

Deep Work

Cal Newport, 2016, 296pp

A Summary

Introduction

Deep work is the ability to focus without distraction on a cognitively-demanding task. Deep work will help you do more in less time and help you master hard skills fast. It leads to work of lasting value and is hard to replicate. It is akin to a superpower in today's demanding competitive economy.

Leading scientific and artistic minds have consistently used deep work to produce output at speed and quality. In contrast, today's knowledge workers, their attention fragmented with easy access to *network tools* (term Cal Newport uses to refer to social media and communication tools such as email, IM etc) are unable to do deep work. They end up doing *shallow work* - non-cognitively demanding tasks, usually of logistical nature, often performed while distracted. Such work does not create any new value and is easy to replicate.

Neal Stephenson: "If I organize my life in such a way that I get lots of long, consecutive, uninterrupted time-chunks, I can write novels. But as those chunks get separated and fragmented, my productivity as a novelist drops spectacularly. What replaces it? Instead of a novel that will be around for a long time, and that will, with luck, be read by many people, there is a bunch of e-mail messages that I have sent out to individual persons." <http://www.nealstephenson.com/why-i-am-a-bad-correspondent.html>

The ability to do deep work is becoming rare, at exactly the same time, it is becoming valuable in the economy. Those few who cultivate this skill and make it the core of their working life will thrive.

Part I: The Idea

Chapter 1: Deep work is valuable

The world of intelligent machines is upon us, and as the gap between human abilities and machine abilities narrow, we will increasingly find ourselves at risk of becoming irrelevant.

Three groups of people are poised to succeed in this new world

- Those who are good at working with intelligent machines.
- Superstar performers in any field.
- Owners of capital, or those with access to it.

To become a member of one of the first two groups, you need two core abilities

1. The ability to quickly master hard things.
2. The ability to produce at an elite level, in terms of both quality and speed

The two core abilities above depend on your ability to perform deep work.

Learning and deep work

To learn requires intense concentration, and requires what performance psychology professor K Anders Ericsson refers to as deliberate practice, where you practice with continuous feedback for a sustained period in the absence of distraction, to gain expert skills.

Deliberate practice works because, by practicing a particular skill repeatedly, you are forcing a particular circuit or neural pathway to fire continuously, thereby leading to the triggering of cells called oligodendrocytes to wrap layers of myelin - a layer of fatty tissue that grows around neurons, acting like an insulator allowing the cells to fire faster and cleaner - thus cementing the skill. To be great at something is to be well-myelinated!

You need to focus intensely while avoiding distraction because this is the only way to isolate the relevant neural circuit enough to trigger useful myelination. In contrast, if you try to master a new skill with distractions available (say with an open facebook feed), you are firing too many circuits simultaneously and haphazardly to isolate the group of neurons you want to actually strengthen.

Producing and deep work

The *batching* of hard but important intellectual work into long, uninterrupted stretches is key to high productivity. The law of productivity may thus be stated as High-quality work produced = (Time spent) X (Intensity of focus).

The reason why batching matters is because of *attention residue*. When you switch from some Task A to another Task B, your attention doesn't immediately follow - a residue of your attention remains stuck thinking about the original task. People experiencing attention residue after switching tasks are likely to demonstrate poor performance on the next task. This explains why the intensity of focus is critical - by working on a single task hard for a long time without switching, we can minimize the negative impact of attention residue, thus maximizing performance on this one single task.

The phenomenon of attention residue also explains why multi-tasking is detrimental to productivity.

Thus, to produce at your peak level, you need to work for extended periods with full concentration on a single task free from distraction. Effectively, the type of work that optimizes your performance is deep work.

Should CEOs do deep work? A good CEO is a hard-to-automate decision engine - they have built up unique perspective and experience which they leverage to continuously add value or weigh on inputs they are presented through the day - inputs such as meetings, emails, site visits etc. To ask a CEO to spend four hours thinking deeply about a problem is a waste of what makes him / her valuable. Better for the CEO to hire three subordinates to think through the problem and then get them to bring their solutions to him for a final decision.

Thus deep work is not the only skill valuable in our economy, and it is possible to do well without fostering this ability, but the niches where this is advisable are increasingly rare. [*Sajith - Every CEO kickstarts or runs certainly key transformational projects, which is the legacy he or she wants to leave behind. This in some ways is the equivalent of deep work for the CEO.*]

Chapter 2: Deep work is rare

Three business trends make it hard for us to go deep. These are open plan offices, the rise of instant messaging (including apps like slack which encourage real-time collaboration) and the push to maintain a social media presence (especially twitter). The benefits of serendipity, real-time collaboration and enhanced exposure that these trends are meant to drive are in reality dwarfed by the decline in being able to learn fast and producing a large volume of work of high quality (which going deep enables).

In addition to the above trends, we also find certain distracting behaviours embraced in the workplace. One such being the culture of connectivity where we are expected to respond to emails and messages quickly and at all times. Another distracting behaviour is using frequently occurring meetings as a way to organize your day and drive focus on projects. Instead of advance planning and thinking through what is required, we let the impending meetings each week force us to take some action or the other on a given project and provide a visible sign of progress. Deep work (thinking and planning in advance) is hard; shallow work (fixing meetings and letting them schedule your day) is far easier.

As knowledge work makes more complex demands of the workforce, it becomes harder to measure the value of an individual's efforts. In the absence of such measures, in order for knowledge workers to demonstrate value, busyness - doing lots of stuff in a visible manner - has become a proxy for productivity.

Almost always we celebrate any advances in technology as a positive. If it is high-tech, we begin to assume that it is good. Neil Postman, the late communication theorist, referred to this as a *technopoly*. Deep work is at a disadvantage in a technopoly because it builds on values like quality, craftsmanship and mastery, that are decidedly old-fashioned and non-technological.

It is difficult to demonstrate the negative impact of our busyness, and other related behaviours, such as excessive use of network tools or using meetings to schedule the

day. Newport refers to this as a *metrics black hole*. In the absence of any metrics, and given how easy it is to persist with these behaviours, we tend to stick with it at the expense of deep work.

All of the above make deep work increasingly rare in modern life, even as we can see from the earlier chapter that it is becoming increasingly valuable to succeed in modern life. This represents a classic market mismatch. If you cultivate this skill, you will thrive professionally.

Chapter 3: Deep work is meaningful

Unlike craftsmen who tackle professional challenges that are easy to define, but hard to execute, in the case of knowledge workers it can be hard to define exactly what a knowledge worker does and how it differs from another. It all seems to boil down to emails and powerpoint. Further craftsmen can derive considerable meaning and satisfaction from their manual (deep) work. Can knowledge workers obtain as much satisfaction from their work as craftsmen?

Yes, says Newport. Knowledge workers can draw as much satisfaction from their deep work in the information economy, as their craftsmen counterparts do with their craftwork. Newport explores three arguments to support this claim.

Neurological argument

Newport suggests a theory propounded by Winifred Gallagher to support the neurological argument. The more focussed we are on a deep endeavour, the less we notice smaller and less pleasant things that populate our lives. Our world is the outcome of what we pay attention to, and dedicating it to something profound and deep, will create a world rich in meaning and importance. The more time we spend in a state of depth dedicated to important ideas and work, the greater the meaning and satisfaction you will associate with your working life.

Psychological argument

Newport introduces the idea of *flow*, conceptualized by psychologist Mihail Csikszentmihalyi. Flow is a mental state where a person's body or mind is stretched to its limits in a voluntary effort to accomplish something hard and worthwhile. Csikszentmihalyi found that the more the number of flow experiences in a subject's week, the higher was his life satisfaction and happiness. This was contrary to the then widely-held notion that relaxation makes people happy. Deep work - where you are so focused that you lose yourself in an activity - is well-suited to generate a flow state. And flow generates happiness.

Philosophical argument

Newport build on an argument introduced by philosophy professors Hubert Dreyfuss and Sean Kelly, who write about how modern work is increasingly absent meaning, whereas craftsmanship had a deep connect with it. Deep work, says Newport, with its similarities to craftwork can help extract meaning from your

profession, and imbue it with something sacred and purposeful, making your work a satisfying pursuit, and not a draining obligation.

Newport uses a quote by Winifred Gallagher, "I'll live the focused life, because it's the best kind there is." to sum up the argument of this chapter, and of Part I more broadly: a deep life is a good life, any way you look at it.

Part II: The RULES

In this section of the book, Newport lays down four rules that can help us do sustained deep work. Rule #1 details how we can bridge the gap between a world which makes deep work difficult (with its open plan offices, pressure to use network tools, and a culture of shallow work) and your own aspiration to do deep work. How does one transform deep work from an aspiration into a regular and significant part of your daily schedule? How does one become a disciple of depth in a shallow world?

Rules #2 through #4 will then help you get the most out of this deep work habit by presenting, among other things, strategies for training your concentration ability and fighting back distractions.

Rule #1: Work Deeply

We can be expected to be bombarded throughout the day with the desire to do anything but work deeply. Given that we have a finite amount of willpower that gets depleted as we use it, and an environment and culture that makes deep work difficult, we have to rely on a key motivating principle. We have to add smart routines and rituals to our working life that are designed to minimize the amount of our limited willpower necessary to transition into and maintain unbroken concentration.

With this principle in mind, Newport lays down strategies that introduce rituals and routines to enable us to do deep work on a sustained basis.

Decide your depth philosophy

There are broadly four approaches to systematically carving out time for deep work. (Ad hoc approaches to carving out time don't work because of limited willpower and attention residue.) Be careful to choose an approach that fits your specific circumstance.

	A	B	C	D
1	Approaches	How it works	Famous Exemplars	Who is it for?
2	Monastic approach	Cut yourself totally all the time while you focus on your work. No shallow obligations	Donald Knuth, Neal Stephenson.	Ideal for novelists, artists whose work is discrete (chunk size) and

		including no email access.		individualized.
3	Bimodal approach	Some periods of year (or month or week) allocated to deep work, and the rest for meeting shallow / work obligations.	Carl Jung, Adam Grant.	Poeple who cannot cut themselves off completely from shallow obligations - such as academics, working professionals.
4	Rhythmic approach	Fixed time for deep work through the day (such as 5-7am) or at specific times during the week (calendaring). Maintain the chain as long as you can.		Ideal for working professionals. Fitness enthusiasts, writers can also use chain approach.
5	Journalistic approach	Take time out whenever you find a free slot. You can chose to do this on a moment-to-moment basis or like Newport does, plan it for a week in advance.	Walter Isaacson	Anyone really.

Rely on rituals

Use rituals and set routines to minimize friction in your transition to depth. Such rituals include

- Where you'll work and how long - it will be ideal if you can carve out a location just for deep work (also stressed in *The Organized Mind* by Daniel Levitin). Scheduling a specific time of the day in advance also works by taking away the need to use willpower.
- How you'll work once you start to work - these include dos and donts - no internet use etc., and even metrics by which you will track progress - number of words per hour, visual indicators of progress (crosses on calendars) etc.
- How you'll support your work - coffee, music, do not disturb board etc; such that you can sustain depth without interruption.

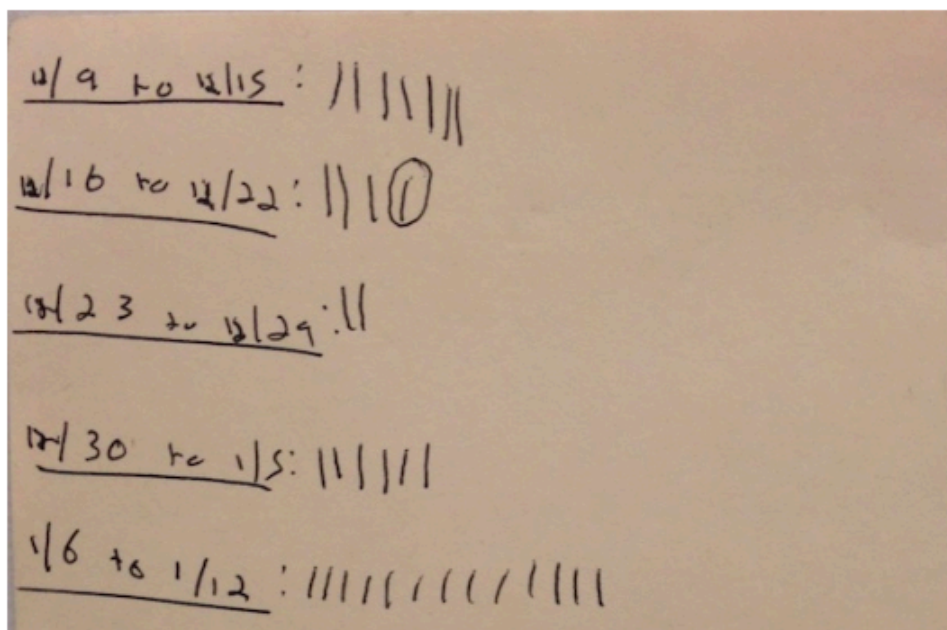
Use grand gestures

These are tactics such as checking into a hotel to write a book - by making a radical change to your working environment, coupled with a significant investment of time and money, you signal to your brain the importance of this task. This reduces your brain's tendency to procrastinate and delivers an injection of energy. Bill Gates' Think Weeks is also a good example.

Use 4DX principles to execute

Newport cites from a book *The 4 Disciplines of Execution* which describes 4 disciplines (abbreviated 4DX) to help companies successfully implement high-level strategies. He applies this framework to ensuring that he is able to execute the deep work strategy. The 4DX principles are

- Focus on the wildly important: have a small number of really critical goals. This simplicity will help focus the organization's energy at a sufficient intensity to ignite real results. Similarly, individuals should focus their deep work hours on a small number of ambitious outcomes. Have a specific goal that will return tangible and substantial professional benefits - this will in turn motivate you to persist with deep work.
- Act on lead measures: lead measures help us track the new behaviours that will drive success on the lag measures. In contrast lag measures describe the thing that you are ultimately trying to improve. Lag measures come too late to change your behaviour. e.g., If lag measures are customer satisfaction scores, then giving free samples to customers is a lead measure. This lead measure can be easily acted upon. For individuals seeking to do deep work, time spent is the most important lead measure, and quality of output generated is the best lag measure. Focus on upping your time spent in the deep work state.
- Keep a compelling scoreboard: this will help everyone in the team align around the progress, and how we are doing on the lead measures. For an individual, the scoreboard should be a physical artifact that displays his or her performance on the current deep work hour count. Newport's tracker of hours in deep work is below - circles indicate key milestone such as solving a proof or completing a paper, corresponding to the hour it was achieved in.



- Create a cadence of accountability: The final step to help maintain a focus on the lead measures is to put in place a “rhythm of regular and frequent meetings of any team that owns a wildly important goal”. In this meeting the scoreboard is confronted, specific actions are agreed, previous actions and results are reviewed etc. This can be even a few minutes, but it must be regular for its effect to be felt. It is in this discipline that “execution really happens”

Plan for downtime

Regular and substantial freedom from professional obligations gives you access to downtime, and thus opportunity for unconscious deliberation. This gives your conscious brain a chance to rest, and allows the unstructured decision making process to take over and provide insights to complex problems and issues, which is particularly suited to such an approach. Thus, paradoxically, greater downtime makes your deep work hours more productive.

In addition, downtime also helps you recharge the energy needed to work deeply. Walking through nature is particularly useful, as it relies on *undirected attention*. To concentrate requires *directed attention*. This resource is finite: exhaust it and you will have *attention fatigue*, making it harder for you to concentrate.

Your capacity for deep work (number of hours daily) is limited. Deliberate practice, as propounded by K Anders Ericsson, states a limit of around 4 hours a day (for experts). This is likely the limit for deep work too. If you plan your schedule well, you will end up doing most of your deep work during your workday, hitting the limits of the capacity for deep work. Use a shutdown ritual (may take 15-30 mins) which will include a look at what was done, what wasn't, and either executing actions for the incomplete ones then and there, or capturing a plan for the same, such that it will be revisited the next day.

Only the confidence that you are done with work until the next day can convince your brain that it can downshift to the level where it can begin to recharge for the next day to follow, overcoming the Zeigarnik effect which describes the ability of incomplete tasks to dominate our attention. Hence the shutdown ritual is critical to signal to your brain that you are done with all incomplete tasks till tomorrow.

Evening downtime is particularly critical. Maintain an end to your workday. Once you get home, take a complete break from work - no emails, ideally no calls even. Else, if you keep focussing on work when home, you are robbing your directed attention centres of the uninterrupted rest they need for restoration. Even if these work dashes consume a small amount of time, they prevent you from reaching the levels of relaxation in which attention restoration can occur. By trying to squeeze a little more work out of your evenings, you reduce your effectiveness the next day enough that you end up getting less done than if you had respected a shutdown.

Rule #2: Embrace boredom

The ability to concentrate intensely is a skill that must be trained. It is akin to a mental muscle and you need to continuously practice to keep it well-conditioned.

Much the same way that athletes must take care of their bodies outside of their training sessions, you'll struggle to achieve the deepest levels of concentration if you spend the rest of your time fleeing the slightest hint of boredom. Do not feel the urge to look at your smartphone every few minutes you are in a line waiting. To simply wait and be bored has become a novel experience in modern life, but from the perspective of concentration training, it is simply invaluable.

If you give in to checking your smartphone every time you are bored, your brain will be so rewired for on-demand distraction, that it will be incapable of real work. Hence along with training to improve your ability to concentrate intensely, train to overcome your desire for distraction.

Some of the strategies to achieve the above twin goals are

- Schedule a break from focus: schedule in advance when you will use the internet. It is not the use of a distracting service that reduces your brain's ability to focus, but it is instead the constant switching from low-stimuli/high-value to high-stimuli/low-value activities at the slightest hint of boredom or cognitive challenge, that weakens the mental muscles responsible for organizing the many sources vying for your attention. By segregating internet use and thereby distraction, you are minimizing the number of times you give in to distraction, and by doing so, you let your attention-selecting muscles strengthen.
 - Make sure that you do not use internet outside of these blocks. Even if you need some information from the internet to do some offline work, wait till you reach internet time. Else you will never develop the discipline required to regulate the use. Schedule internet usage at home as well as at work. You can keep the internet usage block as long as you like - such as on a weekend evening - but once you are offline, stick to it.
 - It is not eliminating distracting behaviours that is the goal - it is eliminating the ability of distracting behaviours to hijack your attention that is the goal.
- Use Roosevelt dashes - inspired by Teddy Roosevelt's brief but intense study periods - to get high priority deep tasks (which require a lot of deep work) done. Roosevelt dashes leverage artificial (abbreviated) deadlines to help you systematically increase the level you can regularly achieve, providing, in some sense, interval training for the attention centres of your brain. Additionally within the intensely constrained period of the dash, there is no scope for distraction.
- Meditate productively - take a period in which you are occupied physically but not mentally - walking, jogging etc - focus your attention on a single well-

defined professional problem. This could be anything - a presentation to be made, an article to be written, a business strategy that needs to be honed etc. As in mindfulness meditation, you must bring your attention back to the problem at hand when it wanders or stalls.

- Plan for at least two to three sessions every week. You can even schedule this during your workday if you are mulling over a professional problem. You may require a dozen or so sessions before it yields results.
- Define what you are seeking to answer from the session. Be clear what is it that you are seeking. If it is re a article that you are righting, then do you want to use the session to build an opening para or argument, or use it to arrive at the key points that you are seeking to elaborate on in the article. This will help you structure your thinking, and help you arrive at concrete results from the session.

Rule #3: Quit social media

Identify the core factors that determine success and happiness in your professional and personal life. Adopt a network tool such as facebook or twitter, only if its positive impacts on these factors substantially outweighs its negative impacts.

Newport illustrates this by asking if Michael Lewis should adopt twitter. Lewis' goal is to craft well-written narrative-driven stories that change the way we see understand and see the world. The key activities that support his goal are researching patiently & deeply, and writing carefully & with purpose. There might be more but these are the two key ones which contribute substantially towards that goal.

Would using twitter have a positive impact on the two activities, or detract from it?. Very likely the latter. Similarly, we should look at the core activities that matter for us to achieve our goals - what are those 20% activities that help us achieve 80% of our goals - and analyse if a specific network tool aids or impedes those 20% activities?

To find out if one really needs these services, you could try a variant of Ryan Nicodemus' packing party - which is to stop using social media for thirty days. Subsequently after these thirty days, ask yourself - 1) would the last thirty days would have been better if you had started using these services? 2) did people care that i wasn't using these services? If the answer to both these questions is no, then quit them. If both are a yes, then return to these services. If only one is a yes, it is up to you to consider and take a decision.

This rule picks on social media specifically because of all the different network tools, it can be particularly devastating on our quest to work deeper. They are addictive and extremely distracting, and are inimical to our efforts to build and strengthen our powers of concentration. They are particularly dangerous for people such as

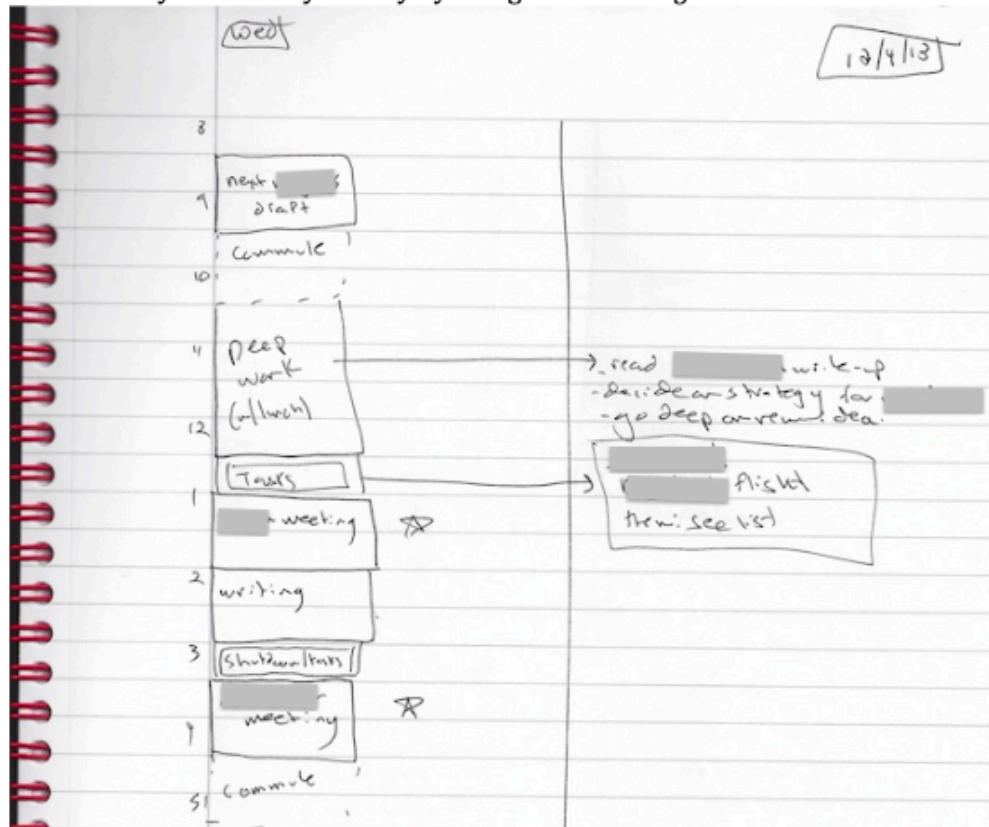
writers and computer programmers whose livelihood depends considerably on deep work.

Newport also recommends that we desist from spending time on sites such as BuzzFeed, Reddit, HuffPo, Business Insider etc., to passively fill our leisure time. These are enemies of depth, and impediments to building focus, in much the same way as social media. Rather, he says, focus on structured hobbies or a carefully planned reading list to fill your leisure time. Figure out in advance what you are going to do with your evenings and weekends before they begin.

If you give your mind something meaningful to do throughout all your waking hours, you'll end the day more fulfilled and begin the next one more relaxed, than if you instead allow your mind to bathe for hours in semiconscious and unstructured web surfing.

Rule #4: Drain the shallows

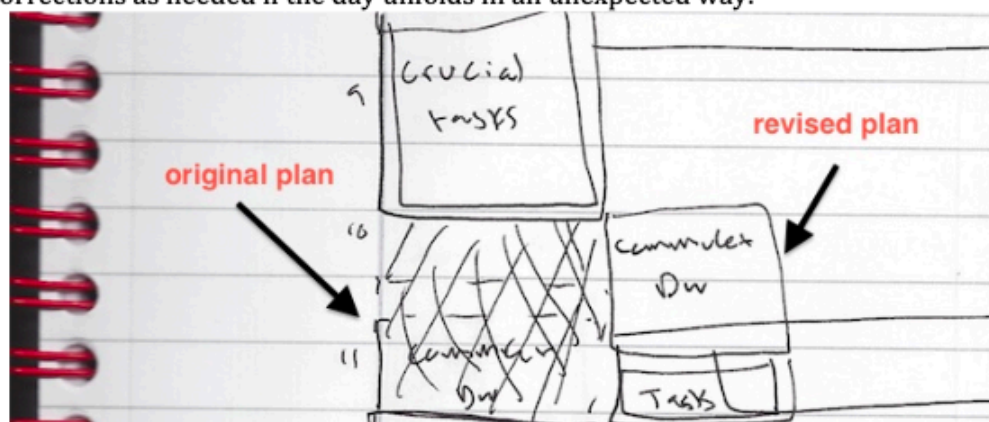
Schedule every minute of your day by using *time blocking*.



The image above shows my plan for a random Wednesday earlier this month. This page is divided into two columns. In the left column, I dedicated two lines to each hour of the day and then divided that time into blocks labeled with specific assignments. In the right column, I add explanatory notes for these blocks where needed.

A key advantage of the above scheduling system is that you can batch tasks together into a specific synergistic time block - such as emailing, printing, ticket booking etc. When you are done scheduling, every minute should be part of a block. You have given every minute of your workday a job.

Notice that I leave some extra room next to my time blocks. This allows me to make corrections as needed if the day unfolds in an unexpected way.



Don't despair if you have to rewrite your schedule multiple times. Your goal is not so much to stick to a specific schedule as it is to maintain a thoughtful say in what you're doing with your schedule going forward, even if these decisions are reworked again and again as the day unfolds.

If you are not sure about the time taken to finish an activity, then use an overflow block (an additional block) that has a split use - one for the overflowing job, second, for if you finish the overflowing job, one where you can do something non-urgent (like calling someone, reading an article etc). Feel free to use lots of overflow blocks if your schedule is typically unpredictable.

Newport also introduces the concept of *fixed-schedule productivity* - not working beyond a certain time, in his case 5.30pm, and then working backwards to find productivity strategies that allow him to satisfy this constraint.

Because time is limited each day, you are forced to cull a substantial amount of shallow work. Secondly, the limits to your time necessitate careful thinking about

your organizational habits, leading to greater value versus longer but less organized schedules.

Fixed-schedule productivity is thus a meta-habit that is simple to adopt but broad in its impact. If you have to choose just one behaviour that reorients your focus towards the deep, this one should be high on your list of possibilities.

In addition, Newport lists some hacks to eliminating shallow work.

- Be hard to reach. Don't display your email publicly.
- Make people who send you email do more work (using sender filters). In return do more work when you send emails to close the loop faster - if an email requests a meeting, and you want to meet, then list all the times and dates when you can meet to ensure one can be picked instead of pinging back and forth. This will mean an extra 2-3 mins per mail, but will save you 1-2 mins on every ping back and forth.
- Don't respond to an email request if
 - it doesn't fit with your schedule or interests
 - is ambiguous or makes it hard for you to generate a reasonable response
 - nothing bad will happen if you don't respond, and nothing really good will happen if you did

In the context of the last, some people will get upset with your non-responsiveness, but as Tim Ferris says "Develop the habit of letting small bad things happen. If you don't, you will never find time for the life-changing big things." By sending fewer emails and ignoring ones that aren't easy to process, you will significantly weaken the grip your inbox maintains over your time and attention.

CONCLUSION

A commitment to deep work is a pragmatic recognition that the ability to concentrate is a skill that gets valuable things done.

The deep life is not for everybody. It requires hard work and drastic changes to your habits. For many there is artificial comfort in the busyness of rapid email messaging and social media posturing, while the deep life demands that you leave many of the stuff behind. There is also an uneasiness that surrounds any effort to produce the best things you are capable of producing, as this forces you to confront the possibility that your best is not that good.

But if you are willing to sidestep these comforts and fears, and strive to deploy your mind to its fullest capacity to create things that matter, then you will discover as others have before you, that depth generates a life rich with productivity and meaning.