

The Myth of Multi-tasking, Chatelaine, 2006

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The other day, I asked a few friends to tell me what happens when they send an email while talking on the phone. Even I was surprised to learn where the emails landed. “I found this filthy Ken and Barbie joke,” one friend, a Toronto marketing pro, told me. “I meant to send it to my best friend. Instead it went to a bank president in a Muslim country. I nearly had a heart attack.” She paused for a moment. “Luckily, the censors bounced it.”

Then came an email from another hardworking consultant. She told of sending a joke e-mail to her brother – “a picture of two kids who wrote in chalk on a sidewalk, ‘Mommy Fat Ass.’” In the subject line, she wrote: “This would be my kids for sure.” But she typed in the wrong name for the recipient, and the joke, with her name on it, went to a senior partner in her firm. “Oh crap!” she thought. “He’s going to wonder why the hell I am telling him what my kids would be like.” Aghast, she hit the recall button, then called the partner’s secretary to make sure the joke was deleted from the partner’s mailbox. The secretary was out for lunch. “Needless to say, it was most humiliating,” she said. The partner never mentioned the email. “So I’m not sure, if he did get it, he thought I was being flirtatious with him or what!”

But the best story came from a gorgeous brunette who sent a raunchy sexual email to a boyfriend – or so she thought. “It was very, very graphic, even for me,” she said. (What she described was once considered, by some U.S. states, to be a crime against nature.) She pushed the send button and an instant later realized the pick-me-up went to the wrong name. It was the father of her boss, and worse, it was the address of his very large boat. The email would be viewed by all of the six sailors on board, the hired crew. I laughed out loud. “It wasn’t funny,” my friend interjected. “It was one of those moments when life flashes before your eyes. I thought I’d move to Australia, change my name.” For the next two weeks she woke up every night, ruminating about the potential humiliation. “Everything good was going to turn bad – the man, the job, the life.”

So why do we make these kinds of mistakes while we’re multi-tasking? How on earth did we get into this situation? Many of us think we can multi-task. We’re even proud of it. It’s a badge of honor, a sign of empowerment in this hyper-connected era. Some women say they can sit through a budget meeting and plan their five-year-old’s birthday party on the BlackBerry. One self-described Multi-tasking Queen told me she catches up on business emails while playing with her three-year-old on the kitchen floor. Another said she hit the multi-tasking peak when she was making dinner in the kitchen while balancing a small child on one hip and conducting a conference call via a telephone cradled between her shoulder and her ear. Most women I know say their husbands or boyfriends can’t do this kind of thing. They’re far better multi-taskers than their husbands are, they say. Perhaps they’ve always been.

Since the beginning of human history, women were the natural multi-taskers, according to Rutgers anthropologist Helen Fisher. In caveman times, men’s survival depended on

the single-minded pursuit of an animal. Women, on the other hand, had to care for children in dangerous conditions and juggle other tasks, like making the fire. Only the multi-taskers survived. The result, Fisher argues, is that women's brains have evolved to allow us to think about things in context, while men typically focus on one thing at a time. Her theory is controversial. Yet anyone can see that the pressures on women to multi-task have never been greater. Consider the modern working woman with kids in the suburbs. If she's like most Canadians, she works full time and manages home and children after work, the classic double shift. If she moved her family to the suburbs for the extra space, she's spending an hour a day to commute to and from work. Her kids probably play on a soccer team, which means that instead of sending them outdoors to play, she's driving them to practice after school and on weekends. In other words, she has way more to do and less time to do it than her mother did. So we've programmed the need to multi-task into our lives.

Perhaps it is no surprise that the word multi-tasking comes from world of computer programming. The idea was launched back in 1957, in an article computer scientist Bob Bemer wrote for Automatic Control Magazine. He suggested that while the computer's brain – its central processing unit or CPU – was waiting for information to be retrieved, it could do another task for someone else. The idea took off. Although it looked like the computer was doing several things at once, it was doing one thing at a time and switching tasks with lightening speed. The word multi-tasking was confined to the wizardry of computers up to 1997. Then it migrated into the world of human behavior, as journalists began using it to describe how humans could apparently do more than one thing at once – like check for email while talking on the phone.

Now, the technology industry is proposing that humans can do something a computer's CPU still cannot do – think of more than one thing at one time. We're on the brink of what industry calls a seamless world in which you can be anywhere – at the office, at home, in your car or on the edge of a soccer field – and yet, in your mind, be somewhere else. In this new multi-tasking world, we can use a cell phone or BlackBerry to confer with a client, check in with the babysitter, order groceries, or monitor the latest stock quotes while we're driving home. The idea of doing one thing at a time, or even being in one place at a time, seems as quaint as an afternoon tea party.

The gadgets that enable our frenzied lives have even turned into magnets, drawing our attention away from the here and now. They can be addictive. As psychiatrist Edward Hallowell points out in his new book, *Crazybusy*, some people love the thrill of apparently being able to do everything at once. They may even acquire the symptoms of Attention Deficit Disorder, says Hallowell, an ADD expert: They “rush around a lot, feel impatient wherever they are,” he writes. They lose focus in the middle of a conversation, forget where they're going, work on many projects at once without finishing them. His diagnosis: “A severe case of modern life.” Ironically, the gadgets that are supposed to connect us to the wider world can disconnect us from the very people we love the most. After all, if your child is trying to tell you something and you answer a cell phone or cast your eyes down to your BlackBerry, she knows you're not really listening.

But now, you have to wonder about the premise of the multi-tasking life. Can we actually think of two things at once? Psychologists have considered this question since the late 19th century, but in the 1950s interest picked up as researchers used the analogy of the computer world to study how we humans deal with multiple streams of information. The upshot is that our ability to multi-task is very limited. We're not like computers that can only do one thing at a time incredibly quickly. We can do two things at once. We can obviously walk and talk, but that's because walking and talking tap into two different mental channels, and one of those activities, walking, is automatic for adults. But if we try to think of two things that tap into the same channel, like a verbal one, we run into trouble.

To help me understand what this means, McMaster University psychologist Lee Brooks gives me a line to think about: "Now is the time for all good men to come to the aid of their country." Then he pops the question: "How many words are there in the sentence?" (If you're trying this at home, count without looking at the page.) Are you using your fingers? I did. That's because saying the words and saying the numbers to count the words overloaded my verbal capacity. I was trying to think of two things at once. So I used my fingers to take off some of the load. By using my fingers, I was recruiting two different capacities of my brain – verbal and spatial/motor – to do the job, so it was easier to count. Now, imagine an F – a wooden rendition that children use as they're learning the alphabet. Imagine that F and count how many corners it has. I had no trouble with that test because I was recruiting two different capacities – one spatial, the other verbal.

But even if we're thinking of two different things, there is still an overall limit on the amount of information we can absorb at any one time. That's why, when you're walking with someone and you hit an intense point in the conversation, you might stop. And why, if you're a driver like me, you turn down the radio when you hit a complicated situation on the road. Overloading our mental circuits – either by hitting the overall capacity limit or by taxing a single mental channel -- will compromise our abilities. We're more likely to make mistakes, as my friends found out to their dismay. We slow down. Our brains cope with the overload of capacity by switching from one task to another, and unlike computers we don't switch very efficiently. The result, according to University of Michigan psychologist David Meyer, is that multi tasking might double the time it takes to do two tasks, compared with doing them one at a time. It may also diminish the quality of our thinking, he adds: You can't think deeply about a subject, analyze it, or develop a creative idea if you're constantly distracted by an email message, a new site, or a cell phone call. There's little evidence that teens are any better than adults, he said. "To think that you're invulnerable because of age, it's delusional. It's a myth."

A very close friend considers herself to be a primo multi-tasker in her car, which doubles as her office, dining room, and den as she whizzes around the outskirts of Toronto. One morning she climbed into the driver's seat of my Honda Accord, water bottle in hand, to show me her tricks. She spends 90 minutes a day driving and she's honed some skills, ones she agreed to share as long as I didn't use her name. She suspects her professional college might not appreciate some of the things she routinely does behind the wheel.

We pull onto the 401, the clogged highway that cuts through the top end of Toronto. She pulls out a Perley's map, opens it, and props it against the steering wheel. She rarely has time to stop and check for directions. We're still on the 401, and her hazel eyes flick up and down, between the road and the list of street addresses. The print is so tiny that she takes off her glasses. "These are distance glasses," she explains. While she's still driving she uses her finger to locate the name of the street and the page number of the map. "Got it," she says.

While driving, she skims notes on an upcoming client, a few words at a time. When she's stopped at a red light, she might jot a couple of notes on a pad beside her. She makes cell phone calls, checks her agenda on her palm pilot. Her eyes leave the road, but only for a second or so. No one's forcing her to do this. But as a self-employed mother of two girls in competitive soccer and ballet, she has no time to lose. So she eats lunch in the car, usually a sandwich, "but I've had a salad, with a fork." Sometimes at the wheel she puts on lipstick and even takes off a coat. We turn off the highway, and she reaches for her bottle of water. It takes two hands, so she drives with her left knee – "only when I'm on a straightaway."

This is not unusual behavior. In one study that videotaped 70 drivers for a week, U.S. researchers found that 40% of them were reading and writing at the wheel. Over 30 percent groomed themselves. Nearly a third talked on cell phones, while almost 60 per cent opened bottles and prepared food or drink. Overall, the drivers were distracted 16 per cent of the time. That did not include talking to the passenger. Now here's the part that unnerved me: Drivers spent 8 per cent of their driving time with *both* hands off the wheel – while putting on makeup, punching out a number on the cell phone or opening a pop bottle, for instance. "You're sometimes amazed that people think it's ok to do this while driving," said investigator Jane Stutts of the University of North Carolina Highway Research Centre. One woman was driving on a multi-lane road with a piece of pie in her left hand and a fork in her right hand. She was steering with her knees and looking at the pie, not the road. She wasn't the only one, said Stutts: "We've got video clips that would scare you to pieces."

Driver inattention is a far bigger problem than we thought, according to another major U.S. study that filmed 100 cars over a year. They found that 80 per cent of crashes and 65 per cent of near crashes involved driver inattention within three seconds of the conflict. It was partly because they took their eyes off the road. Dialing a cell phone typically takes your eyes off the road for a second; selecting a radio station diverts your eyes for even longer, an average 1.5 seconds, says Alison Smiley, president of Human Factors North and a veteran investigator of car crashes. Yet a second is a long time on the road: It takes most people 1.3 seconds to react to something and put their foot on the brake, she says. By the time the driver has slowed down or swerved to avoid the problem, two and one-half seconds have passed. If your eyes are off the road for a second, you might not have enough time to avoid a crash.

But now, the issue is whether the distraction is not just in your eyes but in your mind.

Consider the most frequent source of distraction: cell phones. By now, several studies have shown that driving while talking on a cell phone is like driving drunk. It quadruples your chance of a car crash. Now researchers are finding out why. The answer lies in how much information your brain can process at any one time. University of Utah researcher David Strayer found that undergrads driving in a simulator were twice as likely to miss traffic signals when they were talking on the cell phone about the Clinton impeachment or the Olympic bribery scandal. It didn't matter whether the cell phone was hand-held or hands free. Being an active participant in a conversation "consumes the attentional resources of your brain," said Strayer.

Yet Canada still allows drivers, even teenagers, to talk on the phone while driving. (Newfoundland, the only province with restrictions, forbids drivers from talking on handheld cell phones, but not hands-free ones.) Legislators have been convinced that it's unfair to single out cell phone calls when drivers are multi-tasking in all kinds of ways, which may be even more dangerous. "You can't legislate against a couple having a heated argument, changing a child's diaper or, my favorite, feeding the poodle while you're driving with your knees," says Marc Choma, spokesman for the Canadian Wireless Telecommunications Association. Now distractions for drivers are multiplying quickly, as hand-held devices become mini TV sets and car dashboards are redesigned to include navigation screens, some of which invite the eyes to leave the road. "It's a nightmare," said Meyer. "You're setting yourself up for disaster if anything unexpected comes along the way."

You often hear business executives talking about the importance of a sharp, unwavering focus, as if they were a championship golfer or an Olympic rower. Yet they've fallen for the lure of multi-tasking too. It's even considered a basic business skill, although few have mastered it. Think of the last time you sat through a speech or a pitch in which the speaker used PowerPoint, showing you screen after screen of verbiage while he or she delivered the speech. Did your mind wander? If so, don't blame yourself. It's because the speaker made the classic error of trying to send you two streams of information, one in the speech, the other on PowerPoint, says John Miers, chairman of Black Isle Consultants. The result is exactly the opposite of what's intended: "If you make people read something while listening to speech, the effectiveness of eyes and ears drops to 20 per cent of maximum efficiency," said Miers, "and that's probably optimistic." If that statistic surprises you, consider the study that Cornell University researchers did on the impact of the laptop in the classroom. They found that students who browsed the internet in class remembered far less about the lecture than did those who just listened to the professor -- even when the sites they were checking were related to the topic of the lecture.

In meetings, they call it the "BlackBerry prayer" -- you cast your eyes down and tap out a message under the table. It happens all the time, but according to one survey, 80 per cent of chief information officers think it's rude. "You're saying, you can't manage yourself, you can't prioritize yourself," says Colleen Moorehead, CEO of Nexient Learning. Her firm now teaches executives how to use multi-tasking gadgets effectively. Pfizer, for instance, asked Nexient for help because job satisfaction was declining for Pfizer

employees who thought they had to respond instantly to emails. Nexient trained them to block out time for emails, and take the time to consider their response. Multi-tasking “is a skill,” said Moorehead, “like a great presentation skill.”

The top guns of multi-tasking are undoubtedly air traffic controllers. They routinely monitor several planes on their radar screens while talking to several pilots and other air traffic controllers via their headsets. “Think of a party line, with two or more people on it,” says Christine Guerin, director operational training for NAV CANADA, the private company that owns and operates the country's air navigation system. These top guns are selected for their natural multi-tasking ability, which is honed with up to three years of training. Their deep knowledge of the field helps them to switch tasks very quickly to focus on the highest priority. On the job, air traffic controllers play by a very strict, four-inch-thick rule book that sets out specific procedures and language to cut the chance of misunderstanding. Naturally, they're not allowed to be distracted by cell phone calls and email messages, says Guerin: “You wouldn't want your surgeon on a blackberry when he's operating on you.”

These top guns have a license to multi-task. The rest of us are struggling to learn how, usually without the knowledge, the training, or even the natural skill of an air traffic controller. So we stumble, with embarrassing or even fatal results. Now experts like Hallowell say we need to take back control of our space and time and remember how to focus on what counts. Eleanor Clitheroe saw that after she was fired from a \$2 million job as CEO of the transmission utility Hydro One in 2002. Until then, she was a highly charged executive with two young children, multi-tasking throughout her typical 18-hour days. After the fall, she entered theology college. In one of her courses, on prayer, some of the students turned up with laptops. The teacher, an Anglican nun, told them to put the computers away. Apparently, you can't multitask while you're learning to pray. Clitheroe – or Reverend Ellie, as she's now known – realized that in her new life, she'd have to do one thing at a time, be completely present in the moment. It is a lesson that many of us are only just learning.