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Richard E. Cytowic M.D.
The Fallible Mind

Why We're All Overwhelmed Today

It's no wonder: We ask Stone Age brains to manage Digital Age data streams.

Posted Oct 21, 2014

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Overextended, Overcommitted, and Overwhelmed Source:

We all face the paradox: We want to unplug and push back against modern life's demands on our time and [attention](#). We want a breather. Yet we continue to flit from task to task and endure countless interruptions while bemoaning time wasted and [productivity](#) that could be a lot better. We say we're sick of Instagram and Twitter, or that we're going on a [Facebook diet](#) to limit the time we spend staring at screens. Perhaps we've promised ourselves that we're going to delete our accounts altogether.

And yet we don't.

Logically, there's no apparent reason why what we say and do are two different things. But because our society prizes rationality and believes that there has to be a reason behind everything, our failure to unplug as we say we want to only *heightens* our frustration. We have become like lab rats pressing a lever repeatedly, expecting a reward. Except a reward that would *mean* something never comes.

Is it any wonder we call our daily scurry "the rat race?"

On overload, we lie awake at night, worrying that we've grown inefficient and indecisive, poor at prioritizing. Work, relations, and home life are all affected. Public and private compartments no longer exist.

Blame our stone-age brain for this unhappy state.

We have exactly the same brain that our distant ancestors had. Its attention capacity has profound limitations that modern life taxes past its breaking point. We can't get past this biological limitation either by determination or sheer willpower.

Here is why:

Modern humans have been around for about 200,000 years. During 99% of that time, we did little but survive and procreate. Climatic extremes settled down roughly 10,000 years ago, and agriculture began shortly after that. Even 100 years ago, life was far slower, quieter, and less complicated than today.

Eons ago, when not much changed except the seasons, the brain became a change detector meant to be distracted by novelty, or anything out of the ordinary. A sound or a sudden movement could mean a possible threat. Because we have to be ready for anything, our change detectors operate constantly, always on alert. But this eats up a steady portion of the brain's allotment of power, which in biological terms is also limited and fixed.

Switching attention incurs a high energy cost. And we're not very good at it, especially when you consider how many items vie for our attention each hour compared to what our ancient brains were made to handle. As an old TV commercial once said, "You can't fool Mother Nature!" meaning, again, that we can't get around the Stone Age limits nature has generally imposed on us.

Human brains operate at low speeds of about 120 bits (~15 bytes) per second. By comparison, my Verizon fiber optic connection shoots data into my home at 75 megabytes per second, 5,000 times the rate that my brain can handle. We ask our brains to sort, categorize, parse, and prioritize gargantuan data streams it never evolved to juggle. It should shock us all at how unprepared it is to weigh and navigate the glut of decisions that modern life throws at it.

And yet we continue—overextended, overcommitted, and overwhelmed.

It takes about 60 bits per second to pay attention to one person speaking. That's half of our allotted bandwidth right there. Simple arithmetic shows why [multitasking degrades performance](#). It tires us out, more than we appreciate, which makes it even *harder* to sort the trivial from the important.

Attention and memory are the brain's most precious resources. The other day, I stood in an elevator lobby at my university. The doors opened and about a dozen undergrads spilled out. All stared down at their phones, oblivious to my presence as they bumped and jostled me. The screen lock on their attention created a blind spot that made me invisible, a phenomenon called "inattention blindness." This is not a flaw, but a result of how the brain developed: It ignores what isn't its immediate priority even when it stares it in the face.

Attention is like a sharp-edged spotlight: what lies beyond its perimeter is in our cognitive blind spot. And so by definition *we never know what we are missing*. As an educator, I worry that modern students, our future leaders, won't be able to focus, prioritize, delegate, meet deadlines, or see a task through to the end. They already have already ingrained habits that undermine their ability to learn and remember.

But no amount of organization can truly address the problem. We already hit overload, 10 or 20 years ago. It's why all of us are stressed. The obvious solution is to [start saying no and have fewer things to juggle](#) in the first place.

More on that later. If this topic strikes a note, drop me a line.

What percentage of your brain do you use? - Richard E. Cytowic



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Richard E. Cytowic, MD, MFA, professor of neurology at George Washington University, is known for returning synesthesia to mainstream science. *Wednesday Is Indigo Blue*, with David Eagleman, won the Montaigne Medal.

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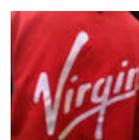
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