

Recovering from information overload

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Always-on, multitasking work environments are killing productivity, dampening creativity, and making us unhappy.

For all the benefits of the information technology and communications revolution, it has a well-known dark side: information overload and its close cousin, attention fragmentation. These scourges hit CEOs and their colleagues in the C-suite particularly hard because senior executives so badly need uninterrupted time to synthesize information from many different sources, reflect on its implications for the organization, apply judgment, make trade-offs, and arrive at good decisions.

The importance of reserving chunks of time for reflection, and the difficulty of doing so, have been themes in management writing for decades. Look no further than Peter Drucker's 1967 classic, *The Effective Executive*,¹ which emphasized that "most of the tasks of the executive require, for minimum effectiveness, a fairly large quantum of time." Drucker's solutions for fragmented executives—reserve large blocks of time on your calendar, don't answer the phone, and return calls in short bursts once or twice a day—sound remarkably like the ones offered up by today's time- and information-management experts.²

¹ Peter Drucker, *The Effective Executive*, Oxford, UK: Butterworth-Heinemann, 1967, pp. 28–29.

² For example, compare Julie Morgenstern's advice to "control the time nibblers," in her well-regarded book, *Never Check E-mail in the Morning: And Other Unexpected Strategies for Making your Work Life Work* (Fireside, 2005), with Drucker's statement that "to be effective, every knowledge worker, and especially every executive, needs to be able to dispose of time in fairly large chunks."

Yet they are devilishly difficult to implement, and getting more so all the time. Every challenge recounted by Drucker in 1967 remains today: an unceasing rhythm of daily meetings, a relentless expectation of travel to connect with customers and far-flung reaches of the organization, an inordinate number of opportunities to represent the company at dinners and events. Add to these challenges a torrent of e-mail, huge volumes of other information, and an expanding variety of means—from the ever-present telephone to blogs, tweets, and social networks—through which executives can connect with their organizations and customers, and you have a recipe for exhaustion. Many senior executives literally have two overlapping workdays: the one that is formally programmed in their diaries and the one “before, after, and in-between,” when they disjointedly attempt to grab spare moments with their laptops or smart phones, multitasking in a vain effort to keep pace with the information flowing toward them.

Better solutions exist, and they aren't rocket science.³ What we hope to do in this article is help executives, and their organizations, by reminding them of three simple things. First, multitasking is a terrible coping mechanism. A body of scientific evidence demonstrates fairly conclusively that multitasking makes human beings less productive, less creative, and less able to make good decisions. If we want to be effective leaders, we need to stop.

Second, addressing information overload requires enormous self-discipline. A little like recovering addicts, senior executives must labor each day to keep themselves on track by applying timeless yet powerful guidelines: find time to focus, filter out the unimportant, forget about work every now and then. The holy grail, of course, is to retain the benefits of connectivity without letting it distract us too much.

Third, since senior executives' behavior sets the tone for the organization, they have a duty to set a better example. The widespread availability of powerful communications technologies means employees now share many of the time- and attention-management challenges of their leaders. The whole organization's productivity can now be affected by information overload, and no single person or group can address it in isolation. Resetting the culture to healthier norms is a critical new responsibility for 21st-century executives.

³For another view on today's information challenge and some potential solutions, see Paul Hemp, “Death by information overload,” *Harvard Business Review*, September 2009, Volume 87, Number 9, pp. 82–89.

The perils of multitasking

We tend to believe that by doing several things at the same time we can better handle the information rushing toward us and get more done. What's more, multitasking—interrupting one task with another—can sometimes be fun. Each vibration of our favorite high-tech e-mail device carries the promise of potential rewards. Checking it may provide a welcome distraction from more difficult and challenging tasks. It helps us feel, at least briefly, that we've accomplished something—even if only pruning our e-mail in-boxes. Unfortunately, current research indicates the opposite: multitasking unequivocally damages productivity.

It slows us down

The root of the problem is that our brain is best designed to focus on one task at a time. When we switch between tasks, especially complex ones, we become startlingly less efficient: in a recent study, for example, participants who completed tasks in parallel took up to 30 percent longer and made twice as many errors as those who completed the same tasks in sequence. The delay comes from the fact that our brains can't successfully tell us to perform two actions concurrently.⁴ When we switch tasks, our brains must choose to do so, turn off the cognitive rules for the old task, and turn on the rules for the new one. This takes time, which reduces productivity, particularly for heavy multitaskers—who, it seems, take even longer to switch between tasks than occasional multitaskers.⁵

In practice, most of us would probably acknowledge that multitasking lets us quickly cross some of the simpler items off our to-do lists. But it rarely helps us solve the toughest problems we're working on. More often than not, it's procrastination in disguise.

It hampers creativity

One might think that constant exposure to new information at least makes us more creative. Here again, the opposite seems to be true. Teresa Amabile and her colleagues at the Harvard Business School evaluated the daily work patterns of more than 9,000 individuals working on projects that required creativity and innovation. They

⁴Christopher L. Asplund, Paul E. Dux, Jason Ivanoff, and René Marois, "Isolation of a central bottleneck of information processing with time-resolved fMRI," *Neuron*, 2006, Volume 52, Number 6, pp. 1109–20.

⁵Eyal Ophir, Clifford Nass, and Anthony D. Wagner, "Cognitive control in media multitaskers," *PNAS*, 2009, Volume 106, Number 37, pp. 15583–87.

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found that the likelihood of creative thinking is higher when people focus on one activity for a significant part of the day and collaborate with just one other person. Conversely, when people have highly fragmented days—with many activities, meetings, and discussions in groups—their creative thinking decreases significantly.⁶

These findings also make intuitive sense. Creative problem solving typically requires us to hold several thoughts at once “in memory,” so we can sense connections we hadn’t seen previously and forge new ideas. When we bounce around quickly from thought to thought, we know we’re less likely to make those crucial connections.

It makes us anxious and it’s addictive

In laboratory settings, researchers have found that subjects asked to multitask show higher levels of stress hormones.⁷ A survey of managers conducted by Reuters revealed that two-thirds of respondents believed that information overload had lessened job satisfaction and damaged their personal relationships. One-third even thought it had damaged their health.⁸

Nonetheless, evidence is emerging that humans can become quite addicted to multitasking. Edward Hallowell and John Ratey from Harvard, for instance, have written about people for whom feeling connected provides something like a “dopamine squirt”—the neural effects follow the same pathways used by addictive drugs.⁹ This effect is familiar too: who hasn’t struggled against the urge to check the smart phone when it vibrates, even when we’re in the middle of doing something else?

⁶Teresa M. Amabile et al., “Time pressure and creativity in organizations: A longitudinal field study,” Harvard Business School working paper, Number 02-073, 2002.

⁷Sue Shellenbarger, “Multitasking makes you stupid,” *Wall Street Journal*, February 27, 2003.

⁸David Bawden and Lyn Robinson, “The dark side of information: Overload, anxiety, and other paradoxes and pathologies,” *Journal of Information Science*, Volume 20, Number 10, pp. 1–12.

⁹Edward M. Hallowell, MD, and John J. Ratey, MD, *Delivered from Distraction*, Ballantine Books, 2006.

Coping with the deluge

So if multitasking isn't the answer, what is? In our conversations with CEOs and other executives trying to cope, we heard repeatedly about some fairly basic strategies that aren't very different in spirit from the ones Drucker described more than 40 years ago: some combination of focusing, filtering, and forgetting. The challenge for these executives, and all of us, is that executing such strategies in an always-on environment is harder than it was when Drucker was writing. It requires a tremendous amount of self-discipline, and we can't do it alone: in our teams and across the whole organization, we need to establish a set of norms that support a more productive way of working.

Focus

The calendars of CEOs and other senior executives are often booked back-to-back all day, sometimes in 15-minute increments. Gary Loveman, CEO of Harrah's Entertainment, describes the implication: "You have to guard against the danger of overeating at an interesting intellectual buffet. I often need to cover a lot of functional terrain over the course of a day, but I'm careful not to be too light on deserving topics and to make the time to get to meaningful depth on the most important ones."¹⁰ Digital information overload compounds the peril of "overeating" by flooding leaders with a variety of questions and topics that frequently could be addressed by others, thereby distracting those leaders from the thorny, unpleasant, and high-stakes problems where they are most needed.

Many executives respond through the old strategy of creating "alone time." Applied Materials CEO Mike Splinter, for example, finds time between 6:30 and 8:00 AM; Dame Christine Beasley, England's chief nursing officer, uses her traveling time; Brent Assink, executive director of the San Francisco Symphony, schedules any time he can find in the middle of the day. Bill Gross, chief investment officer at Pacific Investment Management Company (PIMCO), takes an extreme approach: "I don't answer or look at any e-mails I don't want to. I don't have a cell phone; I don't have a BlackBerry. My motto is, 'I don't want to be connected; I want to be disconnected.'"¹¹

None of this can work, says Assink, unless the management team knows it must keep moving throughout the day without rapid-fire input from the top. Assink has been explicit with his staff: "If they want an

¹⁰All unattributed quotes are taken from interviews conducted by the authors.

¹¹Alex Taylor III et al., "How I work," *Fortune*, March 15, 2006.

immediate response, it will have to be a phone call. If they send an e-mail they will get a response at the end of the day.”

What about the relentless barrage of information that pours in? Managing it may be as simple—and difficult—as switching off the input. Shut down e-mail, close Web browsers, have phone calls go automatically to voice mail, and let your assistant and team know that you are in a focused working session. Christine Beasley says, “If you’re really addicted and can’t be trusted not to check the BlackBerry when it’s in your pocket or bag, you just have to leave it behind.”

Filter

Of course, turning everything off just means that your inbox will be overflowing when you reconnect. And there’s a danger of throwing out the baby with the bathwater: no one wants to lose the ability to stay in touch easily with the organization, customers, and other stakeholders or to “give a short and direct answer to quick questions,” as Mike Splinter puts it, adding that “you don’t want to be the blockade in the business cycle.”

A good filtering strategy, therefore, is critical. It starts with giving up the fiction that leaders need to be on top of everything, which has taken hold as information of all types has become more readily and continuously accessible. Rather, plain old delegation is as important with information as it always has been with tasks. As Gary Loveman says, “Keeping current on what is going on takes a lot of my time, but I only engage in depth personally on those issues that are best served by my involvement and are critical to the company’s performance, either now or in the future.” Christine Beasley has a similar view: “You cannot read everything. The things that I do look at are the things that matter, the things I really need to make a decision on.”

Some leaders now explicitly refuse to respond to any e-mail on which they are only cc’d, to filter out issues that others think require no action from them. You also may need to educate the people around you about what deserves to fill your limited time. Gary Loveman explains that “there is a substantial ante to get my time—you need to do some work, provide me with data and insight, let me read something in advance. That simple bar keeps a lot of the items of lesser importance off my calendar.”

Winning respect for your in-box, though, won’t get you all the way there. Establishing an effective, day-to-day information-management

support structure has become a critical success factor for senior executives. This structure may be elaborate, including a chief of staff for the CEO of a major organization, or as simple as a capable assistant who “is fantastic at managing some of my e-mail traffic, weeding out the things that I don’t really need to see,” as Christine Beasley says.

Forget

It bears repeating that giving our brains downtime to process new intellectual input is a critical element of learning and thinking creatively—not just according to researchers, but also to corporate leaders. Bill Gross says, “Some of my best ideas literally come from standing on my head doing yoga. After about 15 minutes of yoga, all of a sudden some significant light bulbs seem to turn on.”¹² Mike Splinter also sees value in physical exercise: “I find that just staying in shape helps me be more mentally crisp every day.”

Getting outside helps—recent research has found that people learn significantly better after a walk in nature compared with a walk in the city.¹³ And emotional interaction with other people can also divert attention from conscious intellectual processing, a good step toward engaging the unconscious. Sheri McCoy, chairman of Johnson & Johnson Pharmaceuticals Group, explains, “When I go home at night, I like to just say, ‘OK, I’m not looking at my BlackBerry for two or three hours.’ I’m just relaxing. I feel like that lets me conserve my energy and focus later.” Christine Beasley has rules that protect her personal time at weekends, reasoning that “people can always get hold of me if it’s urgent.”

A responsibility to hit the ‘reset button’

All this was easier back in Drucker’s day, when we couldn’t talk on the phone during the daily commute, we didn’t bring multiple connectivity-enabling devices with us on vacation, and planes didn’t have Wi-Fi. The strategies of focusing, filtering, and forgetting are also tougher to implement now because of the norms that have developed around 21st-century teamwork. Most leaders today would feel guilty if they didn’t respond to an e-mail within 24 hours. Few feel comfortable “hiding” from their teams during the day (or on the drive home or during the evening) in order to focus more intently on the most complex issues. And there is the personal satisfaction that comes from feeling needed.

¹²Alex Taylor III et al., “How I work,” *Fortune*, March 15, 2006.

¹³Matt Richtel, “Digital devices deprive brain of needed downtime,” *New York Times*, August 24, 2010.

But there is a business responsibility to reset these norms, given how markedly information overload decreases the quality of learning and decision making. Multitasking is not heroic; it's counterproductive. As the technological capacity for the transmission and storage of information continues to expand and quicken, the cognitive pressures on us will only increase. We are at risk of moving toward an ever less thoughtful and creative professional reality unless we stop now to redesign our working norms.

First, we need to acknowledge and reevaluate the mind-sets that attach us to our current patterns of behavior. We have to admit, for example, that we do feel satisfied when we can respond quickly to requests and that doing so somewhat validates our desire to feel so necessary to the business that we rarely switch off. There's nothing wrong with these feelings, but we need to consider them alongside their measurable cost to our long-term effectiveness. No one would argue that burning up all of a company's resources is a good strategy for long-term success, and that is equally true of its leaders and their mental resources.

Second, leaders need to become more ruthless than ever about stepping back from all but the areas that they alone must address. There's some effort involved in choosing which areas to delegate; it takes skill in coaching others to handle tasks effectively and clarity of expectations on both sides. But with those things in place, a more mindful division of labor creates more time for leaders' focused reflections on the most critical issues and also develops a stronger bench of talent.

Finally, to truly make this approach work, leaders have to redesign working norms together with their teams. One person, even a CEO, cannot do that alone—who wants to be the sole person on the senior team who leaves the smart phone behind when he or she goes on vacation? Absent some explicit discussion, that kind of action could be taken as a lack of commitment to the business, not as a productive attempt to disconnect and recharge. So we encourage leaders and their teams to discuss openly how they choose to focus, filter, and forget; how they support each other in creating the necessary time and space to perform at their best; and how they enable others, throughout the organization, to do the same. This conversation can also be the right starting point for a deeper look at the information and technology needs of all the company's knowledge workers. (For more on how to tackle this thorny problem, see "Rethinking knowledge work: A strategic approach," to be published next week on mckinseyquarterly.com.)

The benefits of lightening the burden of information overload—in productivity, creativity, morale, and business results—will more than justify the effort. And the more we appreciate the benefits, the easier it will be to make new habits stick. ○

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Information overload is a creature that has been growing on the Internet™s back since its beginnings. The bigger the Internet gets, the more information there is. The more quality information we see, the more we want to consume it. How Serious Is Information Overload? The sole fact that there™s more and more information published online every single day is not the actual problem. Only the quality information becomes the problem.