

## 4 Bring your own Boundaries

Who will be great, must be able to limit himself.

Goethe

I mostly grew up in west Texas, in a town called Abilene, which is big enough that you might have heard it in country songs, where it rhymes with names like Eileen or Darlene, or phrases like “treat you mean” or “I ever seen,” but it’s still small enough that when I was in high school Microsoft Word would autocorrect its name to “abalone,” which refers to a species of marine snail with a shell that’s tough and cloddish on the outside, but slippery and rainbow-like within, as though someone had tried to flush out the little being inside with gasoline.

In my senior year of high school in Abilene I signed up for calculus, a class that required me to have a graphing calculator – one of those bigger models, with a dot-matrix display that lets you visualize the implications of your equations when they get too complex to imagine in your head, or to work out easily on paper. So I acquired a Texas Instruments TI-83, the latest model, which had come out just a couple of years earlier. An older model would have sufficed, but the TI-83 had native support for something called assembly programming languages, which meant you could load programs onto it that did *anything*, not just graph equations. This meant that practically, it wasn’t just a “calculator” anymore; it was a full-fledged, “general-purpose” computer. One of my classmates found a program somewhere for the game *Tetris*, and soon enough I had that loaded onto my calculator too. When class got boring, I’d sometimes load the *Tetris* program and play it to pass the time. Before long, I found myself realizing I’d opened the game and started playing it automatically, without consciously deciding to do so. It was just so convenient,

having *fun* waiting a few key-clicks away – and it was usually far more rewarding than listening to the teacher drone on about integrals and differentials. That is to say, it was more *immediately* rewarding – right then, in that moment.

Soon, I started falling behind in class. Distracted by calculator-*Tetris*, my grades began to slide. This wasn't anyone else's fault, of course; *I* had loaded the program onto my calculator, and *I* was the one who kept opening and playing the game. But I didn't want to tell anyone about the problem because I was embarrassed and ashamed to have let myself get derailed by so trivial a thing. I kept putting off my day of reckoning with this distraction, and its effects continued to mount. I carried my constant knowledge of the problem with me, as well as my failure to look it in the face, which made me turn to the quick pleasures of its immediate rewards even more. I hated how impulsive and weak of will I had become, but I kept turning again to the very cause of it to find a consolation that I knew was fleeting and illusory. The bricks kept falling quicker. I kept misstacking them. The pile kept getting higher. The music kept getting faster.

The “game over” moment finally came on a school trip in a nearby town, where I had been scheduled to participate in a journalism competition. At the last minute, word had come through from my school that I was no longer eligible to compete because I had failed my last calculus test. I had never failed a test in my life.

If you wanted to train all of society to be as impulsive and weak-willed as possible, how would you do it? One way would be to invent an impulsivity training device – let's call it an iTrainer – that delivers an endless supply of informational rewards on demand. You'd want to make it small enough to fit in a pocket or purse so people could carry it anywhere they went. The informational rewards it would pipe into their attentional world could be anything, from cute cat photos to tidbits of news that outrage you (because outrage can, after all, be a reward too). To boost its effectiveness, you could endow the iTrainer with rich systems of intelligence and automation so it could adapt to

users' behaviors, contexts, and individual quirks in order to get them to spend as much time and attention with it as possible.

So let's say you build the iTrainer and distribute it gradually into society. At first, people's willpower would probably be pretty strong and resistant. The iTrainer might also cause some awkward social situations, at least until enough people had adopted it that it was widely accepted, and not seen as weird. But if everyone were to keep using it over several years, you'd probably start seeing it work pretty well. Now, the iTrainer might make people's lives harder to live, of course; it would no doubt get in the way of them pursuing their desired tasks and goals. Even though you created it, you probably wouldn't let your kids use one. But from the point of view of *your* design goals – in other words, making the world more impulsive and weak-willed – it would likely be a roaring success.

Then, what if you wanted to take things even further? What if you wanted to make everyone even *more* distracted, angry, cynical – and even unsure of what, or how, to think? What if you wanted to troll everyone's minds? You'd probably create an engine, a set of economic incentives, that would make it profitable for other people to produce and deliver these rewards – and, where possible, you'd make these the *only* incentives for doing so. You don't want just any rewards to get delivered – you want people to receive rewards that speak to their impulsive selves, rewards that are the best at punching the right buttons in their brains. For good measure, you could also centralize the ownership of this design as much as possible.

If you'd done all this ten years ago, right about now you'd probably be seeing some interesting results. You'd probably see nine out of ten people never leaving home without their iTrainer.<sup>1</sup> Almost half its users would say they couldn't even *live* without their device.<sup>2</sup> You'd probably see them using it to access most of the information they consume, across every context of life, from politics to education to celebrity gossip and beyond. You'd probably find they were using the iTrainer hundreds of times per day, spending a third of their

waking lives engaged with it, and it would probably be the first and last thing they engaged with every day.<sup>3</sup>

If you wanted to train society to be as weak-willed and impulsive as possible, you could do a whole lot worse than this. In any event, after unleashing the iTrainer on the world, it would be absurd to claim that it hadn't produced significant changes in the thoughts, behaviors, and habits of its users. After all, everyone would have been part of a rigorous impulsivity training program for many years! What's more, this program would have effectively done an end run around many of our other societal systems; it would have opened a door directly onto our attentional capacities, and become a lens through which society sees the world. It would, of course, be a major undertaking to try to understand the full story about what effects this project had had in people's lives – not only as individuals, but also for society as a whole. It would certainly have had major implications for the way we had been collectively discussing and deciding questions of great importance. And it would certainly have given us, as did previous forms of media, political candidates that were made in its image.

Of course, the iTrainer project would never come anywhere close to passing a research ethics review. Launching such a project of societal reshaping, and letting it run unchecked, would clearly be utterly outrageous. So it's a good thing this is all just a thought experiment.

The new challenges we face in the Age of Attention are, on both individual and collective levels, challenges of self-regulation. Having *some* limits is inevitable in human life. In fact, limits are necessary if we are to have any freedom at all. As the American philosopher Harry Frankfurt puts it: "What has no boundaries has no shape."<sup>4</sup> Reason, relationships, racetracks, rules of games, sunglasses, walls of buildings, lines on a page: our lives are full of useful constraints to which we freely submit so that we can achieve otherwise unachievable ends. "To be driven by our appetites alone is slavery," wrote Rousseau in

*The Social Contract*, “while to obey a law that we have imposed on ourselves is freedom” (p. 59). Even our old friend Diogenes, lover of unrestrained living that he was, said, “for the conduct of life we need right reason or a halter.”<sup>5</sup> When we apply restraints upon ourselves that channel our activities toward our higher goals – some call these restraints “commitment devices” – we reach heights that would have been otherwise unreachable. If Odysseus had not instructed his sailors to tie him to the mast (and to plug up their own ears with wax), he would never have heard the sirens’ song and lived to tell about it.

For most of human history, when you were born you inherited an off-the-shelf package of religious and cultural constraints. This was a kind of library of limits that was embedded in your social and physical environment. These limits performed certain self-regulatory tasks for you so you didn’t have to take them on yourself. The packages included habits, practices, rituals, social conventions, moral codes, and a myriad of other constraints that had typically evolved over many centuries, if not millennia, to reliably guide – or shall we say *design* – our lives in the direction of particular values, and to help us give attention to the things that matter most.

In the twentieth century the rise of secularism and modernism in the West occasioned the collapse – if not the jettisoning – of many of these off-the-shelf packages of constraints in the cause of the liberation of the individual. In many cases, this rejection occurred on the basis of philosophical or cosmological disagreements with the old packages. This has, of course, had many great benefits. Yet by rejecting entire packages of constraint, we’ve also rejected those constraints that *were* actually useful for our purposes. “The left’s project of liberation,” writes the American philosopher Matthew Crawford, “led us to dismantle inherited cultural jigs that once imposed a certain coherence (for better and worse) on individual lives. This created a vacuum of cultural authority that has been filled, opportunistically, with attentional landscapes that get installed by whatever ‘choice architect’ brings the most energy to the task – usually because it sees the profit potential.” The German philosopher Peter Sloterdijk, in his

book *You Must Change Your Life*, has called for a reclamation of this particular aspect of religion – its habits and practices – which he calls “anthropotechnics.”<sup>6</sup>

When you dismantle existing boundaries in your environment, it frees you from their limitations, but it requires you to bring your *own* boundaries where you didn’t have to before. Sometimes, taking on this additional self-regulatory burden is totally worth it. Other times, though, the cost is too high. According to the so-called “ego-depletion” hypothesis, our self-control, our willpower, is a finite resource.<sup>7</sup> So when the self-regulatory cost of bringing your own boundaries is high enough, it takes away willpower that could have been spent on something else.

This increase in self-regulatory burden may pose a unique challenge for those living in poverty, who, research suggests are more likely to begin from a place of willpower depletion relative to everyone else. This is largely due to the many decisions and trade-offs they must make on a day-to-day basis that those who don’t live in poverty don’t have to make.<sup>8</sup> Diogenes once said that “disabled” ought to mean “poor,” and to the extent that living in poverty means one’s willpower can be more easily depleted, he was more right than he knew.<sup>9</sup> But the wider implication here is that these problems of self-regulation in the face of information abundance aren’t just “first-world problems.” They carry large implications for the societal goals of justice and equality. If the first “digital divide” disenfranchised those who couldn’t access information, today’s digital divide disenfranchises those who can’t pay attention.<sup>10</sup>

It’s against this cultural backdrop, of having to bring our own boundaries where we didn’t before, that digital technologies have posed these new challenges of self-regulation. Like the iTrainer in my thought experiment, digital technologies have transformed our experiential world into a never-ending flow of potential informational rewards. They’ve become the playing field on which everything now competes for our attention. Similar to economic abundance, “if these rewards arrive faster than the disciplines of prudence can form, then

self-control will *decline* with affluence: the affluent (with everyone else) will become less prudent."<sup>11</sup> In a sense, information abundance requires us to invert our understanding of what "information technologies" do: Rather than overcoming barriers in the world, they increasingly exist to help us put barriers in place. The headphone manufacturer Bose now sells a product called Hearphones that allows the user to block out all sounds in their environment except the ones coming from their desired source – to focus on a conversation in a loud room, for example. The product's website reads: "Focus on the voices you want to hear – and filter out the noises you don't – so you can comfortably hear every word. From now on, how you hear is up to you."<sup>12</sup> We could also read this tagline as a fitting description of the new challenges in the Age of Attention as a whole.

The increasing rate of technological change further amplifies these challenges of attention and self-regulation. Historically, new forms of media took years, if not generations, to be adopted, analyzed, and adapted to. Today, however, new technologies can arrive on the scene and rapidly scale to millions of users in the course of months or even days. The constant stream of new products this unleashes – along with the ongoing optimization of features within products already in use – can result in a situation in which users are in a constant state of learning and adaptation to new interaction dynamics, familiar enough with their technologies to operate them, but never so fully in control that they can prevent the technologies from operating on *them* in unexpected or undesirable ways. This keeps us living on what I sometimes call a "treadmill of incompetence."

In his essay "Reflections on Progress", Aldous Huxley writes, "however powerful and well trained the surface will is, it is not a match for circumstances."<sup>13</sup> Indeed, one of the major lessons of the past several decades of psychology research has been the power of people's environments in shaping their thoughts and behaviors. On one level, these effects may be temporary, such as changes in one's mood. As Nikola Tesla observed, "One may feel a sudden wave of sadness and rake his brain for an explanation when he might have

noticed that it was caused by a cloud cutting off the rays of the sun.”<sup>14</sup> Yet our environments can also have deep, long-lasting influences on our underlying capacities – even how autonomous (or nonautonomous) we are able to be. The Oxford philosopher Neil Levy writes in his book *Neuroethics*, “Autonomy is *developmentally* dependent upon the environment: we become autonomous individuals, able to control our behavior in the light of our values, only if the environment in which we grow up is suitably structured to reward self-control.”<sup>15</sup>

Yet in the absence of environments that reward self-control or provide effective commitment devices, we’re left to our *own* devices – and given our inherent scarcity of attention, the resulting cognitive overload often makes bringing our own boundaries extremely challenging, if not prohibitive. Limiting our lives in the right way was already hard enough, but in the Age of Attention we encounter even stronger headwinds. Of course, digital technology is uniquely poised to help us deal with these new challenges. And if technology exists to solve problems in our lives, it *ought* to help us surmount these challenges.

Unfortunately, far from helping us mitigate these challenges of self-regulation, our technologies have largely been amplifying them. Rather than helping us to more effectively stack and clear the *Tetris* bricks in our lives, they’ve been making the blocks fall faster than we ever imagined they could.

#### NOTES

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