



Learning How to Focus on Focus

In an age of information overload, simply paying attention is the hardest thing

FOR MOST OF human history, the progress of knowledge was constrained by a shortage of information. Books were expensive and rare, libraries were reserved for elite scholars and communication was extremely slow. Mail moved at the speed of horses.

Now, of course, we live in the age of Google and Amazon Prime, a time when nearly everything ever written can be accessed within seconds or delivered within days. Facts are cheap and easy; the cellphone has become an infinite library.

So what's holding us back? Why does this surfeit of information so often feel overwhelming instead of enlightening? The answer returns us to the stubborn limitations of the human mind, especially when it comes to the ability to focus properly. As the psychologist Herbert Simon famously declared, "A wealth of information creates a poverty of attention."

But it doesn't have to be this way; the mind isn't quite as constrained as we've assumed. Though our attention will always be a scarce resource, easily steamrolled by the world's abundant distractions, it's possible to improve our focus, to become better at dealing with the excess of information.

The key is strengthening what psychologists call "executive function," a collection of cognitive skills that allow us to exert control over our thoughts and impulses. When we resist the allure of a sweet treat, or do homework instead of watch television, or concentrate for hours on a difficult problem, we are relying on these lofty mental talents. What we want to do in the moment, and what we want to want, are



EXERCISES SUCH AS YOGA and board games can improve 'executive function.'

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often very different things. Executive function helps to narrow the gap.

Researchers have found that varying personal levels of executive function have a profound impact on nearly every aspect of life. Consider a recent study led by Arshalom Caspi and Terrie Moffitt of Duke University that tracked 1,037 children born in Dunedin, New Zealand. The researchers gave the kids a barrage of mental tests and then kept meticulous records of their behavior as they

matured into teenagers and adults.

Children who could better regulate their impulses and attention were four times less likely to have a criminal record, three times less likely to be addicted to drugs and half as likely to become single parents. In many instances, the ability to utilize executive control was more predictive of adult outcomes than either IQ scores or socioeconomic status.

But here's the good news: Executive function can be significantly improved, especially if interventions begin at an early age. In the current issue of *Science*, Adele Diamond, a neuroscientist at the University of British Columbia, reviews the activities that can reliably boost these essential mental skills.

The list is surprisingly varied, involving around activities that are both

engaging and challenging, such as computer exercises involving short-term memory, taekwon-do, yoga and difficult board games. Dr. Diamond also notes that certain school curricula, such as Montessori and Tools for the Mind, have also been shown to consistently increase executive function.

Yet, despite this impressive evidence, most schools do virtually nothing to develop executive function. Even worse, education departments are slashing the very activities, such as physical exercise and the arts, that boost executive function among the broadest range of students.

We've also failed to develop metrics that can assess these skills. Though in kindergarten we often attempt to track aspects of executive function—the report card of a 5-year-old is filled with ratings about the ability to focus and stay on task—these categories vanish for the rest of a student's academic career, replaced by an obsession with academic subject matter. We worry about the periodic table instead of persistence, spelling instead of self-control.

That's almost certainly a mistake. Given the age in which we live, it makes no sense to obsess over the memorization of facts that can be looked up on a smartphone. It's not enough to drill kids in arithmetic and hope that they develop delayed gradification by accident. We need to teach the skills of executive function directly and creatively.

If we want our children to succeed in the age of information, we need to give them the mental tools that matter. The world has changed. The mind can't stay the same.

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Wall Street Journal 9/3-4/2011

WALL STREET JOURNAL

cess of selection, choice and thought have been applied that things stand chance of looking natural.

We might, for instance, have known someone like Proust's fictional Duchesse de Guermantes in "Remembrance of Things Past." We might have found there was something superior and insistent in this woman's manner, without knowing quite what—until Proust directly pointed out how the Duchesse reacted when, during a smart dinner, Madame de Gallardon made the error of being a little over-familiar and addressed her by her first name.

Proust writes that the Duchesse "looked with amused astonishment towards an invisible third person, who she seemed to call to witness that she had never authorized Mme de Gallardon to use her Christian name."

One effect of writing in a way that devotes attention to noticing such faint yet vital tremors is that, once readers have put the book down and resumed their own lives, they may attend to precisely the things that the author would have responded to had he or she been in their company.

Thanks to a book, their minds will be like a radar newly attuned to pick up certain objects floating through consciousness. The effect will be like bringing a radio into a room that was had thought silent, only to realize that the silence existed at a particular frequency and we, in fact, shared the room all along with waves of sound coming in from a Ukrainian station on the nighttime chatter of a minicab firm.

Emerson famously wrote: "In every work of genius we recognize our own rejected thoughts." That's the difference between great and bad writing. The geniuses put their fingers on what really counts, which is what we all already knew but were too forgetful and conventional to remember.

Mr. de Botton's most recent books are "The Pleasures and Sorrows of Work" and "A Week at the Airport."