Paying Attention to Attention Pays Off

Protecting Scarce Sources of Focus Time in the World of Digital Exhaustion and Distraction
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Our brains evolved to fit a world diametrically different from the one we live in. Today, many of the challenges we face stem from the fact that our mental capacities are not always well suited to the demands and opportunities posed by the current environment of modern technological societies. One such challenge is our immersion in the digital world, where our innate novelty and reward-seeking behaviour has been successfully ‘hacked’ by various digital tools and applications. Social media in our free time, communication and collaboration apps in our workplaces, tap into our very nature. Despite their huge potential to enrich and enhance our social and professional lives, in reality, their usage often comes at the expense of our ability to work on important tasks and priorities and achieve our long-term goals. It is too easy these days to get distracted and overwhelmed by a tidal wave of notifications, emails, SMS, instant messages, virtual meetings, social media posts, phone calls, etc.

In this whitepaper we discuss the psychological and organizational context of this challenge and, more importantly, some options we have to protect our scarce mental resources, both at the individual and organizational level. We also consider some opportunities for using, somewhat paradoxically, digital technologies in this quest.

**Attention: The doors of perception and productivity**

If we were to list some general truths in life, the following one definitely would be one of them: **We are (almost) always in situations which force us to make choices.** This universal life condition manifests itself in many different forms, from grand and often painful life changing decisions (Should I marry him?) to mundane day-to-day microdecisions we are barely aware of (Shall I put my leg here or there?). It also lies in the very foundations of our subjective experience of the world around us.

Every moment the world bombards our senses with a myriad of stimuli. To make sense of them, we rely on a number of parallel information-processing systems in our brains. Unfortunately, from their very design, they suffer bottlenecks, i.e., there are points at which they must choose and focus their processing on a single thing (Anderson, 2014). Because of that, we may easily miss quite big “details” and changes around us, to our own surprise. To catch this mechanism in action, try for yourself some of the tasks that expose inattentional blindness (Simons, 2000) and change blindness (Simons & Rensink, 2005) in us.
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The process behind this selectivity of our information-processing systems is well known both among laypeople and behavioral scientists as attention. It is not limited to peripheral perceptual processing, as described above, but it operates also in central cognition. Here it helps us (under the name of executive or cognitive control) to select the appropriate lines of thought (the flip side of that is our inability to think about two or more things at once – an ability a lot of us would appreciate if given the choice).

In this second role attention is indispensable for our ability to solve various problems we encounter both in our personal and professional lives. Consider your in/ability to resolve a non-standard driving situation while using a cell phone, even in hands-free mode, as an example of the former (Strayer & Drews, 2007). Consider also your in/ability to do your work in the middle of chatty coworkers and office noise, as an example of the latter. In both these exemplar situations, our attention does all it can to direct the brain's cognitive resources towards competing information-processing demands. As proved by available traffic accidents statistics (Cohen & Graham, 2003) and by ubiquitous complaints to workplace distractions (e.g., Udemy, 2018), it only leads to partial success and has its costs.

To fully appreciate the importance of attention for our ability to achieve our goals, one can remind herself of people in her surroundings who suffer from some form of attention impairment. Typical examples are people with a diagnosis of Attention Deficit Disorder (ADD), a neurological condition that causes a range of behavioral problems. This manifests in the person having difficulty with her persistence, maintaining focus on a task, staying organized, following instructions, planning actions, prioritizing subtasks, etc.

The battle for our attention

Living in our modern technological society is enough to overtax our attention even without ADD diagnosis. Our goal-driven behaviour, under the endogenous control of our plans and our best intentions, fights on a daily basis with a flood of exogenous, stimulus-driven factors. This is now massively amplified by social media whose business models are built on the monetization of our attention. This fight may be more and more difficult for each of us to win as the attractiveness of social media is continuously tuned and enhanced, through intense online A/B testing, to make grabbing and keeping our attention even more effective.

Besides social media, another major source of new challenges for our attention comes from the current workplace. There are several intertwining trends in today’s workplace that have more or less direct impact on our ability to manage our attentional resources.
(Meister & Willyerd, 2010; SHRM, 2013). Some of them are listed and briefly described below:

- **Workplace digitalization**
  Employees are relying more frequently on various digital technologies in their work – HR applications, email, instant messaging, project management tools, enterprise social media tools, virtual meeting platforms; these tools enable and/or amplify many of the other current workplace trends.

- **Workplace globalization**
  Many companies’ business processes are enabled by collaborative teamwork of people who are spread all over the globe.

- **Remote work**
  For various reasons, including the current COVID-19 pandemic, companies enable their employees to work outside of a traditional office environment wherever they please, be it from a local coworking space, from home, at a coffee shop, or even in a different country altogether.

- **Gig economy**
  Various digital platforms (e.g., AppJobs GAP, Catalant, Upwork, PeoplePerHour) make it possible for companies to easily connect with and integrate into their projects large volumes of freelancers, consultants, independent contractors and professionals and temporary contract workers, besides their regular workforce.

- **Flexible work schedules**
  Employees are demanding a more effective balance between their personal and professional lives, and companies are responding. To support their recruitment and retention efforts, employers have started to offer more flexible work arrangements, e.g. allowing them to work during hours that differ from the normal company start and stop time.

As a net result of all these trends, on average, we are forced to cooperate with more people, balance more tasks, switch between different working spheres, and work with more tools & applications than ever before. This represents a tough challenge for our attention’s ability to successfully manage the allocation of our limited cognitive resources to competing information-processing demands generated by these new workplace conditions.

**Attention exhaustion**

These days it is very easy to get overwhelmed and exhausted by a continuous and never-ending stream of emails, instant messages, SMS, notifications, phone calls or virtual meetings. In combination with ASAP expectations and FOMO (fear of missing out) phenomenon, this flood of electronic communication can generate relatively intense negative feelings of stress, frustration and/or anxiety.

In a 2012 study, McKinsey found that the average knowledge worker spends more than 60% of the workweek on electronic communications and internet searches, and nearly 30% of the time falls solely on reading and handling e-mail (Chui, Manyika, Bughin, Dobbs, Roxburgh, Sarrazin, Sands, & Westergren, 2012). For a clearer illustration of the imminent risk of attention overload caused by workplace communication and collaboration, see the Graph 1 below that shows distribution of collaboration events (meetings, emails, Slack messages) across one typical working week of Jan Řežáb, CEO of Time is Ltd².
Graph 1: Distribution of collaboration events (emails, meetings, and Slack messages) across one typical working week of Jan Řežáb, CEO of Time is Ltd., in March 2020. The horizontal axis represents day hours (in 24-hour clock format) when individual events have happened. The size of individual bubbles represents an estimate of how time-consuming the event was. The vertical axis in the panels for individual weekdays does not represent any specific information (it just makes space for displaying individual events). Note: The publication of the visualization and the data behind it was approved by the owner of the data, i.e., by Jan Řežáb himself.

Such workplace arrangements fragments our time (Adamczyk & Bailey, 2004; Czerwinski, Horvitz, & Wilhite, 2004; Gonzáles & Mark, 2004; Iqbal & Horvitz, 2007). It does not leave us much space for experiencing flow (Csikszentmihalyi, 1990) and engaging in deep work, i.e., in “activities performed in a state of distraction-free concentration that push one’s cognitive capabilities to their limits” (Newport, 2016). Every interruption reduces a person’s focus, and it takes some time for concentration to return back to optimum. According to the research from Mark, Gudith and Klocke (2008), it can take 23 minutes to fully focus again after some distraction (see Graph 2 for a depiction of how Time is Ltd. calculates this). The cost of increased connectivity is likely the crippling of reasoning ability, poor decision-making, and recurring mistakes at work (Wilson, 2010; Mark, Gudith, & Klocke, 2008).
Given these conditions, it is no surprise that we are actively trying to protect, maintain and ideally also increase our scarce attentional resources, both at the individual and organisational level.

**What should I personally do to stay productive in the midst of these distractions?**

For the future success of our efforts to bring any significant changes and improvements into our lives, it is essential to start by admitting that there is a real problem to be resolved. Then we must figure out what is the nature and scope of that problem. From this awareness grows not only a motivation to make change happen but a way to determine the steps necessary to make it to the finish line. Fortunately, today there are plenty of applications that make this first step easier for us. These applications enable you to analyse how much time you have spent with your digital tools and gadgets, and informs you of the types of activities you have conducted there. Examples of such time tracking applications for cell-phones and computers are Screen Time and RescueTime, respectively. Both produce simple dashboards and/or reports that give a quick overview of one’s typical behavior in an online environment.
Fig. 2: Screen Time application that helps its user to track and manage their activity on their cell-phones.

Fig. 3: RescueTime application that helps both individuals and teams monitor and better manage their time spent in an online environment.

These time tracking applications are important also for another step on the way towards the desired outcome: increased focus and productivity. **They continuously monitor one’s progress and provide feedback on the effectiveness of a selected system of personal productivity.** But before one can evaluate such a system, it has to be defined. For our own good, the infosphere is today full of reasonable and evidence-based tips and guides about how to increase our ability to focus on our work and how to become more productive.
As an example, let’s look at a few tips for rules & practices for better attention management taken from Dřímalka’s (2020) book HOT - How to succeed in the digital world:

- Turn off notifications in all your applications.
- Plan ahead in your calendar sufficiently large time slots for important tasks and deep work.
- Solve similar types of tasks in batches.
- Set automatic bi-daily reminders about your productivity and work on your priorities.
- Use applications for blocking selected activities on your computer and/or phone.
- Uninstall distracting applications.
- Put all sources of distraction out of your reach, sight and earshot.
- Automatise simple rules and regular processes related to your work (e.g., sorting emails, regular team meetings, recurring presentation preparation, etc.), so that they become routine and do not require much thought. This frees your attention for more important and complex tasks (think of how automastising your driving can free your attention for conversation during car rides).
- Record important things in a simple application, don’t carry them around in your head.
- Act/react in line with your priorities (use, for example, the well-known Eisenhower Matrix that classifies tasks into four categories based on their respective importance and urgency).
- Don’t forget that your attention needs time for regeneration: high quality sleep, regular breaks during the working day (e.g., using the Pomodoro Technique) and an appropriate level of physical activity.

Even when respecting all of these (and many other reasonable) rules, you can only go so far. If the majority of your colleagues behave in a way that is in direct conflict with your own good digital habits, these measures on your personal productivity would be relatively weak. It is not dissimilar to today’s situation with anti-COVID-19 measures. Restrictions are implemented in countries all over the world – wearing masks, keeping sufficient distance and washing hands – but they are only effective when a sufficiently large proportion of the population complies. This brings us to the following question.

**What can companies do to support employees’ ability to focus on their work?**

The answer to the question posed in the headline is, unsurprisingly, very similar to the one when asking about options one has at the individual level. Besides selecting the appropriate digital communication and collaboration tools, it is crucial for a team or organization to make an agreement and come to a consensus regarding how they plan to use selected digital tools. The focus needs to be on keeping all of these tools’ benefits, but at the same time mitigate their major drawbacks.

Such rules will be always specific to the types of digital tools in use and to the needs of their users, which is determined mainly by the nature of the work to be done but also to some degree by generational and personal peculiarities of individual users (Venter, 2016). It is possible, however, to identify some more general rules. All teams and organizations have
some overlapping needs when it comes to communication and collaboration, e.g., efficiency, task relevance, traceability, non-intrusiveness, long-term sustainability, etc. Let’s borrow some examples of these rules from Dřímalka (2020) and Řežáb (2020):

- Determine official digital communication and collaboration tools within the team or organization (fewer options = less time deliberating between available channels).
- Reduce the length of online/offline meetings (for example, shortening 1 hour long meetings to 40 minutes).
- Slack messages should be primarily posted in public channels – issues discussed elsewhere (private channels/direct messages) can lead to a loss of transparency and insight, doubling work and limiting circulation of ideas.
- Use Slack threads to enhance readability and ensure that people aren’t disrupted by irrelevant discussion.
- Use emoticons as a tool for collecting quick feedback and confirmation that one has read the message.
- Do not use emails for instant messaging – it should not be expected that the recipients automatically respond ASAP.
- Emails should be short, brief and well organized.
- Emails should be copied only to those people for whom the email is intended or for whom it is important.
- If a call does not take more than 5–10 minutes, it is not necessary to plan it ahead in the calendar.
- Information should be in one place, so people can access it at any time, without having to search for them or ask their colleagues.
- Communication should take place on specific projects or tasks (this, too, makes people less overwhelmed, communication more transparent and more traceable).
- Working overtime should be the exception, not the rule.

When such rules are set, it is important to play according to them. Similarly as in the case of individual people, even for whole teams and organizations it is important to track progress and collect feedback on how the team or organization is doing in its efforts to make communication and collaboration smoother and more enjoyable. It is reflected in a well-known adage, “You can manage and improve only what you measure”. In accordance with this saying, we need a measurement tool that provides us with information that could be used as an important “source of truth” in ongoing discussions about how the current team agreement works, and how to improve it.

Strict rules and standards of data privacy are necessary when it comes to data analysis at a team/organizational level. People’s communication and collaboration behavior across platforms should not be examined individually. Specifically, one should remove any sensitive information from the very beginning of the data processing pipeline, and generate all insights on aggregated data (i.e., not at the level of identifiable individuals). For more details about this important topic see the Data privacy at Time is Ltd. blog post from Ondřej Kuchta (2020), VP Product at Time is Ltd.
Case study: Using passive data from communication collaboration platforms to support teams’ digital tools usage

Let’s demonstrate this type of analysis using the collaboration analytics platform from Time is Ltd., which provides useful insights while maintaining data on an aggregated level.

First, we may want to identify where in the company employees may struggle finding time for focused work, due to digital exhaustion. Using the dashboard shown in Fig. 4, we can quickly spot potentially struggling teams (behind the displayed summary statistics are focus rate estimations for individual employees, based on the mathematical model of the impact of interruptions on attention; see also Graph 2).

Fig. 4: Screenshot of the dashboard from the Time is Ltd.’s analytics platform showing typical focus rate by individual teams and over time.

To make this task easier for us, we may rely on Alert View, which automatically detects significant changes, both favorable and detrimental (see Fig. 5 for its screenshot). Teams are classified here into three categories based on their focus rate data and trendlines:

- Praise (for those moving in the right direction)
- Watch (for those on shaky ground)
- Get Inspired (for the best performing teams)

It is evident from Sociomap that the Management and Marketing teams are struggling with their focus time, while the Sales team managed to make improvements in this area. Ideally, we would like to have this data complemented with some “softer” data, for example from employee pulse surveys, to provide us with information about the subjective perspective of the users on their digital experience.

3 Sociomapping is an ONA (Organizational Network Analysis) tool that provides a specific graphical interface for interpreting team relationships based on the number of interactions (Bahbouh, 2004, 2012; Höschl, 2006; Rozehnalová, 2008).
Besides localizing spots of potential problems with employees’ focus time, it is also crucial to get closer to the root causes of these problems. Here we get to the specific rules that are part of the team agreement, regarding how digital communication and collaboration tools should be used so as not to interfere with employee productivity. Let’s use some of the rules mentioned in the previous section, and demonstrate on a few Time is Ltd. analysis dashboards how analysis of passive data can help reveal a team’s success (or failure) in implementing them:

**Rule # 1:** Determining official digital communication and collaboration tools.

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**Fig. 5:** Screenshot of the dashboard from the Time is Ltd.’s analytics platform showing Alert View that detects significant short-term and long-term changes in focus rate.

**Fig. 6:** Screenshot of the dashboard from the Time is Ltd.’s analytics platform showing how much individual teams use various digital tools for virtual meetings.
Rule # 2: Reducing length of online/offline meetings.

Fig. 7: Screenshot of the dashboard from the Time is Ltd.’s analytics platform showing distribution of lengths of conducted meetings.

Rule # 3: Posting Slack messages in public channels.

Fig. 8: Screenshot of the dashboard from the Time is Ltd.’s analytics platform showing in which channels employees post their Slack messages.
Rule # 4: Using emails as a tool for instant messaging and not expecting responses ASAP.

Fig. 9: Screenshot of the dashboard from the Time is Ltd.’s analytics platform showing typical response time for internally sent emails.

Rule # 5: Working overtime should be the exception, not the rule.

Fig. 10: Screenshot of the dashboard from the Time is Ltd.’s analytics platform showing the proportion of Slack messages that were written outside the working hours (defined here as a time window between 8AM and 6PM) and during weekends.
These are just a few examples of the insights derived from aggregated passive data coming from communication and collaboration platforms. All of these help to establish functional team agreements, supporting both individual and organizational productivity.

So what should we do now?

It starts with YOU

It would be naive to think that we could resolve problems with digital exhaustion and distraction simply by completely cutting ourselves off from the digital world. The digital world will remain throughout our lifetimes – and will likely integrate further into our day-to-day. So, each of us has to find out for themselves how to coexist with it.

We can hope that over time the digital world will adapt to our psychological peculiarities for our good. Given that incentives behind related business and political decisions do not, however, have to be in line with our personal good, it would be overly optimistic to bet on this. The responsibility lies with each of us – we, as individuals, teams or organizations, have to define our own rules to regulate the way we operate in the digital world. We should exploit all its opportunities and mitigate as many of its drawbacks as possible. Fortunately, we are not alone in this. Digital productivity experts, many useful digital tools, and productivity applications can all be our allies in this quest.

Improve focus time of your company.

Contact us.

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