THE MAN WHO COULDN'T STOP

OCD, AND THE TRUE STORY OF A LIFE LOST IN THOUGHT

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Watch your thoughts, for they become words.
Watch your words, for they become actions.
Watch your actions, for they become habits.
Watch your habits, for they become character.
Watch your character, for it becomes your destiny.

Unknown

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ONE

Our siege mentality

An Ethiopian schoolgirl called Bira once ate a wall of her house. She didn't want to, but she found that to eat the wall was the only way to stop her thinking about it. She didn't want to think about the wall either, in fact she was greatly disturbed by the ideas and images of it that dominated her mind. The only way she could make the thoughts of the wall go away, and calm the anxiety they caused, was to follow a strange and unbearably strong urge to eat it. So she did; day after day, for year after year. By the time she was 17 years old she had eaten eight square metres of the wall – more than half a tonne of mud bricks.

Bira lived in the capital city, Addis Ababa. Her father died when she was young and she grew up with her mother. Bira had eaten mud every day for as long as she could remember, since she was a little girl. It became worse as a teenager, when she started to take it only from the wall of her home. As she did so, the images and thoughts came more vividly and more often, which only intensified her need to eat to find relief. The mud made Bira constipated

and gave her severe stomach aches. Ethiopian traditional healers tried to treat her with prayers and holy water and advised her simply to stop eating the mud. But she couldn't. She couldn't stop her thoughts about the wall, and so she couldn't stop eating it.

One day, Bira couldn't cope any more. Her distended stomach throbbed with pain and her abdomen was tight with cramp. Her throat was scratched raw from the straw in the bricks and her body riddled with parasites from the soil. In tears, she walked to her local hospital. At the time, Ethiopia had eight psychiatrists for a nation of 70 million people. Bira was fortunate. She managed to see one of them. She told him that she needed help. She knew her thoughts were wrong, but she knew she couldn't stop them alone.

An average person can have four thousand thoughts a day, and not all of them are useful or rational. Mental flotsam comes in many forms. There are the irrelevant words, phrases, names and images that flash unprompted into our minds, often as we perform some mundane task. There are earworms: tunes that wedge themselves in our heads, more prosaically called stuck-song syndrome. And there are negative thoughts – 'I cannot do this,' 'I must quit' – the sworn enemy of sports psychologists everywhere.

Then there are the very strange thoughts: those occasional, random and unprompted ideas that seem to emerge from nowhere and stun because they are vile, immoral, disgusting, sickening – and just plain weird. The seductive

question, 'what if'? What if I was to jump in front of that bus? What if I was to punch that woman?

These kinds of thoughts are more common than most people realize. Ask around. A friend of mine has a need to check the toilet bowl for rats before he sits. Another unplugs the iron and places it in an unusual place when he finishes with it, so he knows for certain the answer when his mind demands later: are you sure, really sure, that you turned it off? One tortured soul spent an evening unable to ignore the repetitive thought that he may have scrawled across an application form for his dream job the word cunt. Most people have these kinds of strange thoughts. Most shake them off. Some people don't.

When we cannot make our strange thoughts go away they can lead to misery and mental illness. The friends I mention above did not convert their strange thoughts in this way. But I did.

I turned mine into obsessive-compulsive disorder.

The day that the Brazilian racing driver Ayrton Senna died in a crash during a Grand Prix in Italy, I was stuck in the toilet of a Manchester swimming pool. The door was open but my thoughts blocked the way out.

It was May 1994. I was 22 and hungry. After swimming a few lengths of the pool, I lifted myself from the water and headed for the locker rooms. Down the steps – one, two, three – ouch! I had scraped the back of my heel down the sharp edge of the final step. It left a small graze, through which blood bulged into a blob that hung from my broken

skin. I transferred the drop to my finger and a second swelled to take its place. I pulled a paper towel from above the sink to press to my wet heel. The blood on my finger ran with the water as it dripped down my arm. My eyes, of course, followed the blood. And the anxiety, of course, rushed back, ahead even of the memory. My shoulders sagged. My stomach tightened. It had been four weeks since the incident at the bus stop, and, as much as I told myself that it no longer bothered me, I was lying.

I had pricked my finger on a screw that stuck out from the bus shelter's corrugated metal. It was a busy Saturday afternoon and there had been lots of people around. Any one of them, I thought, could easily have injured themselves in the way I had. What if one had been HIV-positive? They could have left infected blood on the screw, which then pierced my skin. That would put the virus into my bloodstream. Oh, I knew the official line was that transmission that way was impossible. The virus couldn't survive outside the body. But I also knew that, when pressed for long enough, those in the know would weaken that to virtually impossible. They couldn't be absolutely sure. In fact, several had admitted to me there was a theoretical risk.

Stood quietly in the toilets of the changing rooms, still dripping wet, my swimming goggles in one hand and the blood-stained paper towel in the other, I ran through the sequence of events at the bus stop once again. I told myself how there hadn't been any blood on the screw when I had checked it, or at least I didn't think there had been. Oh, why hadn't I made absolutely sure?

Someone else banged through the door into the swimming pool changing rooms. They whistled. I looked at my finger. Wait a minute. WHAT THE HELL HAD I DONE? I had put a paper towel on a fresh cut. OH JESUS CHRIST. There could have been anything on that paper towel. YOU STUPID BASTARD. I looked at the paper towel, now soggy. THERE IS BLOOD ON IT. Well, of course, it's my blood. HOW CAN YOU BE SURE? Someone with Aids and a bleeding hand could have touched it before me. OH JESUS. I threw it into the bin, pulled a second from the dispenser and inspected it. No blood. That helped, a little. No blood on the next one either. BUT THEY COULD HAVE DONE. I pulled the original paper towel back from the bin. It was bloody. IF THIS IS SOMEONE ELSE'S BLOOD THEN WHY ARE YOU PICKING IT UP? I quickly washed my hands. AND WHAT IF THEY BLED INTO THE SINK TOO? DON'T TOUCH YOUR FUCKING HEEL. DON'T TOUCH YOUR FUCKING HEEL. No chance of that. WHAT IF THAT ISN'T EVEN THE PAPER TOWEL YOU THREW IN THE BIN? It could be someone else's paper towel that I was handling, someone else's blood. I looked in the bin. I couldn't see any other paper towels with blood on them. WHAT ABOUT THAT ONE?

The whistling man was ready to swim. He came to the sink, grabbed a paper towel, blew his nose and threw it into the bin. I did the same. He looked at me. I smiled. He didn't. He walked away. I didn't. He finished his swim and left. I couldn't.

Cycling home later, I was pleased with the solution I

had found. I was getting somewhere! I heard the birds and felt the spring sunshine on my face. Well, of course I couldn't have caught Aids from scratching myself on the screw at the bus stop. That was ridiculous, I could see that now. I had nothing to worry about on that score. I pulled my swimming trunks from my bag and placed them on my bedroom radiator. I rummaged in the wardrobe for my winter gloves and put them on to unfold my swimming towel and carefully retrieve the damp and blood-stained paper towel wrapped inside. I placed it on the radiator next to the trunks. It would take about ten minutes, I guessed, before it would be dry enough to check properly. Then I reached back into the bag and found the other crumpled paper towels, the ones I had lifted from the bin, and laid those out on my desk. I would check those as well, check them properly (impossible in the changing rooms), and then surely that would be that. Then I could put all this behind me. Phew! I took off the gloves and turned on the TV. The Grand Prix was about to start.

Those are my strange thoughts. That is my obsessive-compulsive disorder. I obsess about ways that I could catch Aids. I compulsively check to make sure I haven't caught HIV and I steer my behaviour to make sure I don't catch it in future. I see HIV everywhere. It lurks on toothbrushes and towels, taps and telephones. I wipe cups and bottles, hate sharing drinks and cover every scrape and graze with multiple plasters. My compulsions can demand that after a scratch from a rusty nail or a piece of glass, I return to

wrap it in absorbent paper and check for drops of contaminated blood that may have been there. Dry skin between my toes can force me to walk on my heels through crowded locker rooms, in case of blood on the floor. I have checked train seats for syringes and toilet seats for just about everything.

As a journalist, I meet a lot of people and shake their hands. If I have a cut on my finger, or I notice that someone who I talk to has a bandage or a plaster over a wound, thoughts of the handshake and how to avoid it can start to crowd out everything else. My rational self knows that these fears are ridiculous. I know that I can't catch Aids in those situations. But still the thoughts and the anxiety come.

The psychiatrist who Bira saw in Addis Ababa told her she had obsessive-compulsive disorder (OCD) too. She had persistent thoughts that were inappropriate. She could not ignore or suppress these thoughts, which made her anxious. To reduce and prevent this anxiety she developed compulsive behaviour. The compulsions fuelled the obsessions. Together, the obsessions and compulsions took up so much time and caused such distress that they disrupted her life.

Most people have heard of OCD but there is much confusion about the condition. It's commonly seen as a behavioural quirk. In fact, OCD is a severe and crippling illness, and one defined as much by the mental torment of recurring strange thoughts as physical actions such as repeated handwashing. Bira was diagnosed with moderately-severe OCD. Yes, a girl who ate an entire wall of her house was thought

to have it only *moderately*-severe. There are plenty of people out there who have it worse. Bira spent about two hours a day thinking about the wall and eating mud. Yet, on average, OCD patients can waste up to six hours a day on their obsessions and four hours on their compulsions. A Brazilian man called Marcus had OCD that centred on obsessive thoughts about the shape of his eye-sockets, so much so that he was compelled to touch them constantly with his fingers. Marcus prodded himself blind.

It is hard to communicate obsession – severe, clinical obsession, a true monopoly of thought. Just as the human brain struggles to comprehend the magnitude of geological time, or the speed at which electronics can operate, or even the number of times a second the wings of a hummingbird can beat, so it can seem incredible that a single notion, a unique concept, can truly dominate someone's mind for days, weeks, months, years. Here is the best description I have.

Consider a personal computer, and the various windows and separate operations that the machine can run concurrently. As I write this, there is another window open in the background that updates my email, and a separate web browser that, right now, tracks football scores. When I choose, I can toggle between these windows, make them bigger or smaller, open and close others as I see fit. That is how the mind usually handles thoughts. It shares conscious concentration between tasks, while the subconscious changes the content of each window, or draws our attention among them.

Obsession is a large window that cannot be made to shrink, move or close. Even when other tasks come to the front of the mind, the obsession window is there in the background. It grinds away and is ready to sequester attention. It acts as a constant drag on the battery and degrades the performance of other tasks. And after a while it just gets really frustrating. You can't force quit and you can't turn the machine off and on. Whenever you are awake, the window is there. And when you do manage to turn your attention elsewhere, you are aware that you deliberately do so. Soon enough, the obsession will reclaim the focus. Sometimes, usually when you wake, it is absent. The screen is blank. But push a key, move the mouse, engage the brain, and it whirrs and clicks back into place.

As recently as the 1980s, psychiatrists thought that clinical obsessions and compulsions were extremely rare. They believe now that between 2 per cent and 3 per cent of people suffer from OCD at some point in their life. That means more than a million people in Britain are affected directly, and five million more in the United States. OCD is the fourth most common mental disorder after the big three – depression, substance abuse and anxiety. OCD is twice as common as autism and schizophrenia. The World Health Organization has ranked OCD as the tenth most disabling medical condition. Its impact on quality of life has been judged more severe than diabetes. But people with OCD typically wait a decade or more before they seek help.

OCD affects men and women equally. It begins usually in early teens or late adolescence and early adulthood,

though its effects can last a lifetime. It respects no cultural, ethnic, racial or geographical boundaries. OCD is a social handicap and a societal burden. Children with OCD are more likely to want friends, but less likely to make them. Adults with OCD are more likely to be unemployed and unmarried. They drag down their families. They are more likely to live with their parents. They are more likely to be celibate. If they do marry, they are less likely to have children. They are more likely to divorce. Yet many front-line doctors still fail to recognize the signs and symptoms of OCD or their significance. Few people with OCD spontaneously recover, yet two-thirds of sufferers never see a mental health professional.

The word 'obsess' first appeared in English in the early 1500s. Drawn from the Latin *obsidere*, literally 'before to sit' but more commonly defined as 'to besiege', the term has a military background. To obsess a city was to surround but not yet control it. The related *possidere*, from which we derive posses and possessed, described the subsequent stage, when a victorious army would take control of the city and conquer its people.

The drift of these words to describe troubled individuals, first in religious terms and later in clinical language, carried the same distinction. The original use of obsess reflected the belief that the strange thought – in those days attributed to an evil spirit – originated outside the victim. To be obsessed was something that happened *to* someone; a person was not obsessed with an idea – it was the idea that

obsessed them. This was different from someone who was possessed, when the spirit was thought to invade and control a person from the inside.

A diagnosis of whether someone was obsessed or possessed by evil spirits often came down to whether the victim was aware of the malevolent presence; whether they recognized their thoughts as alien and so tried to resist them. Those who were obsessed were considered able to do this. Victims of possession, because they had surrendered their soul to the invading demons, were not. They remained unaware of what was happening. The distinction survives to this day. A diagnosis of OCD usually requires a degree of what psychiatrists call insight – an obsessed person must identify the strange thoughts that drive the obsession as foreign and distressing and must make efforts to reject them.

Today, obsession is a more widely used word. Because thoughts usually come and go, the head a constant swirl of involuntary emotions and sensations, it takes only a drag of coalescence of this mental stardust around a recurrent theme to form a temporary lump, a sticking point, that society calls an obsession. In this way, people say they are obsessed when they cannot get an attractive person out of their minds, or when they cannot quell thoughts about a certain food. Our minds are so fluid that any sluggish current draws our attention. We say we obsess about sport, sex, shoes, cream buns, cars and a thousand other pleasures, sometimes all at the same time. But in time, often no time at all, these so-called obsessions break away and are carried off and consumed by the mental stream. That is not the

obsession we will talk about here. It would not make somebody eat a wall.

The obsessive thoughts of OCD are different and tend to cluster around a limited number of themes. Obsessions of contamination with dirt and disease are the most frequent and feature in about a third of cases. Irrational fears of harm – did I lock the back door? Is the oven switched off? – are the next most common, and affect about a quarter of people with OCD. About one in ten wrestles with an obsessive need for patterns and symmetry. Rarer, but still significant, are obsessions with the body and physical symptoms, religious and blasphemous thoughts, unwanted sexual thoughts, and thoughts of carrying out acts of violence. It's because obsessive thoughts are so often within these taboo and embarrassing subjects that so many people with OCD choose to hide them.

Obsession has no regard for rational explanation. No pathology of thought can be solved with more thought. The brilliant twentieth-century mathematician Kurt Gödel, a friend and colleague of Albert Einstein, lived his life for rationality. His incompleteness theorem used logic to explore and expose the limits of logic. Yet Gödel suffered from the wildly irrational and obsessive idea that he would accidentally be poisoned, from tainted food perhaps, or by gas that escaped from his refrigerator. He would eat no meal that his wife did not taste first. When she became ill and could not do this for him, the obsessive siege on his mind made Gödel starve himself to death.

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Why I am writing this book? Obsession encourages attention to turn inward and drains focus from relationships with others. OCD cements the presence of an individual at the centre of their mind and their actions. And it distracts. There is always something else that you would rather think about, or not think about. I don't want to be selfish any more. I now have two children who need me. I don't want them to go through what I did. I don't want them to develop obsessions, to be held hostage by their strange thoughts, to think up a monster. And if they do, I want to be able to help them.

The best way to do that, I believe, is to investigate these strange and obsessive thoughts, to see how they work, where they come from and what we can learn from them. To question how the brain, our closest ally and biggest asset in millions of years of evolution, can turn against us so. To see what forces to the surface the obsessive Mr Hyde who lies dormant inside every Dr Jekyll – inside you – and how his betrayal can be stopped. And, as it turns out, it is a terrific story.

Strange thoughts, the seeds of obsession, are everywhere. They scatter across the population. Yet only occasionally do they take root. The first step in our journey to understand obsession is to see how this happens.

TWO

Bad thoughts

'How easy it would be for me to stick this kitchen knife into him.' Most people have thoughts like that. They are called intrusive thoughts. Most people don't talk about their intrusive thoughts.

They don't talk about them, that is, until psychologists take the trouble to ask. When they do, then survey after survey shows that about nine in ten people admit they experience intrusive thoughts that distress, bewilder, shock and perplex them. Most people have thoughts about driving their car off the road. A third of us say we have thoughts of grabbing money. More than four in ten get an urge to jump from a high place, an impulse so common that it has its own scientific name: the high-place phenomenon. Half of all women and eight out of ten men have thoughts of strangers in the nude, while half of all people cannot help but think of sex acts they consider 'disgusting'.

Intrusive thoughts are everywhere. But it took until the late 1970s for anyone to notice, when the South African-born psychologist Stanley Rachman and his Sri Lankan

colleague Padmal de Silva made a stunning discovery. In trying to understand the nature of obsession, the two realized that many normal people seemed to have the same kinds of strange thoughts and impulses as patients with OCD.

Their obsessive-compulsive patients had urges to insult and physically attack people, but so, it turned out, did their friends. The patients reported impulses to push people under trains and buses, to jump from high places and to deliberately crash their car. So did their colleagues. Both groups had ideas of violence during sex, thoughts they might have committed a crime they heard about on the news and harboured irrational fears that they might have suffered some contamination, such as from radiation or asbestos.

When the psychologists wrote down the weird thoughts harvested from the minds of their OCD patients and those from their 'normal' associates on index cards, and mixed the cards up, even their most experienced clinical colleagues could not correctly distinguish which thoughts came from the damaged minds of patients considered mentally ill and which came from the highly respected people they worked and socialized with.

My OCD began with an intrusive thought, a snowflake that fell from the summer sky. 'Shall we go upstairs?' the girl had asked me. She was pretty, with long black hair that she had to push back from her eyes as we kissed. The skin on

her arms was smooth and her hands, I remember, seemed so small. She was older than me, though she didn't think so. Her question: 'You're not a first year are you?' hadn't left me much room to manoeuvre. I had lied about my university course too. I knew nothing about the politics of the French revolution but it sounded of more appeal to her than chemical engineering. I knew little about chemical engineering either, but then I had only studied it for a couple of months.

I was eighteen and a happy college student. Real life was on hold and time was a string of fun nights and daytime lectures on fluid dynamics and mathematics. I had little idea what a chemical engineer did, but I didn't care. That was the future. And right now it felt good to think about only the next day.

It was November 1990 in northern England so she wore a baggy white T-shirt with a purple skirt over Doc Marten boots and black leggings. I was pleased with my newly-grown sideburns. I thought she might mention them as we stumbled through the dry sand of our early conversation. By the time we headed from the university campus and into the neighbouring maze of terraced houses I realized that she wasn't going to. We walked and we talked, about music and our friends. We reached her house and, as she invited me inside and closed the front door behind us, a new world beckoned.

It was one of those frozen Leeds nights that Yorkshire folk are so proud of. The wheezing gas fire in her kitchen generated more light than heat and the cold chased us

around the room like the smoke from a wood fire. Upstairs sounded good.

'Did you have sex with that girl?' my friend Noel asked the next day.

'Yes,' I lied.

'Did you use a condom?'

'No.'

'You could have Aids.'

'Don't be daft.'

Had I had sex with that girl? No. Had we used a condom? No. Could I have caught Aids? Don't be daft. Still, I hadn't even considered the threat, despite all of the warnings. I should be more careful next time, I thought as I bought Noel a drink that night. I should have been more careful. The same thought, an echo of our conversation – you could have Aids – floated back into my mind from time to time over the next few months, but on each occasion I could muster the mental puff to blow it out. Don't be daft. Then, one hot night in the August of 1991, I couldn't.

On holiday from university as I walked back to my parents' house, with no warning the thought came again. You could have Aids. Only this time I couldn't move past the idea, or the cramps of panic it caused. 'Don't be daft' suddenly seemed an inadequate response to the scale of the threat, the possible consequences. I could have Aids. And if I did, then I was doomed. My life was over before it had truly begun. Worse, no matter what I did, no matter what anybody said, I could not change it. They could not

fix it. I had lost the power over my own fate. As I tried to brush away the thought, the snowflake, it squirmed from my mental grasp and settled. Quickly it was joined by another, then another, then another. The blizzard that followed blew the snow into every corner of my mind, and laid down a blanket that muffled every surface.

I gulped for air when I opened the window in my stuffy bedroom. I heard the scratch on the ceiling of the summer insects when I turned out the light. I saw the red glow of the stereo, still switched on from when I had lay on the same bed that afternoon, which already seemed a lifetime ago. I ripped down the dog-eared posters on the wall in terror. Why me? I was so frightened that the tips of my fingers tingled. I remember I told myself that all would be fine when I woke up the next morning. That was how life was – everyone had night terrors and everyone saw things differently the next day.

The sun rose and the windows and curtains were still wide open. The thought was still there. You could have Aids. I went downstairs to the kitchen and had breakfast in the new world I would inhabit from that day, the first of the rest of my life. I watched my mum and dad gently bicker across the wooden kitchen table, and I thought how sad they would be if I did have Aids. I decided I would not tell them. I went back upstairs to my bedroom and buried my face in my pillow and wept. I could have Aids.

The obsessive thoughts of OCD are different to those that tend to dominate other types of mental anguish. Recurring

and distressing thoughts are not always an obsession – at least not in the clinical sense. We can find our minds dominated by exaggerated and distressing thoughts of whether our child will survive and flourish in the world, for instance, or crippling nerves before an exam or driving test, but thoughts like that are in step with the rules and rhythms of our life. We want our child to be happy. We want to pass. We can think and worry non-stop about whether we might lose our job, but only because we know we need the money it brings to feed and clothe our family, which we feel and instinctively sense is the right thing to do.

Thoughts like that are 'ego-syntonic'. They are in harmony with our drives and motivations. Ego-syntonic thoughts can make us unhappy, but when they do it is their contents and not the thoughts themselves that are the problem. We do not question why we have them. Indeed, sometimes we resent others who do not have ego-syntonic thoughts as acutely as we do. 'I can't believe you left this to the last minute.' 'It's only been a month. Of course I still miss him.'

Taken to extremes these types of ego-syntonic thoughts can cause mental disorder, usually anxiety. But at their heart most concerns of anxiety are rational. So, usually, are the dark thoughts of depression: endless rumination on external events, regret of decisions and how life has unfolded. Severe grief, hysteria even, is based on the rational sense of loss.

Unwanted and intrusive thoughts, the raw materials of obsession, are different. They are irrational. They strike a

mental discord. They are 'ego-dystonic'. They clash with how we see ourselves, and how we want others to see us. Just to think these thoughts is enough to make us question who we are. We are not dishonest, yet we could snatch the money from that open till so easily. We do not want to be the dreadful person who could think such terrible and ridiculous things. But most people are.

Winston Churchill, a one-time First Lord of the Admiralty, didn't like to travel by ship because of the ego-dystonic urge he had to jump into the water. Churchill was a well-known depressive but these, and similar thoughts he had of jumping in front of trains (he liked to stand with a pillar between himself and the edge of the platform) do not appear to have been genuinely suicidal impulses. Talking once of how he hated to sleep in a bedroom with access to a balcony from which he felt the urge to jump, he told his doctor Charles Moran:

> I don't want to go out of the world at all in such moments. I've no desire to quit this world, but thoughts, desperate thoughts, come into my head.

As Churchill observed, to have intrusive thoughts is not a sign that someone wants to act on them. A disturbing thought of sex with a child does not make someone a paedophile, just as an unwanted urge to hit someone with a hammer does not make someone a thug or a murderer. In fact the opposite is true. To consider such a thought or urge unwanted, disturbing and unwelcome – and so intrusive – is

usually enough to show it is ego-dystonic and so contrary to someone's normal personality and actions.

Where do these bizarre thoughts come from? The simple, if unsatisfying, answer is that we don't know for sure. The theory used by psychologists who study OCD is that our brains have something they call a cognitive 'idea generator'. On most other occasions, this generator helps us to solve problems.

To consider all possible solutions, it's important for the mind to generate novel ideas and not immediately censor them. It's a similar principle to a corporate brainstorm exercise and how every idea to boost sales or attract customers – however stupid – gets written on its own sticky note and given a nod of approval from an overenthusiastic manager. The cognitive idea generator does not have to anchor its responses to reality. Intrusive thoughts are what happens when the mind says 'yes, and' rather than 'yes, but'.

Not all unasked-for thoughts are unwanted or unpleasant, far from it. Mozart revelled in musical thoughts he did not command. Beethoven said something similar:

> You will ask me where I get my ideas. That I cannot say with certainty. They come unbidden, indirectly, directly. I could grasp them with my hands; in the midst of nature, in the woods, on walks, in the silence of the night, in the early morning, inspired by moods that translate themselves into words for the poet and into tones for me, that sound, surge, roar, until at last they stand before me as notes.

Random inspirations of musical genius are all very well, if you're fortunate enough to have them. But the thoughts most likely to make the rest of us sit up and take notice are odd and unpleasant. Those are also the ones that tend to stick around. Nobody gets obsessed by thoughts that they will be too nice to people, or by urges to give all their money away to a tramp. People do not complain to psychologists of intrusive thoughts of pushing someone with the build of a heavyweight boxer under a subway train. Intrusive thoughts bother us because the usual imagined victims are the small and the weak, the puny and the vulnerable; the child and the little old lady. It's what psychologists label the Arnold Schwarzenegger effect.

This might make sense, given the theory that a mental idea generator helps us to navigate through life. We may consider it uncivilized, but there are some situations where a natural and useful reaction when one sees a stranger would indeed be to beat them over the head. The smaller the stranger is than you, and so the lower the chance that they can hurt you, the more attractive that option becomes.

According to the theory, sometimes an external cue – the rattle of a train or a dirty floor – can kick the idea generator into action, and make it churn out intrusive thoughts. At other times the trigger is internal – the result of stress or a low mood or a subconscious emotional shift, or the residue of an incomplete memory. In this case, the intrusions appear almost at random.

It's hard to test these ideas, so there is no experimental evidence to support them. All we know for sure is that

intrusive thoughts pop up more in certain circumstances than others, under stress for instance, and that when they do appear, how we react is critical. A natural reaction, especially if the thoughts will not recede by themselves, is to try to force them to go away, to squash the idea, to deliberately shove the unpleasant notion behind the mental furniture or under the rug. That's a bad idea. That's when the problems can begin.

Leo Tolstoy knew well the mind's inability to repel unwanted thoughts. When he was a child, the Russian novelist would play a game with his siblings. To join a secret club called the Ant Brothers, whose members would discover wonderful things, they had only to stand in one corner of a room and try to not think of a polar bear. As hard as they tried, Tolstoy and the others could not manage it.

Fyodor Dostoyevsky, a contemporary of Tolstoy, knew of the bear conundrum too. In his 1863 book *Winter Notes on Summer Impressions* he wrote: 'Try and set yourself the task not to think of a white bear, and the cursed thing comes to mind every minute.' A century later, that Dostoyevsky quote appeared in an article in the US magazine *Playboy*, where it was read by a university psychology student called Daniel Wegner.

Wegner, who died of motor neurone disease in July 2013 just as I was finishing this book, rose to run the Mental Control Laboratory at Harvard University, but he will always be remembered as the white bear guy. His work with the bears can explain why, even though we see a hole

in the road ahead, we steer our bike right into it. It shows why forbidden love offers the most thrills. It can reveal why footballers, desperate not to hit penalty kicks straight at the goalkeeper, go ahead and do just that. In 2009, he wrote an article for the prestigious journal *Science* titled 'How to think, say, or do precisely the worst thing for any occasion'. Most of all, Wegner's research shows why unwanted intrusive thoughts can hang around; why some people find them so difficult to brush off. It shows how we can turn them into obsessions.

In the 1980s at Trinity University in San Antonio, Texas, just a quick gallop from the Alamo and one of the last places on Earth that anyone would associate with a polar bear, Wegner asked some of his students to repeat the Tolstoy trial under scientific conditions. He asked them to try to not think of a white bear.

Students told not to think of the bears found it difficult. And students told to do the opposite and to encourage thoughts of white bears, of course, thought of more. (Wegner kept track by asking them to ring a bell.) Most surprising was what happened next, when Wegner reversed the tasks so those students previously told to think of the bears were now asked not to, and vice versa. Those students who had originally tried to keep away the white bears now found their minds flooded with them – more so than the students instructed to think about them originally.

It's an experiment that has been repeated many times since with similar results. It is hard, if not impossible, to suppress unwanted thoughts. And to try leads to an increase

in the thoughts later on, after someone has stopped attempting to suppress them. The latter effect appears in psychology textbooks as the rebound effect of thought suppression. Most psychologists call it the white bear effect – try to make an unwanted thought go away and it will bounce back, harder and stronger than before.

Anyone who, to borrow a phrase from Oscar Wilde, can resist everything except temptation will recognize just how hard thought suppression is; everyone who has tried to give up cigarettes, or to stick to a calorie-controlled diet. That feeling, the urge and craving, is the sound of the white bear as it paws at the door.

This ironic effect – that a suppressed thought comes back stronger – could underpin a range of unusual human behaviours. It could explain, for instance, why those smokers who are the most motivated to quit also seem to find it the hardest to give up. The brain could interpret intrusive thoughts about a substance as a craving for it. The more smokers try to push away the thoughts of a cigarette, the more they amplify their craving. Studies show those people who had tried and failed to quit cigarettes are indeed more likely to suppress thoughts. A similar effect has been seen in obese people who overeat: they are more likely to suppress thoughts about chocolate and chips, and so increase the craving for them. Suppressing a thought before sleep can even make it resurface in a dream.

What's going on? According to theories of how the mind works, the white bear effect is down to two mental processes. First, people who try not to think of the white

bear must choose to think of something else, and so they introduce and employ a conscious distraction; thinking about what they had for breakfast, for instance. But before we can introduce a distraction, we must know there is a target to distract ourselves from. So, before we can suppress a thought, we must scan our conscious mind to see if it is there. And to do this, we must think of what we want to look for – the white bear – which is the target that we don't want to think of.

Second, a separate process begins to make sure that the target, the unwanted thought of a white bear, is not present. While this second, monitoring, task is automatic, an unconscious routine that takes little work, the same is not true for the distraction, the thought suppression. That takes real effort, and so cannot last. If the monitoring process lingers after the distraction process has ended, and psychologists think it does, then our minds will continue to search for it. And this means we will find the unwanted thought more frequently than if we had never tried to suppress it in the first place.

That's not to say that intrusive thoughts can't be banished, at least in the short term. Distraction – to keep the mind busy – is a pretty effective way to do that. But it's difficult to keep up for too long. Markus Wasmeier could manage it for barely three minutes – just long enough for the German skier to write his name into the record books.

Stood at the top of a mountain in the early 1990s, Wasmeier's teammate Hansjorg Tauscher was given the strangest piece

of advice of his career. He was fast, no doubt about that – he had astonished the winter-sports world when he tamed the fearsome downhill run at Beaver Creek in Colorado to win the 1989 world championships – but his coach had noticed a possible flaw. 'You think too much.' Tauscher was quick in the turns, but he stiffened on the fast glide sections that linked them together. And while the groomed icy runs that Alpine racers hurtle down at speeds near 90mph may look smooth, up close they are a strength-sapping series of bumps and lumps.

As they crouch and let gravity propel them down the mountain the mind of an Alpine skier in a glide can start to wander. Most do not wander too far. They start to think about how they could go even faster and as they do so they usually try too hard to control the actions of their feet and legs. The result: they tighten, hit the bumps harder and drag themselves that crucial fraction of a second down the leader board.

Juergen Beckmann, the coach, thought he had the solution. A former downhill racer himself, until a high speed crash almost broke his neck, Beckmann knew the mental problems of the glide well. Watching Tauscher practise, he decided to try an unorthodox control technique that he had picked up from research carried out in the 1960s on short-term memory. To keep the thoughts from his idle mind, Beckmann said that day, Tauscher should count backwards. When he started to glide, he should start at 999 and descend in threes. His mind and his thoughts occupied, the theory went, his legs would be more flexible

and his run faster. Tauscher was sceptical, but he gave it a go. He disappeared down the mountain, mumbling under his breath '999, 996, 993 . . .'

Today, Beckmann works as a sports psychologist at the Technical University of Munich. His research to help athletes perform under pressure is world famous. But it was his work with the German Alpine ski team from 1991 to 1994 that arguably brought the greatest success. As Tauscher started to ski and count backwards, his times improved. Pretty soon, the former world champion was convinced, and Beckmann, emboldened with his apparent success, shared the secret with the rest of the team.

That was when Beckmann began to work closely with Wasmeier, another former world champion, this time of the giant slalom event back in 1985. The skier was widely considered past his best and even Beckmann's mother said her son's work with him was a waste of time. Yet, at the 1994 Winter Olympics in Norway, Markus Wasmeier won two gold medals for Germany – in the giant slalom and the super-giant slalom. Against all expectations, he earned the unlikely title of the greatest German skier of all time and was named the country's sportsman of the year. He then retired, to spend more time with his thoughts.

Beckmann's backwards count was a form of ritual, which is one way to keep unwanted thoughts from the mind. Rituals are common, and not only among skiers. Just as most people have intrusive thoughts, so too about half of the people in the general population surveyed by psychologists will admit they perform odd and meaningless rituals.