

LOSING OUR FOCUS

How the brain is not coping with today's work environment

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Focusing on today's modern info-tech world is a challenge and it really takes something to get a grasp of how to actually stay focussed, be productive and be able to elevate your performance without burning out your brain. As I sat down for a three hour block to begin researching and writing this article on focusing the mind and improving the use of my brain, an area that I am at work on this year to master, I was struck by the amount of times that I was distracted, my attention diverted, and how challenging it was to just focus on the one thing I had scheduled time to do. I realised very quickly that I have become so accustomed to, and have such an ingrained habit of stopping what I am doing for short periods to handle or do small tasks that in my mind seem like they don't take much time, or won't take away my ability to stay focussed during the time I have scheduled to work on a significant single task.

It became obvious to me the more I researched and read about it, that I did not really get how much multi-tasking/task switching/dual-task interference actually affected my productivity and performance, and was depleting my brain's resources in an inefficient way. I realised I was not seriously dealing with the hard core research that has been coming out for the last 15 years on this, and using it to my full advantage to get the most out of my brain and mind, and have even more access to lower stress levels, greater balance in my life, and the ability to elevate my levels of performance in my own work.

I discovered that none of us can get away with it not affecting our productivity and mental state to some degree, and our brain really does have a limited amount of resources to perform at it's best. It is now critical that you begin learning about how to manage your mind and brain better, to maximise the use of it in our brain-powered economy, where the amount of information, choices, decisions and tasks that are demanded of us to deal with day-to-day are relentless, and not going away. This article is not to try and tell you to end multi-tasking, being interruptible or switching tasks constantly, however you really can learn to master how you use the limited amount of cognitive mental resources you have to perform all the tasks you have to do, so that you don't end up with all the common mental and physical consequences from chronic stress caused by not managing your mind and brain to the best of your ability.

So if you're anything like me – with a commitment to being ever-more productive and improve your performance – and you arrogantly (or naively more like) think you can override your innate physiology and the way your brain is designed to work – THINK AGAIN! I really recommend you take heed of ALL of the research that is out, some of which I will present in this article about the brain and the consequences of having your attention constantly

diverted between multiple things, and engaging in daily activities that poorly use your brain's resources, robbing you of the energy you need to perform other important functions and tasks that require a fully functioning brain, ultimately leaving you more stressed, not coping at times and not having the energy you need for other important areas of your life outside work.

You may hear yourself in the following account of the Saturday mid-morning when I began working on this article. My reason for stating that is because I did not have any clients to tend to, no phone calls I had to make, no one expecting me to respond to anything until Monday, and nothing pressing for my attention to have to get done that day. This is why I scheduled to start it on a Saturday as in my mind I thought it would be the best time as I would have no distractions or things to get in the way of just focusing on the impending deadline of getting this article researched and written. While I consider myself more productive than most I work with, I knew that I would see many of my own habits by putting the spotlight on the issue of our lack of capacity to focus in today's modern world, especially in the work environment, which I was actually looking forward to discovering, however what I observed was far more sobering and enlightening than I expected!

Within about 15 minutes of starting to work on the article, I was in the middle of re-reading a brilliant piece about "Focus-time" in an article from David Rock on "The Healthy Mind Platter" (which I reviewed in the January *M2 Magazine*), and had a sudden impulse to send it to a couple of colleagues that would love it, then unconsciously and with no self-control stopped what I was doing, switched screens and sent the email, then because my email was now open my eyes scanned the inbox and my attention was caught by one that I was expecting from Friday, so I thought "I'll just quickly respond so I can keep it in motion and maybe they will get back to me today", so I responded to that email for five minutes, then caught myself about to read another email, and executed some self-control and gave myself a little mental slap about not focusing on the article, and got back to the article. By this time about 25 minutes had passed and I had worked on the article for about 15 minutes. Then about 20 minutes later, because I had forgotten to turn my Skype off (something I know I should do to stay focussed) a message beeped at me, and instead of just turning it off, I was compelled to quickly read it, respond, wait for the quick response back (which ended up being a series of exchanges) before I turned off my Skype. Again, I gave myself a mental slap for being distracted, and then proceeded to have a short internal conversation with myself about getting distracted, and laughed at myself given I am writing an article all about the effects of being distracted constantly in the workplace, I of all people should know better! Over the course of the next couple

of hours in my own battle to stay focussed I was shocked at how challenging it was to stay focussed and not allow things to distract my attention. While I did not note down everything that distracted my focus, here are some of the things that happened over the two more hours I was working on this article – I would have stopped to send an email a few more times to colleagues with great articles I was reading (my brain said it was so important and I must do it NOW); I had to send a couple of texts to people I had forgotten to respond to that morning (again obviously so important that I had to stop what I was doing as they could not wait a couple of hours until I was finished to hear from me), took a short call from my mother whom I told I can't talk and need to focus on my article (firstly, I did not need to answer her call as no one was dying and secondly, my phone should not have been on, but because of sending some texts prior to that, I forgot to turn it off again); I stopped to make at least three cups of tea which I justified with "I need to take some breaks" – but really I just had an impulse that I felt like a cup of tea and chose to stop and go do that and used the "break" to check my phone (which is not a break for my brain at all).

It may sound like I got nothing done, but I worked out that in the 3 hours I had scheduled to work on the article, I got about 2 hours of work done on it and made a good start, and because of what I saw, began immediately to go to work on improving my own work habits. In the past I would have felt mildly okay with how much I got done in that first few hours, with a slight sense of pressure because I know how long it takes for me to write these articles, and I was now not really on track with my deadline. But because I was so conscious of how much I was taken away from focusing on working on the article, I was instead left with some major questions to inquire into which became apparent to me:

If I really learned how to focus my mind and use my brain to it's full potential by not depleting it's resources unnecessarily by being distracted, how much could I achieve and how much time could I save by being able to truly focus and not constantly divert my attention? What kind of performance and productivity is possible if I was managing my focus and attention powerfully?

Too much these days we are left with the feeling of not really accomplishing much in a day or what we intend to at work because of the level of interruption and distraction from the tasks we are trying to achieve. It has become common in the business setting to be "interruptible" at any time and very little thought is put into what this actually does to the productivity of a workplace or business and the performance of the employees or staff. To have to stop and respond to texts and emails and other demands is a standard practice, that diverts attention constantly and has a clear impact on performance and productivity.

I am going to focus this article on three key areas that the research is showing affect our ability to focus and manage our attention for performance and productivity, and are having a major impact on our mental resources and stress levels in the workplace:

- Multi-tasking/Dual-task interference/Task Switching
- Self-control
- Choice/Decision making

My intent by presenting the following research, studies and facts by the world's leading experts in neuroscience and psychology and my discussion of it, is to wake you up to some things you may not be dealing with or managing in your own work habits and practices and in other areas of your life. It is also to have you really think about and examine what you are doing on a day-to-day basis that you could do differently to conserve the precious resources in your brain, giving you greater access to a more balanced, happy and successful life – where you feel you have control over your state of mind, and the energy and capacity to enjoy all that life has to offer.

STAYING FOCUSED – ATTENTION MANAGEMENT FOR PERFORMANCE

In today's business paradigm that has evolved over the course of the last couple of decades, we have developed habits and behaviours that have our time completely fragmented. We are

connected and expected to be available 24/7 due to globalisation and the rapid developments in technology and communication. Firms expect their managers to be able to be at the beckoning of the increased customer demands from this fast-paced modern business world. In this paradigm where time is more and more fragmented our focus and attention is also becoming ever increasingly scattered.

"There is less time available for more tasks and responsibilities. Since time is a scarce resource, those skilled in (re-)focusing quickly and staying focused within fragments of time will thrive and be more successful. This requires the capacity to manage one's attention: to focus entirely on the person or task at hand while also exerting self-control to block out interferences.

"Focusing attention involves several functions, including alerting, orienting, and executive control. The executive capacity to focus is dependent on a well-developed prefrontal cortex (PFC), also referred to as the executive part of the brain, responsible for most of the higher cognitive functions organising actions, both physical and mental. The PFC's functions are wide and varied; they include capacities such as: (1) working memory, involved in organising and structuring information, remembering self and creating images of the possible future, for consequence evaluation, and long-term planning; and (2) processes for monitoring behaviour and inhibiting pre-potent responses, including emotion regulation and self-observation. Our executive functions allow us to reconsider the environment moment to moment and make choices that may be different to our automatic responses." (David Rock et. al, 2012)

To focus is to pay close attention. Attention is a complex process involving multiple parts of the brain related to perception, arousal, emotion, and memory. It requires higher cognitive functions in the PFC which require adequate levels of dopamine or adrenaline, which can be altered by levels of arousal or stress. If you are under-stimulated, presenting as boredom, or over-stimulated, presenting as stress, you will get impairment of executive functions, distraction, and lack of focus.

Various studies cited by the National Institute for Occupational Safety and Health in the report "Stress at Work" indicate that between 26 percent and 40 percent of all workers today feel stressed or burnt out by work. Roughly 60 percent of doctor visits stem from stress related complaints and illnesses.

"Attention can therefore be considered to be dependent on a state of optimal arousal that activates our body and mind to process the incoming information and respond adequately. In order for a person to function at optimal levels of arousal, predictability and a sense of control are necessary. Deep breathing, mindfulness (openness and acceptance to what arises in the field of attention), and framing the stressor as controllable or transient can also help to maintain or bring a person back to optimal levels of arousal and attentional focus. In short, there is a direct relationship between stress, focus, and health. One could even propose that the capacity to focus attention is an ongoing indicator of mental fitness. Many mental difficulties such as Attention Deficit Hyperactivity Disorder (ADHD), schizophrenia, and Alzheimer's disease are characterised by attention problems." (David Rock et. al. 2012)

In the *Healthy Mind Platter*, focus time involves the application of a singular attentional focus on a task that permits a sense of mastery and completion. Focus time enables an individual to avoid the sense of being overwhelmed and incomplete that so often accompanies multitasking. Focus time is both a cognitive process necessary for effective performance, and an intentional effort that requires self-control, both of which require energy and the management of stress. This has important implications for self-management – keeping down the "switching-time costs" of multi-tasking which diminishes cognitive performance. In these ways, focus time is helpful for the process of a sense of efficacy in the outcome of efforts and the effective sense of contributing to work output.

MULTI-TASKING, TASK-SWITCHING AND DUAL-TASK INTERFERENCE

In today's information-rich society, people frequently attempt to perform many tasks at once and this has become a normal way

to act. This often requires them to juggle their limited resources in order to accomplish each of these tasks successfully which is not always easy, especially with the increasing demands put on us to perform, and in most cases leads to greater inefficiency in performing the individual tasks. For example, using a cell-phone while driving can lead to both poor communication and poor driving. Research has shown it to be consistently counterproductive, often foolish, unhealthy in the long run, and in the case of gabbing on the cell-phone while driving, relatively dangerous. Yet it is also expected, encouraged and basically essential.

All of us have the capacity to re-focus after we get distracted or when we are multi-tasking. While it may seem like we are processing multiple sources of information simultaneously, what we are actually doing, due to our limited capacity for working memory, is continuously switching the focus of our attention back and forth between the different stimuli. The consequence of this is a division of our attention, less time spent on each task, and a distribution of our focus to more things over a longer period of time, impairing our performance and productivity. This is also known as “dual-task interference”. According to the research by Professor David Meyer, multi-tasking requires multiple cognitive micro-processes, involving multiple regions of the brain, for goal shifting and refocusing attention, for activating the task’s procedural rules, for error monitoring, and for anticipatory movement preparation. The more interruptions that have us switch from one task to another the greater the amount of time it takes for all these micro-processes to be executed in the brain, which in turn expends more mental resources than focusing our attention on a single task.

Switching between two tasks in rapid succession also impacts performance, as it requires an individual to reorientate to each new task, which itself takes time and other attentional resources.

“We’re stressing people out with multi-tasking demands over time,” says Grafman of the National Institute of Neurological Disorders and Stroke in Maryland. And it will cause further decline in our health and performance, he says, if we keep it up. “The brain gets confused and looks for default mechanisms. It becomes hard to focus; we take shortcuts.” – *Seattle Times*, 2004

“Researchers peering into the brains of those engaged in several tasks at once are concluding what some overworked Americans had begun to suspect: that multi-tasking, which many have embraced as the key to success, is instead a formula for shoddy work, mismanaged time, rote solutions, stress and forgetfulness. Not to mention car crashes, kitchen fires, forgotten children, near misses in the skies and other dangers of inattention.” – *LA Times*, 2004

On August 2001, a team led by Professor David Meyer published the findings of his study on multi-tasking (in the *Journal of Experimental Psychology*). According to Meyer, multitasking creates health problems and is not efficient. In another study, Hembrooke and Gay found that multi-tasking weakens the abilities of the memory, in comparison to those who did not apply multi-tasking.

SELF-CONTROL:

Another major player affecting our focus or sustaining of attention is self-control, again controlled by our brains executive function the Pre-Frontal Cortex (PFC). Studies show that exerting self-control relies on a limited resource in the brain.

“Self-control can be defined as “the over riding or inhibiting of automatic, habitual, or innate behaviours, urges, emotions, or desires that would otherwise interfere with goal directed behaviour. Without self-control, capricious and enjoyable decisions would be made, statements uttered, and actions taken. Whereas it is sometimes more desirable to follow one’s own whims, those actions could occur at the expense of practical and boring yet

sensible decisions. Clearly it is important that some sort of internal control system be implemented in order to inhibit such impulses so that more appropriate decisions can be made and actions taken. Our capacity for self-control is unquestionably one of the things that separates man from the beasts and yet, like most psychological capacities, it is typically taken for granted. This capacity is unique, complex, and responsible for most human accomplishments being applauded as such rather than half-baked ideas that never leave the drawing board. Self-control allows us to persist in the face of other appealing options and to adapt rather than being slaves to our impulses.” (Cohen and Lieberman, 2009)

“Just as a muscle gets tired from exertion, acts of self-control cause short-term impairments (mental depletion) in subsequent self-control, even on unrelated tasks. Research has supported this strength framework for understanding the possible challenges in the domains of eating, drinking, spending, sexuality, intelligent thought, making choices and interpersonal behavior.” (David Rock et. al. 2012)

“It has long been known that action consumes energy. More recent evidence has indicated that some brain and cognitive processes likewise consume substantial amounts of energy — indeed, some far more than others. The “last-in, first-out rule” states that cognitive abilities that developed last onto-genetically are the first to become impaired when cognitive and physiological resources are compromised. Self-control, as a relatively advanced human capacity,

was probably one of the last to develop and hence may be one of the first to suffer impairments when resources are inadequate. The present findings suggest that relatively small acts of self-control are sufficient to deplete the available supply of glucose in the PFC, thereby impairing the control of thought and behaviour, at least until the body can retrieve more glucose from its stores or ingest more calories. More generally, the body’s variable ability to mobilise glucose may be an important determinant of people’s capacity to live up to their ideals, pursue their goals, and realise their virtues.” (Galliot et.al 2007)

Self-control requires a certain amount of glucose to operate unimpaired. A single act of self-control causes glucose to drop below optimal levels, thereby impairing subsequent

attempts at self-control. Studies showed that even resisting the temptation to eat chocolates and cookies (and making oneself eat health-promoting but unappetising radishes instead) caused participants to give up faster on a subsequent frustrating task, as compared to people who had not exerted self-control. These studies all pointed toward the conclusion that the self-control task consumed and depleted some kind of psychological resource that was therefore less available to help performance on the second self-control task. In short, the more frequent succession the exertion of self-control, the more challenging it is to keep executing self-control for the following tasks. It was shown that drinking a glass of lemonade with sugar helped counteract these effects, by restoring glucose in the blood. Lemonade mixed with diet sweeteners (no glucose) had no such empowering effect.

Using the muscle analogy, it is becoming evident that regular exertions of self-control in an intentional and conscious manner can improve will power strength which is important for those of us who are constantly having to battle with our own self-control in building the kinds of habits, behaviours and patterns of thinking for a healthy and happy life. How far the muscle analogy can be pushed remains an open question. Roy Baumeister who is the author of the book *Willpower* poses the question – “Are there self-control states resembling sprained or injured muscles? One might speculate that burnout or other pathological states resemble the incapacities stemming from muscles that have been abused beyond their normal capacity for recovery.”

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CHOICE AND DECISION MAKING:

By some analyses, human life is full of constant choices, insofar as almost every time one acts, one could probably have done something different (Sartre, 1956) By that definition, the fact that Starbucks has 19,000 possible choices for any customer order, would entail that every customer unconsciously considers 19,000 choices with every order. When we are talking about choice here I am using it in a more limited sense, to refer to choices made by a conscious consideration among alternatives. Much of the time people proceed by routine, habit, and automatic processes. Here I mean the contemplation of alternatives and selection among them to be a meaningful internal act that involves more than unconscious habitual behaviour.

The most advanced form of choosing involves weighing information about currently available options so as to select the option that seems most promising. It requires the most elaborate information – processing apparatus and the most pliant behaviour control system – which would suggest that it is a costly skill. The cost of such choosing is our current focus.

Chronic depletion of the brain's mental resources has been linked to multiple behavioural problems, including overeating by dieters, prejudicial responding, ineffective self-presentation, intellectual underachievement, inappropriate sexual responses, and impulsive overspending. Studies have also shown that participants who freely chose their favourite option showed no signs of depletion in mental resources. They concluded that autonomous choice is not depleting.

Making a choice involves a direct interpersonal act, which commits a person to a course of action, and takes effort above and beyond merely thinking about possible options. This is why choosing is shown to consume some of the conscious brains limited supply of energy, which in turn renders those resources less available for further demands.

"Ambivalence about choice presents one of the great seeming paradoxes of modern life. On the one hand, the desire for choice seems ubiquitous. People clamour for freedom in their private and political lives. They exhibit patterns such as reactance and illusions of control that indicate deeply rooted motives to maintain a feeling of having choices. The marketplace, normally a reliable guide to what people want, offers ever more fine-grained choices, from dozens of car makes and models to (most recently) personalised boxes of disposable tissue paper. On the other hand, people tire of the endless demands for choice and the stress of decision-making. In related research, there are signs that too much choice can be detrimental to satisfaction and that people resist facing up to the trade-offs that many choices involve. One recent analysis demonstrated that behavioural commitment (i.e., buying) initially rose with the number of options but fell when even more options were presented. The present investigation sought to shed light on the psychic costs of choice. Making choices can be difficult and effortful, and there is a personal price to choosing, which is seen in worse self-regulation." (Baumeister et.al. 2008)

The research shows that making deliberate, effortful choice consumes a limited resource needed for a broad range of executive functions in the brain, including self-regulation. It gives evidence that making choices depletes these conscious brain resources because subsequent self-regulation was poorer among those who had made choices than it was among those who had not. This pattern was found in the laboratory, classroom, and shopping mall. It was found with assigned choices and spontaneously made choices. It was found with inconsequential and more consequential choices.

It is proven in all the literature that this precious and limited supply of glucose the brain has as a resource for making conscious choices and decisions is the same resource used for self-control and multi-tasking/task-switching. In particular, making many decisions leaves the person in a depleted state and hence less likely to exert self-control effectively.


"The human self is quite remarkably different from what is found in most other species. One likely explanation for these differences is that an escalating complexity of social life, including culture, was a defining theme of human evolution. These uniquely human social systems have conferred remarkable advantages, ultimately including the long and happy lives enjoyed by many modern citizens. But they require advanced psychological capabilities, which are what set the human self apart from the rudimentary selfhood of other animals. Self-control and decision making are central, vital skills for functioning in human culture. Our findings suggest that the formation of the human self has involved finding a way to create an energy resource that can be used to control action in these advanced and expensive ways. Given the difficulty of these modes of action control, the resource is shared and limited. That is presumably why decision making produces at least a temporary impairment in the capacity for self-control." (Baumeister et. al. 2008)

MANAGING YOUR FOCUS AND ATTENTION FOR IMPROVED PERFORMANCE AND PRODUCTIVITY, AND LOWER STRESS LEVELS:

Most people are not actually aware of how the constant distractions and interruptions caused by the increased volume of information we have to process and the advanced communication devices that have been invented and mass amount of media sent to us affect our state of mind and mental health. Maintaining a healthy state of mind is becoming more and more difficult under these ever increasing demands in the work place. It is a challenge to maintain our focus over prolonged periods of time, and we are well aware of the fatigue this can cause. It becomes even more challenging if we have not had sufficient sleep the night before, or if we have not been sleeping adequate amounts over time. With the increasing load of stress we are all being subjected to, our brains are demanding of us to use them and take care of them in ways that we have never experienced in history.

We are in a brain-powered economy now, and the demands on our brain and what that is doing to our capacity to manage a healthy state of mind are only going to increase. So those who are going to thrive and succeed in the future will be those who understand how to manage their mind and brain to use it to its full potential, feed it the right kinds of activities and nutrients to keep it properly nourished and not burn it out with high amounts of multi-tasking; task-switching; frequent unnecessary exertions of self-control; and an overload of choices and decision making.

While I could recommend many things you could do to improve the use of your brain and how to manage your mind better for improved performance, productivity and overall wellness, I want to recommend you learn about *The Healthy Mind Platter* by David Rock et. al. You can download it from his website. The central component of *The Healthy Mind Platter* for those concerned not just with brain health but also performance is undoubtedly focus time: the time we are able to focus, stay focused and refocus efficiently and effectively. Reading this article and beginning to implement all the other ingredients to having a healthy mind and a brain will give you the greatest access to sustaining high performance into the future and not being another one of the general population to suffer some kind of stress related mental or physical illness.

While it may be cliché, it really is true that we only have this life and life is very short, so use the time you have wisely, invest some time in putting this into practice, armed with the knowledge we now have access to information that enables us to create a happy and balanced state of mind in this full on, fast paced, wild and wonderful world we are currently living in. 

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