



### The perils of multitasking: Is less really more?



Christmas is upon us. Days go from busy to crazy, as we scramble to fit in the extras the season demands. We respond by multitasking more furiously than ever – until stopped in our tracks by a misplaced wallet, a stolen credit card, a car crash or worse! Why do some people seem to juggle tasks better than others? Logic suggests there must be an upper limit to the ability to multitask. Is there a point of

diminishing returns? Is working faster really better?

Effective time management is the Holy Grail of our age. A recent poll by *Scientific American Mind* showed multitasking is a fact of life for many at home and work, as they strive to perform superhuman feats as employee, parent and citizen. Those who don't buy into the multitasking norm risk appear lazy and uncommitted. Multitasking at work is especially prevalent among young adults and decreases with age, from 18- to 34-year olds (51%) to those over 65 (16%).<sup>1</sup> But an increasing body of research shows multitasking may be overrated and counterproductive. Although we may feel more productive or appear more accomplished to coworkers, multitasking is actually inefficient in terms of mental processes and capacity.

#### Is multitasking possible?

René Maurois explains that while awesome in its complexity and ability to process information, the human brain has serious limitations. Between sensation, decision and action are major bottlenecks. First, attention control. Bombarded by stimuli, we must continually separate the unimportant from the important, and filter out distractions. Second, short term memory. Research suggests short term memory can only hold the equivalent of four objects at a time! Third, recognition. The brain may identify an object instantly, but can take more than half a second to identify a second object. Fourth, response time. While deciding on the best response to an object or event, less processing power is available for other responses. Our ancestors rarely needed to make simultaneous decisions in their simpler and more linear world. Today our nervous system struggles to cope with the increasing pace of technology and society. As Maurois points out, in a fast-paced world on densely populated roads, these capacity limits are all too real and downright dangerous!<sup>2</sup>

Maurois' research demonstrates how multitasking may be an inefficient use of brain power. The ability to temporarily switch from a main task, explore alternatives and return to the original task is controlled by the prefrontal cortex. Research subjects took 20 to 30% longer to complete two separate problems when switching back and forth than when they performed the tasks sequentially.<sup>3</sup> The brain was clearly not designed for parallel processing.

#### Who are the most successful multitaskers?

The most important predictor of multitasking performance is

working memory. Attention and fluid intelligence (on-the-spot reasoning ability) are also significant.<sup>4</sup> Today's teens, having grown up with more complex schedules and lots of high tech toys and tools, are regarded as the multiplexed generation or Generation MUX.<sup>5</sup> But they are still constrained by their neurobiology!

#### Warning: Multitasking can cause brain damage!

Studies are showing that intense multitasking can cause short term memory problems. A prolonged adrenaline rush has been shown to damage cells that form new memory. Changes in concentration and gaps in attentiveness were also noted.<sup>6</sup> Compulsive multitaskers can become addicted to the constant stimulation of incoming data and rapid task switching. They develop shorter attention spans, and become frustrated with long term projects requiring intense concentration. "Pseudo-attention deficit disorder" is a condition recognized by the following symptoms: difficulty in unplugging from e-mail, voice messages and fax; a desk cluttered with unfinished projects; trouble separating data from information; stalled creativity and lack of ideas.<sup>7</sup>

#### In conclusion:

Multitasking is affecting our creativity, thinking processes and productivity. Paradoxically, to speed up we need to slow down. There is now a worldwide movement afoot to promote just that. Check out [Inpraiseofslow.com](http://inpraiseofslow.com) and [slowdownnow.org](http://slowdownnow.org) websites for ideas. Remember, technology can multitask forever. People can not. And the price tag for trying may be unacceptably high!

#### Resources

1. "Multitasking adults have hands full." *USA Today*, April 2005: 10.
2. "Capacity limits of information processing in the brain." *Phi Kappa Phi Forum* Winter/Spring 2005, v.85(1): 30-33.
3. "Multitask" *Softcopy Newsletter* Dec 2004-Jan.2005. <http://tpitre.nikola.com/softcopy/multitaskingSMALLERcar.jpg>
4. "Working memory, fluid intelligence and attention are predictors of multitasking performance, but polychronicity and extraversion are not." *Human performance* 2005, v.18(3):243-266.
5. "Generation MUX." *InfoWorld* July 18, 2005: 27, 29.
6. "Juggling too many tasks could make you stupid." S. Shellenbarger. *Wall Street Journal Online*. <http://tinyurl.com/728p>
7. *The addiction of multitasking: why you may be wasting instead of saving time*. Bartlein, B. 2003. <http://tinyurl.com/8z8yz>
8. *SlowDownNow.org: the almost serious antidote to workaholism*. <http://www.slowdownnow.org/>
9. *In Praise of Slow: how a worldwide movement is challenging the cult of speed*. Carl Honoré. <http://www.inpraiseofslow.com/>
10. "A tale of 'Whoa!' In this mile-a-minute world, some folks are resisting the hurry-up offensive." Weeks, L. *Washington Post*, May 31, 2004. <http://www.washingtonpost.com/wp-dyn/articles/A5160-2004May31.html>