The Brain Science of Success:

The Cognitive Pitfalls that Hinder your Achievements: Attention

Part 1: The Reward Processing System

The psychology of success points to a key mechanism in the human brain called the reward-processing system. It's the main mechanism that drives your decision-making and it's the why behind your attempts to improve in your relationships or have breakthroughs in your career or business.

Daniel Salzman, head of investigations at Salzman's Lab, Columbia University, explains the centrality of rewards in decision-making as such:

"Your decisions are typically really about some aspect of rewards, whether immediate or delayed into the distant future, and researchers are in a position where they can actually

study how neurons are representing rewards, and how information on rewards may be integrated over time in order to reach a decision."

From the smallest achievements such as a softer feeling to the bigger ones such as more net profit, rewards are the main reasons we continue making decisions. In other words, rewards and achievements fuel us to continue living.

But what stops us from having our achievements?

Part 2: Our Attention Capacity

In this article, I'll discuss the importance of our attention capacity and how its malfunctioning can stop us from achieving our goals.

You will see how our attention works in the digital age, and how its malfunctioning can harm our productivity. I will then make some suggestions on how to take control of our attention and maximize our productivity.

In general, the problem with our attention is that there are either too many salient issues that clutter our attention, or the wrong salient issues fill our attention capacity.

Taking control of our attention and what salient issues it's spent on is the secret sauce to more achievements.

To do so we need to know two things: first human attention is a limited resource and only a few salient things grab and hold our attention for a while; and second our attention is typically allocated to the things we are not aware of and do not benefit from.

We are living in the digital age and this means that we have instant access to more information. This is good as far as we're concerned with researching and finding more information on a topic. However, it seems that the information overload makes us creatures of everything-packed-and-ready-for-consumption. In other words, our attention

is so much cluttered with other's ideas that we don't care for critical thinking and coming up with our own ideas.

This point is well illustrated by Carl Newport in his best-selling book, *Deep Work*. He emphasizes the necessity of dedicating a good amount of your time on deep work, "professional activities performed in a state of distraction-free concentration that push your cognitive capabilities to their limit, . . . [the efforts that] . . . create new value, improve your skill, and are hard to replicate." He then proposes myriad methods for cutting distractions and focusing on deep work. Here are some of his main suggestions:

- **Monastic philosophy of deep work scheduling:** focus on one particular goal and minimize all the distractions throughout the day.

- **Bimodal philosophy of deep work:** schedule a part of your day to deeply focus on a particular task while leaving the rest of your day free.

- **Rhythmic philosophy of deep work:** create some simple habits of deep working and stick to them.

- **Journalistic Philosophy of Deep Work:** insert deep work in the day whenever possible, just like the journalists who should be able to shift their writing tone whenever needed.

- Collaborate with like-minded people to boost creativity and motivation.

- Minimize your social media presence.

- Schedule and plan your day

Daniel Levitin in *The Organized Mind* points to the same problem when reminding us of the concept of "information overload." He believes we've created more information in the last

10 years than in all of human history before that and as a result processing this information has become more difficult than ever.

He says that there are only three or four things that could occupy our minds at a time, and when you go further than this cognitive load, "you begin to exercise poorer judgment, you lose track of things and you lose your focus". A Forbes blog post summarizes Levitin's suggestions to deal with information overload as follows:

- **Do a brain dump:** write down what you have in your mind and prioritize them.
- **Follow the two-minute rule:** designate an hour in the day to do all of the tasks that take 2 minutes or less.
- Clump the similar tasks together and do them at once.

- Don't multitask.

- Limit the distractions of email.

- "Eat the frog" and do the most difficult task first thing in the morning.

- Spend only as much time on decisions, tasks and activities as they are worth.

- Take breaks.

- **Let yourself daydream:** This resets your mind and lets you think while you're fresh.

- **Push down authority:** preserve your autonomy in the workplace and do your job right. That's because managers and decision-makers might be under the influence of information overload while you can focus on a particular task.

Part 3: Availability Effect

Talking about attention, we're always reminded of the concept of salience and salient elements that grab and hold our attention. One of the features of the salient elements in the environment is their availability, the fact that we see them all the time or are reminded of them in any way.

The forefront of our working memory is always cluttered with the available elements or items. The ads you see all the time on the TV or other devices or their songs that keep playing in your mind are in the forefront of your memory due to their availability effect.

You might also have a particular judgment about a phenomenon because of the prevalent news that is always drilled in your mind.

For example due to the availability effect, you might think that violence has dramatically soared in the modern societies. The availability of the news of violence in social media makes you neglect the fact that long ago, before the advent of modern societies, the typical punishment for almost any crime was death. Just imagine how many people got killed everyday for the pettiest crimes they did. And this is just the share of the authorities. The slightest cause for disagreement between two big families could start a big war resulting in the death of many. The violence of the modern societies is actually a fraction of the violence in the pre-modern societies.

The Availability Effect and Productivity:

The availability effect has also an influential role in our productivity. Our decision concerning the tasks that should be done or how/when to do them depends on what available issues are in the forefront of our working memory.

For example you might decide to put off updating your blog for a while and instead catch up on your thesis simply because your classmates have recently started to share their progress, making you feel you're losing a great deal on your thesis.

Or you might think that your working hours are not productive enough simply because you're reading different bloggers claiming that their greatest posts have only got a few

hours to complete, while you spend days researching, writing, and editing your articles. You might easily get disappointed to see how other bloggers claim to do in fewer hour what you do in longer hours.

Availability effect could make you take the wrong turns and make unfit decisions.

Daniel Kahneman in *Thinking Fast and Slow* proposes that there are two ways human mind makes decisions: one is a "deliberate problem solving" that demands more cognitive efforts, and the other is "an automatic operation" that happens almost instantly without much effort.

Kahneman then explains that the "availability heuristics" is placed in the second category. In other words people would typically make decisions based on the ease with which they conjure a memory. If people can make a decision based on the available information in the forefront of their memories, why should they take the more tiresome way and go deeper in their memory or search for complementary cases to make a decision?

You know the answer: because the decisions made the easy way are normally unfit solutions while spending some time to make more objective decisions is more fruitful.

The reason why we start many of our tasks and leave them unfinished is that instead of planning and starting a task based on the true evidence, we jump to conclusion that we're making the right decision based on the available information around us.

For example, once there is a new trend around, such as using standing desks with their unbeatable benefits, we think that it's the best option and then decide to get ourselves into the trend without thinking of the consequences. But after a while we get to see the reality of our decision and get disappointed.

The best way to avoid this is to consider options beyond the available ones. Before making a decision, try to think of the real reasons behind it. If you realized that your logic is restrained to what you've seen in the media or your personal experience, be more cautious.

Instead of choosing an option simply because it seems to be right, make a list of all the possible options and their pros and cons. By studying all the available options, you'll have a more objective perspective on the topic, and can finally make a decision that works.

Final Words:

The Brain Science of Success: the Cognitive Pitfalls that Hinder your Achievements is supposed to be a series of articles on the cognitive pitfalls that stop us from achieving more and more. This is a project I've always wanted to do but was not sure of its practicality or the readers' feedback.

The first article was on the importance of our attention in achieving our goals. The main problem with our attention is that it is always cluttered with unimportant issues due to the information overload and the prevalence of salient issues around us. The tips offered here

to tackle the problem are all based on the research done in the field of psychology of attention.

And finally, let me ask you a little favor:

Because this ebook is the first in the series, I need to know your feedback on it. Should I continue the project (which means spending a lot of time on researching and formulating ideas)? Is there any problem with the text and its readability? Do you have any ideas to be added to the text? Just head to the ebook's page and leave a comment, or drop a line through the contact form. I'll appreciate your response.

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