

Working Under the Influence: Emails Make You Dumber Than Pot

By **Barbara D. Holmes**

Maybe you know the feeling: you're at lunch or in a meeting and you feel that familiar vibration at your hip. Someone is trying to get in touch with you . . . and, suddenly, your pulse quickens and your palms begin to sweat, you try to concentrate on the people around you, but their voices become distant, you can't resist the overwhelming urge to check your email. So, you surreptitiously read the message and type a response (even while wincing from the pain of "Blackberry thumb"). Little did you know that hitting that "reply" button is more harmful than taking a hit.

That's right. A 2005 study commissioned by Hewlett-Packard found excessive day-to-day use of technology can be more damaging, and apparently, more addictive, than marijuana.¹ Infomaniacs — slang for people addicted to modern communications and information technology — suffered a temporary drop in IQ test scores of more than 10 points when juggling phones, emails, and other electronic messages; more of an IQ fall than occurs after missing a whole night's sleep and more than double the typical four-point dive after smoking marijuana. According to the study, 62% of adults are addicted to checking email and text messages, unable to resist the temptation even outside office hours or on vacation. Half of the workers surveyed respond to email immediately or within 60 minutes. One in five are

"happy" to interrupt a business or social meeting to respond to a telephone or email message.²

Infomania is a strain of the multitasking epidemic that has become widespread in the last decade or so. "Multitasking" originally referred to the running of two or more programs in one computer at the same time.³ Although it was just in the 1990s that the term translated from techno-speak into common parlance, multitasking is not new. Researchers have been fascinated with the science of multitasking for more than 100 years.⁴ As technology exploded, so did multitasking.⁵

Everyone from mothers to musical conductors multitask at some level. Lawyers have deadlines to meet, so we multitask.⁶ We want to get more done, so we multitask. Technology connects us to the office and clients 24/7, so we multitask. But, multitasking makes us dumber than pot is more than just a rally cry for the Marijuana Legalization Organization; it is a graphic illustration that trying to do more than one thing at a time actually reduces mental sharpness.

There are numerous studies and substantial literature on how the brain handles multitasking. And, basically it doesn't. For all the wonders of the human brain, a core limitation is an inability to concentrate on two things at once, according to René Marois, a neuroscientist and director of The Marois Laboratory on Human Information Processing at Vanderbilt.⁷ Dr. Marois and his colleagues sampled brain activity using functional mag-

netic resonance imaging while participants were performing two demanding tasks using different senses and motor responses.⁸ The results showed queuing of neural activity by areas of the brain critical to cognitive control. When the participants were given the two tasks at about the same time, the second task was postponed until the first was completed.⁹

For simple, highly practiced skills the rapid toggling between multiple tasks is indiscernible; the tasks can be easily done while thinking about other things. But as the tasks multiply, become more complex, or require more concentration, the more difficult and inefficient multitasking becomes.¹⁰ The difficulty and inefficiency increase when the tasks utilize the same parts of the brain, such as two things that both involve language skills — listening, talking, reading.¹¹ And, as the brain constantly switches and pivots between tasks, the regions that specialize in visual processing and physical coordination become highly energized, shortchanging other areas related to memory and learning.

We can easily walk down the street and carry on a conversation or cook while watching TV. We even think we can talk on the cell phone and drive. But, chopping onions while watching a heated political debate or a close game is not a good idea. And the more engrossing our conversation becomes, the less attention we're paying to where we're doing or to our driving. A missed destination is not a big deal when we're walking, and

for many daily tasks, a lost second is unimportant, but even a one second delay in response time at 60 miles per hour could be fatal.¹²

In a visual demonstration of the limitations of multitasking, viewers are shown a short video of eight people playing basketball, four in white T-shirts and four in black. Viewers are asked to count the number of passes made by the team in white (which requires distinguishing between the white and black T-shirts, focusing on the basketball, and counting the passes). After the video, viewers are asked if they saw anything unusual, like, perhaps, the person in a gorilla suit that walked into the game, beat his chest at the camera, and sauntered off. Dr. Marois recently showed this video to a group of lawyers and almost every one missed the gorilla in the middle of the room. This from a profession in which many consider multitasking part of the job description. What else are we missing?

That doing too many things at once means something is not done well is not a revelation. We rear-end a stopped car as we are carrying on (or texting) a cell phone conversation. We make a private email public by hitting “reply all” or send an email to the wrong, but similar, address while we talk on the phone. We miss an important comment in a meeting when we’re editing a document.

Multitasking can be an invitation to malpractice. In a distracted moment when we are talking to a client on the phone and doing something else — driving, checking email, or proof-reading — we might miss a key bit of information. If that information is critical to the client’s case or transac-

tion, we may have just set ourselves up to fail our client.¹³

Multitasking also reduces productivity, showing up in the bottom line. Researchers at the University of Michigan estimate that individuals actually lose somewhere between 20 to 40 percent efficiency — or two to three hours per day — as a result of multitasking.¹⁴ As multitasking increases, errors go way up, and it takes much longer, often double the time or more, to get the jobs done than if they were done sequentially, according to David E. Meyer, director of the Brain,

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Cognition, and Action Laboratory at the University of Michigan.¹⁵ Cycling back to an original, interrupted task takes an average of 25 minutes.¹⁶ Often, the original task is abandoned altogether for another day, requiring even more reorientation time. One national business-research firm estimates the annual cost of multitasking to be \$650 billion dollars — our National Attention Deficit.¹⁷

And it’s not just our work that suffers from our addiction to multitasking. Some researchers suggest that constant multitasking is also eroding our quality of thought; that we are becoming less creative, less flexible, and less innovative.¹⁸ To maintain the balancing act of constantly switching between tasks, the brain becomes overexcited, making it difficult to concentrate even when we want to.

Multitasking junkies are losing the desire to concentrate. And the more plugged in we are, the less time we have to just sit and think.

Multitasking may be taking a similar toll on our quality of life. How often have we been caught by a family member not listening because we were thinking about a work problem? How many vacations have been filled with complaints because we wouldn’t unplug from the office and our clients? Chronic multitasking is also linked to a variety of health issues, including: short-term memory loss; lapses in concentration and attentiveness; and boosts in stress-induced hormones, such as cortisol and adrenaline, which, in turn, lead to other physiological problems, including biochemical friction and premature aging.¹⁹

But, we can get the multitasking monkey off our backs.

The answer lies in managing our time and technology, or, as one technology writer dubbed it, by “life-hacking”; that is, using simple (and, often, low-tech) shortcuts to manage the complexities of modern life.²⁰ One technology geek even ditched his PalmPilot for “The Hipster PDA” — index cards held together with a binder clip, described as “an ultra-low-fi organizer, running on the oldest memory technology around: paper.” Your life hack might be to answer emails or phone messages only at designated times during the day. Use only the technology that makes what you do simpler. Refuse to be available to everyone all the time. Decide to completely focus on and finish one task at a time.

The first step is to recognize the problem. Now that we know for a scientific fact that multitasking doesn’t

work, we can figure out how to cope. As Clint Eastwood said (via “Dirty” Harry Callahan), “A man’s gotta know his limitations.”

ENDNOTES

1 See Anne Casselman, *Does E-mail Make You Dumber?*, DISCOVER MAGAZINE, Aug. 6, 2005.

2 Yet, paradoxically, 89% characterize colleagues who respond to emails or telephone messages during meetings as “extremely rude.”

3 Actually, the CPU, like the human brain, is only doing one thing at a time, actively giving instructions for only one process before turning its attention to the next task in queue. That the technology so rapidly and efficiently switches tasks and recovers gives the appearance that the computer is doing many things at once.

The first multitasking operating systems were developed in the 1960s, but the technology really boomed in the 1990s with rapid increases in speed and power.

4 Studying telegraph operators, psychologists discovered that the operators were more likely to make mistakes if spoken to while keying a message. See Clive Thompson, *Meet the Life Hackers*, N.Y. TIMES, Oct. 16, 2005. Initially, the research on multitasking was applied mostly to facilitate information-processing in high-stress jobs, for things like airplane cockpit designs and application screening tests for air traffic controllers. Some commentators suggest that, in the last two decades, multitasking has also become the darling of down-sizing companies. The technological transformation of computers into communications and operational hubs provided an opportunity for corporations to have fewer employees multitasking to do the work of many.

5 And so did the interest in studying multitasking. Not surprisingly, the processes and effects of multitasking continue to be favorite research topics in the scientific community. But, the examination and discussion of multitasking is occurring across a broad spectrum of other disciplines as well. Everyone from economists to workplace and lifestyle consultants to — yes — lawyers seems to be talking

about multitasking.

6 Just to be clear, multitasking does not mean working on several different client matters throughout the day or even within a short period of time. Multitasking is doing two or more things at the same time.

7 Steve Lohr, *Slow Down, Brave Multitasker, and Don’t Read This in Traffic*, N.Y. TIMES, Mar. 25, 2007.

8 One task was to press the correct computer key in response to hearing 1 of 8 possible sounds. The other task was to name the correct vowel in response to 1 of 8 possible images.

9 *Neural Bottleneck Found That Thwarts Multi-tasking*, SCIENCE DAILY, Jan. 19, 2007, <http://www.sciencedaily.com/releases/2007/01/070118161628.htm>. When the participants were given the tasks one at a time, there was no delay in response time.

10 Our brains tell us this, if we just pay attention: when we really want to listen to something, we close our eyes.

11 Sue Shellenbarger, *Multitasking Makes You Stupid: Studies Show Pitfalls of Doing Too Much at Once*, WALL STREET JOURNAL, Feb. 23, 2003.

12 It is estimated that cell phone distracted drivers are four times more likely to be in a car wreck. According to a Harvard University study, cell phones cause more than 200 deaths and half a million injuries each year.

13 Multi-tasking also raises ethical concerns about client billing. Although there are no Tennessee decisions or formal ethical opinions on the subject, other jurisdictions have held that billing more than one client for multitasking time (such as working on different matters while waiting during a docket call) is a misrepresentation and an excessive fee, both of which are misconduct. See *Fraudulent or Dishonest Conduct: Billing Multiple Clients for Simultaneous Service*, OR ETH. OP. 2005-170, 2005 WL 5679597 (Oregon State Bar Association Board of Governors, August 2005); *In re Entin*, 287 A.D.2d 943, 732 N.Y.S.2d 648, 2001 N.Y. Slip Op. 08549 (N.Y.A.D. 2001); *How Must an Attorney Bill for Work on Two or More Matters at the Same Time?*, CA ETH. OP. 1996-147, 1996 WL 664854 (California State Bar Standing Committee on Professional Responsibility and Conduct, 1996); *Billing Practices:*

Propriety of Billing More Than One Client for the Same Hours, AK ETH. OP. 96-4, 1996 WL 907641 (Alaska Bar Association Ethics Committee, May 1996).

14 Marcia Pennington Shannon, *Multitasking in an Information-Overloaded World*, LAW PRACTICE (June 2005).

15 Claudia Wallis, *The Multitasking Generation*, TIME, Mar. 19, 2006.

16 Thompson, *supra* note 5.

17 Lohr, *supra* note 7, (referring to a frequently cited report by Jonathan B. Spira, chief analyst at Basex, a business-research firm). See also *The Siren Song of Multitasking* (Herman Miller, Inc., Zeeland, MI) 2007, www.hermanmiller.com/hm/content/research_summaries/pdfs/wp_SirenSong.pdf.

18 *The Siren Song of Multitasking*, *supra* note 16.

19 Chris Woolston, *Multitasking and Stress*, Consumer Health Interactive, www.ahhealthyme.com. Multitasking also adversely affects the brain’s learning systems, which is a critical issue for Gen M’s for whom multitasking is, literally, a way of life. Willis, *supra* and *Multitasking Adversely Affects Brain’s Learning*, UCLA Psychologists Report (UCLA, Los Angeles, CA), July 26, 2006, www.eurekaalert.org/pub_releases/2006-07/uoc--maa072506.php.

20 Thompson, *supra* note 5.

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and a recovering multitasker. This same topic was presented as an Inn of Court program last November. The ideas and assistance of the Inn of Court team were invaluable and greatly appreciated.