

# Your brain has limited capacity: Here's how to maximize it

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You can't find your keys again. You forgot to buy milk. You were supposed to call your niece to wish her a happy birthday – three days ago.

Don't worry, you're not losing your mind. It hasn't adapted to deal with modern life, according to Daniel Levitin, neuroscientist and bestselling author of *This Is Your Brain on Music*.

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As Levitin explains in his new book, *The Organized Mind: Thinking Straight in the Age of Information Overload*, the evolution of the human brain hasn't caught up with the demands of today's world. We're now chasing deadlines instead of the quarry that will become our next meal. We're keeping track of friends and acquaintances around the world through e-mail and social media instead of focusing on relationships within a single village. And rather than having to make do with whatever the environment deals us, we're bombarded with choices at every turn, from which shampoo to buy to where to plan our next vacation.

The brain has a limited capacity to process information and juggle multiple tasks. But Levitin, a professor of psychology and behavioural neuroscience at McGill University, says we can help the brain do its job more efficiently by organizing our lives around how it functions. By using so-called brain extenders, methods that offload some of the brain's functions, we can help declutter our thoughts and sharpen memories. As Levitin discovered through interviews with high-powered executives, military leaders, Nobel laureates and artists, adopting organizational tactics to reduce the brain's workload may help us become more successful.

## Evaluate the probabilities

When making big decisions, like buying a home or considering medical treatments, it can be tough to wrap your head around a deluge of numbers and statistics. You may be inclined to trust your gut feelings, but your gut does not always yield the wisest results. To better systematize your approach to decision-making, Levitin advocates using Bayesian inferencing.

Bayesian inferencing involves updating one's estimates of probabilities, based on increasingly refining the information available, he explains. Consider, for example, what the odds are that the person you just saw at your local Starbucks was the Queen. Your answer is probably close to nil. But your estimates of those chances increase if you find out the Queen is in town. And they become higher still if you know the Queen had plans to visit that very Starbucks at the very hour you were there.

Levitin says this kind of reasoning is especially important in medical decision-making. Imagine, for example, your doctor tells you that you need to take a cholesterol-lowering drug. Most people would likely assent based on their physician's recommendation, he says. But if you were to weigh the odds of that drug having a positive effect against the odds of experiencing side effects, you might find it wiser to decide otherwise.

“What I advocate is a more active role in medical care where you would say to the doctor, ‘Well, what are the chances that I’ll benefit from it? How many people take this medication with no benefit?’” Levitin says. Although doctors tend to be trained to think in terms of diagnosing and treating illnesses, they are not typically trained to think probabilistically, he adds. This becomes problematic when faced with the latest treatment options with questionable odds of a cure. “The way medical care is going in this country and in other countries, I think we need to become more proactive about knowing which questions to ask and working through the answers.”

### **Take the time to write it down**

According to The Wall Street Journal, the coaching staff of the Cleveland Browns is employing an old-fashioned tactic this year to help boost the NFL team's performance; it's encouraging players to write notes on team strategies by hand. “When you write stuff down, you have a much higher chance of it getting imprinted on your brain,” coach Mike Pettine told the paper.

Pettine may be on to something. A recent study in the journal *Psychological Science* found university students who were asked to hand-write notes during lectures were better able to answer questions based on the lectures later, compared with those who typed their notes using a laptop. The researchers suggest handwriting required the students to engage more in processing the information, selecting only the most important details, instead of mindlessly transcribing what they heard.

Levitin offers another compelling reason to dust off your pens and pencils. Writing things down conserves mental energy that you would otherwise expend fretting about forgetting them. It frees the brain from what cognitive psychologists call the “rehearsal loop,” replaying an idea

over and over again to remember it.

While conducting interviews with highly successful individuals for the book, Levitin was struck by how many of them use this low-tech approach. But don't settle for organizing your thoughts with notebooks and to-do lists. Levitin suggests writing them on index cards. You may, for example, have a stack of cards for daily errands, reminding you to pick up laundry, call a client and drop off your collection of *Breaking Bad* DVDs for a friend.

"The beauty of it is, for one thing, you can carry them in your pocket, so they're always with you," he says. And unlike lists, you can easily re-sort them, as your priorities change. He notes some people even keep separate piles of index cards for to-do items at work and for home.

### **Your friendships could use a reminder**

A 2012 study from the University of Edinburgh found that having more Facebook friends also means having more stress. The study suggested the average Facebook user has seven different social circles – among them, friends they know offline, extended family, siblings, friends of friends and co-workers. Having these disparate circles in their Facebook network increased users' anxiety because they worried about presenting an online version of themselves that did not meet the approval of certain groups.

It's no wonder juggling your social life is stressful. Levitin notes that our ancestors, with their limited social networks, had it easy by comparison. Today, simply trying to keep track of all the people we wish to stay connected with is a source of stress on its own.

Levitin suggests actively organizing data about your social world to allow you to have more meaningful interactions. This means taking notes when you meet new people that help you contextualize your link to them, such as who made the introduction and whether you share any hobbies, and using memory "ticklers," such as setting a reminder on your electronic calendar every few months to check in with friends if you haven't heard from them in a while.

"Organizing your social world doesn't mean you turn your social world into an algorithm," Levitin says. "The idea is to maximize the opportunities that you'll have rewarding and pro-social interactions with people."

### **When in doubt, toss it in a junk drawer**

The chaos of a junk drawer, a catch-all place to store odds and ends, may seem antithetical to creating order in your life. But Levitin says there is an important purpose for the junk drawer. It allows you to cut down on time and mental energy spent making trivial decisions.

Previous research by Sheena Iyengar, director of the global leadership program at Columbia Business School and author of *The Art of Choosing*, found the average American makes around

70 conscious decisions a day. It's a safe bet Canadians are faced with a similar number.

Although our brains are hardwired to create categories for all the things and ideas we encounter, there are times when deciding the right category for an item is counterproductive.

Say, for instance, your plumber gives you a tool needed to fix your garbage disposal, and asks you to hold onto it until the next time the appliance needs repairs. Instead of agonizing over the best place to put it, Levitin says, "we throw it in the junk drawer. We're not wasting more time making a decision than it's worth, and we move on with our lives."

A junk drawer needn't be just for physical odds and ends. And it needn't be their final resting place. You can set up electronic junk drawers, or miscellaneous folders, on your computer to hold hard-to-categorize documents and e-mails until you find a better place to store them. Levitin notes that his former boss kept a folder titled, "stuff I don't know where to file," and would check it periodically to review the materials in it, and sometimes create new folders for them.

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