

Information-rich society drains our brains of creativity if we don't take needed breaks

In the U.S., summer vacation season is wrapping up. Teachers are heading back to school. Pencils and notebooks are replacing sand buckets and pool toys in the seasonal aisle at local stores. What did you accomplish this summer? [Hopefully you got some rest, says McGill University neuroscientist Daniel Levitin](#). Your future productivity and creativity likely depend on it.

The structure of the human attentional system is dependent on three main systems: the task-positive (persistence and focus), the task negative (daydreaming and mind-wandering) and an attentional filter that switches between them. Some people seem predisposed to be better at one system or the other, or more efficient switchers, but they are all three crucial to performance:

This two-part attentional system is one of the crowning achievements of the human brain, and the focus it enables allowed us to harness fire, build the pyramids, discover penicillin and decode the entire human genome. Those projects required some plain old-fashioned stick-to-itiveness. But the insight that led to them probably came from the daydreaming mode. This brain state, marked by the flow of connections among disparate ideas and thoughts, is responsible for our moments of greatest creativity and insight, when we're able to solve problems that previously seemed unsolvable.

It is the attentional filter, the ability to switch back and forth between these two modes, that suffers the most in our modern world where emails, tweets, texts and the task-at-hand all simultaneously compete for our neurological resources. In other words, Facebook is dirtying up your filter.

The irony is that in this information age, where we're exposed 5 times the amount of information daily as we were in 1986, the multi-tasking domain of the attentional filter is highly prized. Stanford psychologists Eyal Ophir and Anthony Wagner went hunting for so-called 'good multitaskers' to find out what neurological differences made them adept at juggling several tasks. They didn't find anything. In fact [high multitaskers performed worse](#) on every cognitive test:

"The high multitaskers are always drawing from all the information in front of them. They can't keep things separate in their minds," Ophir said. The researchers are still studying whether chronic media multitaskers are born with an inability to concentrate or are damaging their cognitive control by willingly taking in so much at once. But they're convinced the minds of multitaskers are not working as well as they could.

Unsurprisingly, the people most taxing their attentional filters are likely the ones most in need of a rest.

Levitin and his colleagues suggest a few tips, mostly centered on creating external breaks in your day that alleviate the internal pressures on your attentional switch. These can increase the productivity and creativity that comes with having a more restful mind:

- Set aside chunks of designated time for social media and emailing. Close browsers and shut down applications so they don't distract you during off hours.
- Immerse yourself in a task, without distraction, for 30 to 50 minutes at a time.
- Go for a walk.
- Listen to music.
- Take a nap.

If we can train ourselves to take regular vacations — true vacations without work — and to set aside time for naps and contemplation, we will be in a more powerful position to start solving some of the world's big problems. And to be happier and well rested while we're doing it.

Additional Resources:

- [We're multitasking, but are we getting more done?](#), Forbes
- [Why do we love multitasking? Because we're wired to make order out of chaos](#), Huffington Post
- [Searching for the super genius genes](#), Genetic Literacy Project