Introduction

You are probably just beginning a long period of isolation. I spent 2017 largely alone in my family home preparing for and recovering from a surgery to fix a serious illness. I thought the lessons I learnt might be useful to us all now.

My illness was a wonderful teacher, memorialised by a 10 inch abdominal scar from emergency surgery of which I am fond. But the most lasting change came from learning what happens when you have ‘free time’, and how to use it.

What I found is that ‘free time’ vanishes like a pile of sand gathered through open, welcoming hands. You only realise it is gone when a few grains are left. That horrible feeling of waste creeps. Twitter consumes.

Some things are learnt fast: cabin fever is real for many - get out consciously near the start of everyday (lockdown permitting), we seem to have an instinct for nature. Without it, days seem to not really begin (that 3pm feeling of still being half-in-bed). Other things take longer to learn, and they center around the curse of too much freedom and our need to deliberately impose structure upon ourselves. Da Vinci’s words are wise: “Art breathes from constraint and suffocates from freedom.”. We may have dreams of how we will use our new found isolated freedom, but, if you are like me, your will will be captured by clickbait and the time will vanish

I suggest four simple weapons for the bunker:
1. Work via long-periods of deliberate isolation, not scattered, interruptible time (deep work).
2. Create targets at different time scales, to provide milestones to move toward (distant stars).
3. Create a clear work/personal divide and ‘mindset changes’ via routines (organising the paintbrushes).
4. Develop a non-work skill such as meditation to provide balance, an escape from work, and fulfillment.

Much of this is ‘common sense’, but I at least found it useful to have it spelt out. The simplest advice is often the best.....

Create a virtual bunker: deep work

‘Evil is whatever distracts’
Franz Kafka

One of the best pieces of advice I received came from computing pioneer Alan Kay, who said a crucial change in his life came in his twenties, when he began to prioritise the quality of effort invested over the quality of the product made. The latter bred perfectionism, the former excellence. He said it took ten years to fully internalise the shift in mindset.

We must structure our bunker time for maximum quality of effort. At home we will be surrounded by distraction in a way we may not be at work. The divide between ‘personal’ and ‘work’ is unclear, and so we shift between the two modes both incompletely and briefly.

The Deep Work phrase comes from Cal Newport’s book of the same name. I have read the book three times. Deep work is a sustained period of isolated concentration, without distracting influences. Newport argues that we have lost the ability to do this, instead spending our time consumed by the ‘shallows’ of email etc, and our productivity has quietly collapsed because of it.

Newport tells of famous (and non-famous) achievements made by deliberately cutting oneself off from the world for a specified period of time: no internet, no email, no phone calls, no social contact. Historically, Carl Jung worked in a tower for almost the entire

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1 I almost called this ‘monastery’, and it may be a better name. But bunker somehow seems more apt for 2020.
day, cut off from distraction. Mark Twain had an isolated hut for writing, and would be summoned for dinner by a horn. Today distraction is far worse than then.

Distraction, even fleeting, prevents **flow** and creates attentional residue, in which your performance on the task you are trying to complete is substantially damaged. The ‘mental space’ occupied by checking email, waiting for email, quick conversations etc can be severe.  

_A 2005 University of London study reported in the BBC_ claimed the effects of checking email - ‘infomania’ - were twice as bad on IQ as smoking a joint (strength unspecified). We only feel this distraction when it is removed - I remember the clarity of reading a book in a tent on holiday before the days of smart phones. Nowadays, reading large chunks of a book in one sitting is increasingly rare, and so we ‘take in’ only snapshots. We check our iphone for its more reliable yet often (usually) vacuous dopamine rush.

**The essence of deep work is that an hour of continuous undistracted work is worth 3-4 hours of distracted, fragmented time, or of eight 15 minute blocks of undistracted work. It gets you ‘in the zone’, keeps your mind on task.**

Crucial to deep work are two key things:

1. *Set aside deliberate blocks of time, say 2 hours, to work on something.*
2. *Cut off all contact with the outside world during this time.*

This may sound simple (it is), but when did you last do it? Set your day to be composed of around 1-4 blocks of deep work, depending upon length (when I met Newport he suggested that sustained intense deep work of more than 4 hours per day is challenging, which matches GH Hardy’s advice in ‘A mathematicians apology’). When distraction comes, say you are in ‘deep work’ - a polite f-off to ‘whatever distracts’.

In my experience, this is far more important and useful than expensive productivity apps. It also acts as a ‘free organisational tool’, forcing you to structure time and prioritise by picking your ‘deep work targets’ (see below).

To get a better sense of this, see [this video which is an excellent summary](https://www.youtube.com/watch?v=...) of deep work by a youtube blogger who has interviewed Newport.

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2 From Wikipedia - “In positive psychology, a flow state, also known colloquially as being in the zone, is the mental state in which a person performing an activity is fully immersed in a feeling of energized focus, full involvement, and enjoyment in the process of the activity.”

3 Poetically, google doc’s grammar checker wants to turn this into ‘destruction’
Something I have found very useful for ‘deep work’ is to play ‘coffee shop sounds’ - it's not music, it's as if a recording had been made in a coffee shop. Example 1 and an example 2. It's on spotify and apple music. It helps to create a sense of isolation. There is something suggestive about silence, the mind tries to fill the void - the great mathematician von Neumann needed noise in order to work, many of us are similar at least in the narrow area of needing some unstructured noise. I try to balance periods of silence with periods of the coffee shop noise, it creates a sense of varying surroundings.

Two useful apps - freedom & self control. Freedom shuts the internet off, self control blocks specific sites. It will educate you about how quickly you reach for the twitter dopamine hit.

Create stars of varying distance: ‘compass-like’ targets at different timescales

“He whose gaze is fixed on a distant star will not falter.” Leonardo Da Vinci

It’s easy to lose sight of the distant star indoors, especially for the infinite labyrinth of the internet at our single-click-away disposal. Deep work without direction will lead to piles of semi-finished things. Time becomes amorphous without targets at different timescales.

The UK satirical website The Daily Mash has an entertaining piece regarding our coronacrisis, titled “Quaint old concept of ‘days of the week' remembered”:

“BRITAIN has cast its mind back to the old times when the days of the week were individually named and distinct from one another.

People across the UK are lost in nostalgia for the quaint tradition of splitting time into seven different ‘days’ rather than one big long socially distanced, self-isolated, locked-down unchanging present.”

This sensation only gets worse without active countermeasures. What I found in my bunker year was that without clear weekly targets, weeks blurred into one another, and nothing ever got ‘done’ - books were left half read, essays begun and half forgotten. I did many things, but never finished them: I was a slave to momentary wills. Weekly targets give you clear ‘weekends’.
Targets must be used to create a sense of timescale, a sense of time as a resource to be used. Targets act at different timescales. I was fortunate enough to be educated in the Oxford tutorial system. A ‘hidden routine’ in this system is the weekly essay, which gives you a target and a ‘focus’. The weekly essay gave you your ‘local purpose’, the ‘stepping stone’ to the exams and, more importantly, to being a scientist.

Without this weekly essay as a PhD student, I found myself wandering. I lacked the productivity of my undergraduate stays, spending much time dithering. I only realised what I was missing in the final year of my thesis: clear weekly targets, very few in number. This is a difficult thing to do as cleanly as when a mentor sets them, but it's a skill I have since consciously worked on. In essence, this is about being mindful of the goals you have, rendering them explicit, rather than simply aiming for vague notions of productivity.

The Oxford term system also provides a mental scaffolding of time - I can still remember what I was doing each term of Oxford, and I used to be able to remember individuals week (3rd week), because they were placed within the structure of 3 terms with holidays (ie, Monday of 3rd week Michaelmas Term, 2010). Each term is 8 weeks, with long vacations, meaning you have a total of 6 divisions to the year. It is likely we will be bunkered for a year on-and-off - divide that time up. I follow the oxford system now using an Oxford diary. These structures evolved over centuries and have hidden wisdom.

Likewise, without clear daily targets, it is easy to find yourself at lunch having done nothing but ‘deep work’ on whatever came up in the morning’s emails. Setting targets is a simple way of prioritising. For this, ZenHabit's MIT’s is very useful: Zen Habits on MITs - identify 1-3 of the most important tasks for the day and structure your time around it. Today for me, for example, it is 1) to complete this blog post which was half finished, 2) to do some additional research for a rewriting of my book's introduction, and 3) to finish the second draft of a blog post outlining a vision of different ways of funding science. Each is expected to take a couple hours. Note that having a long conversation with someone often is an MIT - today I tried to sneak a call in and ended up with so much to follow up on that I had to schedule a deep work session on it. Beware of death by zoom, meetings can create the appearance of progress.

Your work time therefore becomes a hierarchy of targets.

**Pick daily, weekly and termly targets, and remind yourself of them daily.** I put the weekly targets in my diary so I see them everyday. Think in the future - where do I need
to be? A nice phrase is ‘a year is shorter than you think, 10 years is longer than you think’ - I read it on twitter some time ago and can’t find the source, but it is not original to me.

Perhaps vacation times in the calendar should be less strict and target-based - perhaps this is the time for exploration? I have not actively experimented with this yet but intend to do so.

A different approach with similar intent was suggested by another orion member and is in the footnote⁴.

The painter tidies his paintbrushes: habits, routines, and the structuring of time

States of mind⁵ are something that we find ourselves at the mercy of in our isolation, as it is easy to get ‘stuck’ in a mindset without external cues to nudge us out of it, or even point out that we are in a maladaptive mindset. We assume what 16th century zen master Takuan Soho calls right-mindedness⁶, that our mind is free to deal with what it needs to deal with, rather than stopping in distraction. Yet our state of mind depends greatly on surroundings, and we usually only realise we have gone astray some time after it happens.

Monasteries use chanting, rituals, daily schedules to keep the monastic mind focussed upon its higher calling. They also use the physical environment, a topic for a later blog.

⁴ “The way I create the weekly cycle is a bit different. I do this by having Sunday as my "day-off" where I only do the things I don’t do in any other days. In practice, this means that I do my weekly best of twitter newsletter; clean up my notes; clean up opened chrome tabs; do a project orthogonal to whatever i'm working on, etc.; On monday, I have a weekly review with my wife which helps me to start the week and to understand my priorities for the week, while effectively “resetting” the quality of the week, so if the last week didn’t go well, I know that I can always start from a blank state.

During the day I work in 3 hour blocks. I used to have 5 minute breaks every 30 minutes and a 35 minute break every 3 hours but I'm experimenting now.

The system I have had for the last few weeks that I’m enjoying a lot is: a 30 minute break every 3 hours (at 9am, 12pm, 3pm...) and no breaks inside these 3 hours. I turned on my notifications and everything that needs to be answered immediately gets answered immediately and everything else waits until the break.

I find that given that I formally don’t have short breaks, the real number of focused minutes per 30 minutes of nominal work is between 15 and 30, with an average of perhaps 20.”

⁵ So understudied at least in circuits neuroscience.

⁶ The Unfettered Mind: Writings from a Zen Master to a Master Swordsman
Our work environment, for better or worse, sculpts this also. You may find, as I did, that the sudden removal of the cruxes and stimuli of our work mind reveal the very existence of those cruxes and stimuli. Freedom reveals the benefits of constraints. The trip to work in the morning tunes the mind for what's to come. Seeing the boss reminds you of the importance of deadlines. Travelling home at night helps 'switch off' - somewhat reduced by the curse of chronic connectivity.

In the eastern arts, the frailty of will is recognised and deliberately honed. In Zen in the art of Archery, Herrigel tells of a master of painting preparing for and executing a painting in front of pupils:

“A painter seats himself before his pupils. He examines his brush and slowly makes it ready for use, carefully rubs ink, straightens the long strip of paper that lies before him on the mat, and finally, after lapsing for a while into profound concentration, in which he sits like one inviolable, he produces with rapid, absolutely sure strokes a picture which, capable of no further correction and needing none, serves the class as a model. A flower master begins the lesson by cautiously untying the bast which holds together the flowers and sprays of blossom, and laying it to one side carefully rolled up.

........But why doesn't the teacher allow these preliminaries, unavoidable though they are, to be done by an experienced pupil? Does it lend wings to his visionary and plastic powers if he rubs the ink himself, if he unties the bast so elaborately instead of cutting it and carelessly throwing it away? And what impels him to repeat this process at every single lesson, and, with the same remorseless insistence, to make his pupils copy it without the least alteration? He sticks to this traditional custom because he knows from experience that the preparations for working put him simultaneously in the right frame of mind for creating. The meditative repose in which he performs them gives him that vital loosening and equability of all his powers, that collectedness and presence of mind, without which no right work can be done.”

I can distill this down very simply in two parts: first, have strict work hours, and non-work hours. Second, when you are to work, try to have a consistent place for it, and a routine to start/end the work. For me, it is to shut everything else down, remove all distractions for the task at hand, and set a timer. Then I think for several minutes about what is to come, which acts as a ‘work meditation’ akin to the organisation of the painter’s studio Herrigel describes.

I also recommend spending 25 minutes in the morning on a planning/tidying session. For example, today I took out my small notebook, reviewed my projects page of my notebook, and identified three priorities. I then simply thought about those priorities, visualising how I would do them, what I would need etc. When it came to do them, my mind was 'ready'.
I will write more on this soon.

**Deliberate rest is an important concept**, relating to the divide between personal and work. Being on an iPhone looking on Instagram is not rest, it is a reward seeking behaviour and stimulating. I strongly recommend setting strict ‘work hours’ and ‘personal hours’. Experiment in the benefits of cutting yourself off in the evenings, deep-work style.

**Develop a skill: meditation, drawing etc**

The single most important thing I did in my year of isolation, except for having a huge operation and eating lots of food to recover, was to begin meditating. I will write about this separately, but as part of my recovery I began exploring Zen Buddhism. The meditation that I focussed upon is Hakuin’s Nanso meditation, about which much of my book is centered, as well as more standard ‘clear the mind’ meditation. An exceptional piece on this comes from Dogen, effectively the father of the Soto school of Zen: *recommending zazen to all people*. It is worth reading even just as poetry.

> The real way circulates everywhere; how could it require practice or enlightenment?
> The essential teaching is fully available; how could effort be necessary?
> Furthermore, the entire mirror is free of dust; why take steps to polish it?
> Nothing is separate from this very place; why journey away?

More generally, I recommend picking a non-work skill to develop. It might be learning to play chess better, it might be learning to draw. Had I chosen a different skill, it would be learning to draw, which changes the way you see the world by making you study it closely. The book *Drawing with the right side of the brain* by Betty Edwards has been excellent for this (and an extremely interesting experience for a former neuroscientist). If a skill isn’t something you like, set a target of reading so many books, or spending 2 hours reading books a day. Otherwise ‘non-work’ time may get consumed by the internet.

Always err on learning too few things, but aim high in those skills. I was going to learn to draw, master yoga, meditate, read lots of books, ... Pick a core thing, and don’t overburden yourself. I ended up developing a moderate proficiency at meditation, the ability to sit in lotus pose, and a knowledge of original Zen scriptures in my chosen area. Maybe it’s important to explore a few things for a month, but after that I strongly recommend picking **one thing**.
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