes a question less of pure unwavering focus than of your ability to organize distractions around a central point. The dot, in other words, becomes only the hub of your total dot-related distraction.

This is what the web-threatened punditry often fails to recognize: Focus is a paradox"it has distraction built into it. The two are symbiotic; they're the systole and diastole of consciousness. Attention comes from the Latin "to stretch out" or "reach toward," distraction from "to pull apart." We need both. In their extreme forms, focus and attention may even circle back around and bleed into one other. Meyer says there's a subset of Buddhists who believe that the most advanced monks become essentially "world-class multitaskers" that all those years of meditation might actually speed up their mental processes enough to handle the kind of information overload the rest of us find crippling.

The truly wise mind will harness, rather than abandon, the power of distraction. Unwavering focus"the inability to be distracted"can actually be just as problematic as ADHD. Trouble with "attentional shift" is a feature common to a handful of mental illnesses, including schizophrenia and OCD. It's been hypothesized that ADHD might even be an advantage in certain change-rich environments. Researchers have discovered, for instance, that a brain receptor associated with ADHD is unusually common among certain nomads in Kenya, and that members who have the receptor are the best nourished in the group. It's possible that we're all evolving toward a new techno-cognitive nomadism, a rapidly shifting environment in which restlessness will be an advantage again. The deep focusers might even be hampered by having too much attention: Attention Surfeit Hypoactivity Disorder.

I keep returning to the parable of Einstein and Lennon"the great historical geniuses hypothetically ruined by modern distraction. What made both men's achievements so groundbreaking, though, was that they did something modern technology is getting increasingly better at allowing us to do: They very powerfully linked and synthesized things that had previously been unlinked"Newtonian gravity and particle physics, rock and blues and folk and doo-wop and bubblegum pop and psychedelia. If Einstein and Lennon were growing up today,

their natural genius might be so pumped up on the possibilities of the new technology they'd be doing even more dazzling things. Surely Lennon would find a way to manipulate his BlackBerry to his own ends, just like he did with all the new technology of the sixties"he'd harvest spam and text messages and web snippets and build them into a new kind of absurd poetry. The Beatles would make the best viral videos of all time, simultaneously addictive and artful, disposable and forever. All of those canonical songs, let's remember, were created entirely within a newfangled mass genre that was widely considered to be an assault on civilization and the sanctity of deep human thought. Standards change. They change because of great creations in formerly suspect media.

What will happen to the kids who've grown up with the Internet?

Which brings me, finally, to the next generation of attenders, the so-called "net-gen" or "digital natives," kids who've grown up with the Internet and other time-slicing technologies. There's been lots of hand-wringing about all the skills they might lack, mainly the ability to concentrate on a complex task from beginning to end, but surely they can already do things their elders can't"like conduct 34 conversations simultaneously across six different media, or pay attention to switching between attentional targets in a way that's been considered impossible. More than any other organ, the brain is designed to change based on experience, a feature called neuroplasticity. London taxi drivers, for instance, have enlarged hippocampi (the brain region for memory and spatial processing)" a neural reward for paying attention to the tangle of the city's streets. As we become more skilled at the 21st-century task Meyer calls "flitting," the wiring of the brain will inevitably change to deal more efficiently with more information. The neuroscientist Gary Small speculates that the human brain might be changing faster today than it has since the prehistoric discovery of tools. Research suggests we're already picking up new skills: better peripheral vision, the ability to sift information rapidly. We recently elected the first-ever BlackBerry president, able to flit between sixteen national crises while focusing at a world-class level. Kids growing up now might have an associative genius we don't" a sense of the way ten projects all dovetail into something totally new. They might be able to engage in seeming contradictions: mindful web-surfing, mindful Twittering. Maybe, in flights of irresponsible responsibility, they'll even manage to attain the paradoxical. Zenlike state of focused distraction.