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Here's why your brain hurts – too much information and too many decisions



PETER ROBB

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Daniel Levitin's new book is called *The Organized Brain*.

The Organized Mind

Daniel J. Levitin (Allen Lane Canada)

In town: *The author is appearing at the Ottawa International Writer's Festival on Oct. 24 at 6:30 p.m. at Knox Church, 120 Lisgar St. Tickets and info: [writersfestival.org](http://www.writersfestival.org) (<http://www.writersfestival.org/events/fall-2014/thinking-straight-in-the-age-of-information-overload-with-daniel-j.-levitin>)*

Is there such a thing as too much information?

Well, according to the cognitive psychologist and neuroscientist Daniel Levitin, humanity is now on information overload and there are consequences.

Many people likely know this intuitively. After all, there is an epidemic of forgotten car keys.

Levitin, whose previous books *This is Your Brain on Music* and *The World in Six Songs* have positioned him as a thinker on the brain, has come up with a new book called *The Organized Mind*.

“There is actually a biological drive toward order and symmetry that goes back 200 million years,” he said in an interview. “There are birds and rodents that will ornament the entrance to their nests with stones or twigs in some way of demonstrating symmetry and to detect if some

enemy has been there when they were gone.

“This is a very sensible and economical way of having an alarm system. It's easier to tell when things are out of place when things are ordered.”

Call it survival of the neatest.

The ordered world existed very well for many millennia, and there's a reason for that.

“It's important to realize that for tens of thousands of years information didn't come along very quickly. We discovered fire, 10,000 years before we discovered the wheel; and it was another 10,000 years before we discovered agriculture.”

Not so today.

A decade ago, Google estimated that there were 30 exabytes of accumulated human information. It estimates there are 300 exabytes now, Levitin says.

Can you feel the impact of all that stuff coming at your head?

“At the simplest level, the body produces the stress hormone cortisol, which is toxic. It is not good to have chronic stress.”

Dealing with an onslaught of information leads to stress and then some pretty bad health outcomes, Levitin says. It also causes what he calls mental cloudiness that impairs judgment.

“We are not evolved to deal with this mass of information and we reach a point of decision overload. Take a simple case of emails that come in. When you hear that little beep you have to make a decision: ‘Do I tend to this now or not?’ And then once read, you have to decide: ‘Do I answer this now or not?’

“Do I forward it to somebody, do I file it, do I need more information? Do I put it in the trash?

“Each of those questions constitutes a decision and unfortunately the biology of the brain doesn't distinguish very well between little decisions and major decisions.”

What if you are the “Decider in Chief,” a.k.a. the President of the United States or the Prime Minister of Canada?

“Anybody who is being asked to make more decisions in a small space of time than the brain can make is going to have impaired judgment,” Levitin says. He has investigated decision-making in the White House and they do have a system of filtering information that protects POTUS from overload.

He then has another big problem: separating the signal from the noise or the digital grain from the digital chaff.

In a complex world, one thing we do know is that good decision-making is very important. And we need to understand more about that process, Levitin says. Hence his book.

“I realized after my first two books that people want to know what neuroscientists have discovered in the past 10 years. People have an innate curiosity about how the mind works, especially if there is stuff they can use.

“I started thinking more broadly about the things that neuroscientists have learned about our everyday life and the appeal of translating that would be useful.”

Levitin's ambitious project has taken about four years. He started by reading the literature on neuroscience focussing on organization, memory, attention and categorization. It helps that he teaches this stuff to students in his classes at McGill University.

“I read self-help books to see if there were things in them that were based in science as opposed to field work. Then I made a list of things I wanted to talk about like limit of attentional capacity, the fascinating story about how language developed and how our earliest ancestors categorized plant and animal life. How they divided up their world.

Then I started talking to people who were very successful; CEOs and their executive assistants, painters, musicians, people in government, Nobel prize winners, to get a broad idea about their success and trying to figure out if there is science behind it.”

Levitin doesn't like the word advice.

“I don't think I can actually give advice without knowing a person. What I do have are observations that I can share.”

“There are all these successful people and there are things that they do that really work. If it fits, why not try it?

“For example: Externalizing — get things out of your head if you can. The famous behaviouralist B.F. Skinner on hearing a weather report predicting rain would take an umbrella out of the closet and stick it by the front door right away. There are dozens of ways to do that. Write notes, put the information on a calendar. Getting it out of your head is good because your head has a limited capacity.”

Our brains are easily distracted by digital shiny objects.

“Understanding decision fatigue and overload would suggest one should tackle the most important tasks early in morning when our neurochemistry is at its best. It's also important to know which questions to ask when trying to make a decision. Great leaders know which question to ask to move things forward.”

All of this matters because the part of our brain that governs immediate working memory is actually limited to four thoughts at a time, Levitin says.

That's why we lose keys or reading glasses.

“I do believe we are confronted with more information than we can handle and I believe there are simple things that any of us can do to help us better filter the onslaught of information. Ultimately we can reach a point where we are more productive in our work with more time for loved ones.”

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Peter Calamai · Ottawa, Ontario

Thanks for providing comfort for my increasing need to write notes for myself. Here I thought I was getting forgetful with old age. Now I find out this is simply "externalizing" -- getting things out of my head to avoid overload.

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