The Science of Storytelling.

WILL STORR

THE SCIENCE OF STORYTELLING

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WILLIAM
COLLINS

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William Collins
An imprint of HarperCollins*Publishers*
1 London Bridge Street
London SE1 9GF

www.WilliamCollinsBooks.com

This eBook first published in Great Britain by 4th Estate in 2019

Cover design by Jack Smythe

A catalogue record for this book is available from the British Library

Source ISBN: 9780008276935
Ebook Edition © April 2019 ISBN: 9780008276959
Version: 2019-04-08

Dedication

For my firstborn, Parker

Epigraph

‘Ah, but a man’s reach should exceed his grasp,
Or what’s a heaven for?’

Robert Browning (1812–1889)

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INTRODUCTION

We know how this ends. You're going to die and so will everyone you love. And then there will be heat death. All the change in the universe will cease, the stars will die, and there'll be nothing left of anything but infinite, dead, freezing void. Human life, in all its noise and hubris, will be rendered meaningless for eternity.

But that's not how we live our lives. Humans might be in unique possession of the knowledge that our existence is essentially meaningless, but we carry on as if in ignorance of it. We beetle away happily, into our minutes, hours and days, with the fact of the void hovering over us. To look directly into it, and respond with an entirely rational descent into despair, is to be diagnosed with a mental-health condition, categorised as somehow faulty.

The cure for the horror is story. Our brains distract us from this terrible truth by filling our lives with hopeful goals and encouraging us to strive for them. What we want, and the ups and downs of our struggle to get it, is the story of us all. It gives our existence the illusion of meaning and turns our gaze from the dread. There's simply no way to understand the human world without stories. They fill our newspapers, our law courts, our sporting arenas, our government debating chambers, our school playgrounds, our computer games, the lyrics to our songs, our private thoughts and public conversations and our waking and sleeping dreams. Stories are everywhere. Stories are *us*.

It's story that makes us human. Recent research suggests language evolved principally to swap 'social information' back when we were living in Stone Age tribes. In other words, we'd gossip. We'd tell tales about the moral rights and wrongs of other people, punish the bad behaviour, reward the good, and thereby keep everyone cooperating and the tribe in check. Stories about people being heroic or villainous, and the emotions of joy and outrage they triggered, were crucial to human survival. We're wired to enjoy them.

Some researchers believe grandparents came to perform a vital role in such tribes: elders told different kinds of stories – about ancestor heroes, exciting quests and spirits and magic – that helped children to navigate their physical, spiritual and moral worlds. It's from these stories that complex human culture emerged. When we started farming and rearing livestock, and our tribes settled down and slowly merged into states, these grandparental campfire tales morphed into great religions that had the power to hold large numbers of humans together. Still, today, modern nations are principally defined by the stories we tell about our collective selves: our victories and defeats; our heroes and foes; our distinctive values and ways of being, all of which are encoded in the tales we tell and enjoy.

We experience our day-to-day lives in story mode. The brain creates a world for us to live in and populates it with allies and villains. It turns the chaos and bleakness of reality into a simple, hopeful tale, and at the centre it places its star – wonderful, precious *me* – who it sets on a series of goals that become the plots of our lives. Story is what brain does. It is a 'story processor', writes the psychologist Professor Jonathan Haidt, 'not a logic processor'. Story emerges from human minds as naturally as breath emerges from between human lips. You don't have to be a genius to master it. You're already doing it. Becoming better at telling stories is simply a matter of peering inwards, at the mind itself, and asking how it does it.

This book has an unusual genesis in that it's based on a storytelling course that is, in turn, based on research I've carried out for various books. My interest in the science of storytelling began about a decade ago when I was working on my second book, *The Heretics*, which was an investigation into the psychology of belief. I wanted to find out how intelligent people end up believing crazy things. The answer I found was that, if we're psychologically healthy, our brain makes us feel as if we're the moral heroes at the centre of the unfolding plots of our lives. Any 'facts' it comes across tend to be subordinate to that story. If these 'facts' flatter our heroic sense of ourselves, we're likely to credulously accept them, no matter how smart we think we are. If they don't, our minds will tend to find some crafty way of rejecting them. *The Heretics* was my introduction to the idea of the brain as a storyteller. It not only changed the way I saw myself, it changed the way I saw the world.

It also changed the way I thought about my writing. As I was researching *The Heretics*, I also happened to be working on my first novel. Having struggled with fiction for years I'd finally buckled and bought a selection of traditional 'how-to' guides. Reading through them, I noticed something odd. Some of the things the story theorists were saying about narrative were strikingly similar to what the psychologists and neuroscientists I'd been interviewing had been telling me about brain and mind. The storytellers and the scientists had started off in completely different places and had ended up discovering the same things.

As I continued my research, for subsequent books, I continued making these connections. I started to wonder if it might be possible to join the two fields up and thereby improve my own storytelling. That ultimately led to my starting a science-based course for writers which turned out to be unexpectedly successful. Being faced regularly with roomfuls of extremely smart authors, journalists and screenwriters pushed me to deepen my investigations. Soon, I realised I had about enough stuff to fill a short book.

My hope is that what follows will be of interest to anyone curious about the science of the human condition, even if they have little practical interest in storytelling. But it's also for the storytellers. The challenge any of us faces is that of grabbing and keeping the attention of other people's brains. I'm convinced we can all become better at what we do by finding out a bit about how they work.

This is an approach that stands in contrast to more traditional attempts at decoding story. These typically involve scholars comparing successful stories or traditional myths from around the world and working out what they have in common. From such techniques come predefined plots that put narrative events in a sequence, like a recipe. The most influential of these is undoubtedly Joseph Campbell's 'Monomyth', which, in its full form, has seventeen parts that track the phases of a hero's journey from their initial 'call to adventure' onwards.

Such plot structures have been hugely successful. They've drawn crowds of millions and dollars by the billions. They've led to an industrial revolution in yarn-spinning that's especially evident in cinema and long-form television. Some examples, such as the Campbell-inspired *Star Wars: A New Hope*, are wonderful. But too many more are Mars Bar stories, delicious and moreish but ultimately cold, corporate and cooked up by committee.

For me, the problem with the traditional approach is that it's led to a preoccupation with structure. It's easy to see why this has happened. Often the search has been for the One True Story – the ultimate, perfect plot structure by which every tale can be judged. And how are you going to describe *that* if not by dissecting it into its various movements?

I suspect it's this emphasis on structure that's responsible for the clinical feel from which many modern stories suffer. I believe the focus on plot should be shifted onto character. It's *people*, not events, that we're naturally interested in. It's the plight of specific, flawed and fascinating individuals that makes us cheer, weep and ram our heads into the sofa cushion. The surface events of the plot are crucial, of course, and structure ought to be present, functional and disciplined. But it's only there to support its cast.

While there are general structural principles, and a clutch of basic story shapes which are useful to understand, trying to dictate obligatory dos and don'ts that go beyond these extremely broad outlines is probably a mistake. A journey into the science of storytelling reveals that there are many things that attract and hold the attention of brains. Storytellers engage a number of neural processes that evolved for a variety of reasons and are waiting to be played like instruments in an orchestra: moral outrage, unexpected change, status play, specificity, curiosity, and so on. By understanding them, we can more easily create stories that are gripping, profound, emotional and original.

This, I hope, is an approach that will prove more creatively freeing. One benefit of understanding the science of storytelling is that it illuminates the 'whys' behind the 'rules' we're commonly given. Such knowledge should be empowering. Knowing *why* the rules are the rules means we know *how* to break them intelligently and successfully.

But none of this is to say we should disregard what story theorists such as Campbell have discovered. On the contrary. Many popular storytelling books contain brilliant insights about narrative and human nature that science has only recently caught up with. I quote a number of their authors in these pages. I'm not even arguing that we should ignore their valuable plot designs – they can easily be used to complement this book. It's really just a question of emphasis. I believe that compelling and unique plots are more likely to emerge from character than from a bullet-pointed list. And the best way to create characters that are rich and

true and full of narrative surprise is to find out how characters operate in real life – and that means turning to science.

I've tried to write the storytelling book I wish I'd had, back when I was working on my novel. I've tried to balance *The Science of Storytelling* in such a way that it's of practical use without killing the creative spirit by issuing lists of 'You Musts'. I agree with the novelist and teacher of creative writing John Gardner, who argues that 'most supposed aesthetic absolutes prove relative under pressure'. If you're embarking on a storytelling project, I'd suggest you view what follows not as a series of obligations, but as weapons you can choose if and how to deploy. I've also outlined a practice that's proved successful in my classes over the years. The 'Sacred Flaw Approach' is a character-first process, an attempt to create a story that mimics the various ways a brain creates a life, and which therefore feels true and fresh, and comes pre-loaded with potential drama.

This book is divided into four chapters, each of which explores a different layer of storytelling. To begin, we'll examine how storytellers and brains create the vivid worlds they exist within. Next, we'll encounter the flawed protagonist at the centre of that world. Then we'll dive into that person's subconscious, revealing the hidden struggles and wills that make human life so strange and difficult, and the stories we tell about it so profound, compelling, unexpected and emotional. Finally, we'll be looking at the meaning and purpose of story and taking a fresh look at plots and endings.

What follows is an attempt to make sense of some of what generations of brilliant story theorists have discovered in the face of what equally brilliant women and men in the sciences have come to know. I am infinitely indebted to them all.

Will Storr

September, 2018

CHAPTER ONE:

CREATING A WORLD

1.0

Where does a story begin? Well, where does anything begin? At the beginning, of course. Alright then: *Charles Foster Kane was born in Little Salem, Colorado, USA, in 1862. His mother was Mary Kane, his father was Thomas Kane. Mary Kane ran a boarding house ….*

It's not working. A birth may be the beginning of a life and, if the brain was a data processor, that's surely where our tale would start. But raw biographical data have little meaning to the storytelling brain. What it desires – what it insists upon, in exchange for the rare gift of its attention – is something else.

1.1

Many stories begin with a moment of unexpected change. And that's how they continue too. Whether it's a sixty-word tabloid piece about a TV star's tiara falling off or a 350,000-word epic such as *Anna Karenina*, every story you'll ever hear amounts to 'something changed'. Change is endlessly fascinating to brains. 'Almost all perception is based on the detection of change' says the neuroscientist Professor Sophie Scott. 'Our perceptual systems basically don't work unless there are changes to detect.' In a stable environment, the brain is relatively calm. But when it detects change, that event is immediately registered as a surge of neural activity.

It's from such neural activity that your experience of life emerges. Everything you've ever seen and thought; everyone you've loved and hated; every secret you've kept, every dream you've pursued, every sunset, every dawn, every pain, bliss, taste and longing – it's all a creative product of storms of information that loop and flow around your brain's distant territories. That 1.2-kg lump of pink computational jelly you keep between your ears might fit comfortably in two cupped hands but, taken on its own scale, it's vast beyond comprehension. You have 86 billion brain cells or 'neurons' and every one of them is as complex as a city. Signals flow between them at speeds of up to 120 metres per

second. They travel along 150,000 to 180,000 kms of synaptic wiring, enough to wrap around the planet four times.

But what's all this neural power *for?* Evolutionary theory tells us our purpose is to survive and reproduce. These are complex aims, not least reproduction, which, for humans, means manipulating what potential mates think of us. Convincing a member of the opposite sex that we're a desirable mate is a challenge that requires a deep understanding of social concepts such as attraction, status, reputation and rituals of courting. Ultimately, then, we could say the mission of the brain is this: control. Brains have to perceive the physical environment and the people that surround it in order to *control* them. It's by learning how to control the world that they get what they want.

Control is why brains are on constant alert for the unexpected. Unexpected change is a portal through which danger arrives to swipe at our throats. Paradoxically, however, change is also an opportunity. It's the crack in the universe through which the future arrives. Change is hope. Change is promise. It's our winding path to a more successful tomorrow. When unexpected change strikes we want to know, what does it mean? Is this change for the good or the bad? Unexpected change makes us curious, and curious is how we should feel in the opening movements of an effective story.

Now think of your face, not as a face, but as a machine that's been formed by millions of years of evolution for the detection of change. There's barely a space on it that isn't somehow dedicated to the job. You're walking down the street, thinking about nothing in particular, and there's unexpected change – there's a bang; someone calls your name. You stop. Your internal monologue ceases. Your powers of attention switch on. You turn that amazing change-detecting machine in its direction to answer the question, 'What's happening?'

This is what storytellers do. They create moments of unexpected change that seize the attention of their protagonists and, by extension, their readers and viewers. Those who've tried to unravel the secrets of story have long known about the significance of change. Aristotle argued that 'peripeteia', a dramatic turning point, is one of the most powerful moments in drama, whilst the story theorist and celebrated commissioner of screen drama John Yorke has written that 'the image every TV director in fact or fiction always looks for is the close-up of the human face as it registers change.'

These changeful moments are so important, they're often packed into a story's first sentences:

> *That Spot! He hasn't eaten his supper. Where can he be?*
>
> *(Eric Hill,* Where's Spot?*)*

> *Where's Papa going with that ax?*
>
> *(E. B. White,* Charlotte's Web*)*

> *When I wake up, the other side of the bed is cold.*
>
> *(Suzanne Collins,* The Hunger Games*)*

These openers create curiosity by describing specific moments of change. But they also hint darkly at troubling change to come. Could Spot be under a bus? Where *is* that man going with that axe? The threat of change is also a highly effective technique for arousing curiosity. The director Alfred Hitchcock, who was a master at alarming brains by threatening that unexpected change was looming, went as far as to say, 'There's no terror in the bang, only in the anticipation of it.'

But threatening change doesn't have to be as overt as a psycho's knife behind a shower curtain.

> *Mr and Mrs Dursley, of number four Privet Drive, were proud to say that they were perfectly normal, thank you very much.*
>
> *(J. K. Rowling,* Harry Potter and the Philosopher's Stone*)*

Rowling's line is wonderfully pregnant with the threat of change. Experienced readers know *something* is about to pop the rather self-satisfied world of the Dursleys. This opener uses the same technique Jane Austen employs in *Emma*, which famously begins:

> *Emma Woodhouse, handsome, clever and rich, with a comfortable home and a happy disposition, seemed to unite some of the best blessings of existence; and had lived nearly twenty-one years in the world with very little to distress or vex her.*

As Austen's line suggests, using moments of change or the threat of change in opening sentences isn't some hack trick for children's authors. Here's the start of Hanif Kureishi's literary novel *Intimacy*:

> *It is the saddest night, for I am leaving and not coming back.*

Here's how Donna Tartt's *The Secret History* begins:

The snow in the mountains was melting and Bunny had been dead for several weeks before we came to understand the gravity of our situation.

Here's Albert Camus starting *The Outsider*:

Mother died today. Or yesterday. I don't know.

And here's Jonathan Franzen, opening his literary masterpiece *The Corrections* in precisely the same way that Eric Hill opened *Where's Spot?*

The madness of an autumn prairie cold front coming through. You could feel it: something terrible was going to happen.

Neither is it limited to modern story:

Rage! Sing, Goddess, [of] Achilles' rage, black and murderous, that cost the Greeks incalculable pain, pitched countless souls of heroes into Hades' dark, and left their bodies to rot as feasts for dogs and birds, as Zeus' will was done. Begin with the clash between Agamemnon, the Greek warlord, and godlike Achilles.

(Homer, The Iliad*)*

Or fiction:

A spectre is haunting Europe – the spectre of communism.

*(*Karl Marx, The Communist Manifesto*)*

And even when a story starts without much apparent change …

All happy families are alike; each unhappy family is unhappy in its own way.

(Leo Tolstoy, Anna Karenina *– first sentence.)*

… if it's going to earn the attention of masses of brains, you can bet change is on the way:

All was confusion in the Oblonskys' house. The wife had found out that the husband was having an affair with their former French governess and had announced to the husband that she could not live in the same house with him.

(Leo Tolstoy, Anna Karenina *– sentences two and three.)*

In life, most of the unexpected changes we react to will turn out to be of no importance: the bang was just a lorry door; it wasn't your name, it was a mother calling for her child. So you slip back into reverie and the world, once more, becomes a smear of motion and noise. But, every now and then, that change matters. It forces us to act. This is when story begins.

1.2

Unexpected change isn't the only way to arouse curiosity. As part of their mission to control the world, brains need to properly understand it. This makes humans insatiably inquisitive: between the ages of two and five, it's thought that we ask around 40,000 'explanatory' questions of our caregivers. Humans have an extraordinary thirst for knowing how things work and why. Storytellers excite these instincts by creating worlds but stopping short of telling readers everything about them.

The secrets of human curiosity have been explored by psychologists, perhaps most famously by Professor George Loewenstein. He writes of a test in which participants were confronted by a grid of squares on a computer screen. They were asked to click five of them. Some participants found that, with each click, another picture of an animal appeared. But a second group saw small component parts of a single animal. With each square they clicked, another part of a greater picture was revealed. This second group were much more likely to keep on clicking squares after the required five, and then keep going until enough of them had been turned that the mystery of the animal's identity had been solved. Brains, concluded the researchers, seem to become spontaneously curious when presented with an 'information set' they realise is incomplete. 'There is a natural inclination to resolve information gaps,' wrote Loewenstein, 'even for questions of no importance.'

Another study had participants being shown three photographs of parts of someone's body: hands, feet and torso. A second group saw two parts, a third saw one, while another group still saw none. Researchers found that the more photos of the person's body parts the participants saw, the greater was their desire to see a complete picture of the person. There is, concluded Loewenstein, a 'positive relationship between curiosity and knowledge'. The more context we learn about a mystery, the more anxious we become to solve it. As the stories reveal more of themselves, we increasingly want to know, Where *is* Spot? Who *is* 'Bunny' and *how* did he die and *how* is the narrator implicated in his death?

Curiosity is shaped like a lowercase n. It's at its weakest when people have no idea about the answer to a question and also when entirely convinced they do. The place of maximum curiosity – the zone in which storytellers play – is when people *think* they have *some* idea but aren't

quite sure. Brain scans reveal that curiosity begins as a little kick in the brain's reward system: we crave to know the answer, or what happens next in the story, in the way we might crave drugs or sex or chocolate. This pleasantly unpleasant state, that causes us to squirm with tantalised discomfort at the delicious promise of an answer, is undeniably powerful. During one experiment, psychologists noted archly that their participants' 'compulsion to know the answer was so great that they were willing to pay for the information, even though curiosity could have been sated for free after the session.'

In his paper 'The Psychology of Curiosity', Loewenstein breaks down four ways of involuntarily inducing curiosity in humans: (1) the 'posing of a question or presentation of a puzzle'; (2) 'exposure to a sequence of events with an anticipated but unknown resolution'; (3) 'the violation of expectations that triggers a search for an explanation'; (4) knowledge of 'possession of information by someone else'.

Storytellers have long known these principles, having discovered them by practice and instinct. Information gaps create gnawing levels of curiosity in the readers of Agatha Christie and the viewers of *Prime Suspect*, stories in which they're (1) posed a puzzle; (2) exposed to a sequence of events with an anticipated but unknown resolution; (3) surprised by red herrings, and (4) tantalised by the fact that *someone* knows whodunnit, and how, but we don't. Without realising it, deep in the detail of his dry, academic paper, Loewenstein has written a perfect description of police-procedural drama.

It's not just detective stories that rely on information gaps. John Patrick Shanley's Pulitzer Prize-winning stage play *Doubt* toyed brilliantly with its audience's desire to know whether its protagonist, the avuncular and rebellious Catholic priest Father Flynn, was, in fact, a paedophile. The long-form journalist Malcolm Gladwell is a master at building curiosity about Loewensteinian 'questions of no importance' and manages the feat no more effectively than in his story 'The Ketchup Conundrum', in which he becomes a detective trying to solve the mystery of why it's so hard to make a sauce to rival Heinz.

Some of our most successful mass-market storytellers also rely on information gaps. J. J. Abrams is co-creator of the longform television series *Lost*, which followed characters who mysteriously manage to survive an airline crash on a South Pacific island. There they discover mysterious polar bears; a mysterious band of ancient beings known as

‘the Others’; a mysterious French woman; a mysterious ‘smoke monster’ and a mysterious metal door in the ground. Fifteen million viewers in the US alone were drawn to watch that first series, in which a world was created then filled until psychedelic with information gaps. Abrams has described his controlling theory of storytelling as consisting of the opening of ‘mystery boxes’. Mystery, he’s said, ‘is the catalyst for imagination … what are stories but mystery boxes?’

1.3

In order to tell the story of your life, your brain needs to conjure up a world for you to live inside, with all its colours and movements and objects and sounds. Just as characters in fiction exist in a reality that’s been actively created, so do we. But that’s not how it feels to be a living, conscious human. It *feels* as if we’re looking out of our skulls, observing reality directly and without impediment. But this is not the case. The world we experience as ‘out there’ is actually a *reconstruction* of reality that is built *inside* our heads. It’s an act of creation by the storytelling brain.

This is how it works. You walk into a room. Your brain predicts what the scene should look and sound and feel like, then it generates a hallucination based on these predictions. It’s this hallucination that you experience as the world around you. It’s this hallucination you exist at the centre of, every minute of every day. You’ll never experience *actual* reality because you have no direct access to it. ‘Consider that whole beautiful world around you, with all its colours and sounds and smells and textures,’ writes the neuroscientist and fiction writer Professor David Eagleman. ‘Your brain is not directly experiencing any of that. Instead, your brain is locked in a vault of silence and darkness inside your skull.’

This hallucinated reconstruction of reality is sometimes referred to as the brain’s ‘model’ of the world. Of course, this model of what’s actually out there needs to be somewhat accurate, otherwise we’d be walking into walls and ramming forks into our necks. For accuracy, we have our senses. Our senses seem incredibly powerful: our eyes are crystalline windows through which we observe the world in all its colour and detail; our ears are open tubes into which the noises of life freely tumble. But

this is not the case. They actually deliver only limited and partial information to the brain.

Take the eye, our dominant sense organ. If you hold out your arm and look at your thumbnail, that's all you can see in high definition and full colour at once. Colour ends 20 to 30 degrees outside that core and the rest of your sight is fuzzy. You have two lemon-sized blind spots and blink fifteen to twenty times a minute, which blinds you for fully 10 per cent of your waking life. You don't even see in three dimensions.

How is it, then, that we experience vision as being so perfect? Part of the answer lies in the brain's obsession with change. That large fuzzy area of your vision is sensitive to changes in pattern and texture as well as movement. As soon as it detects unexpected change, your eye sends its tiny high-definition core – which is a 1.5-millimetre depression in the centre of your retina – to inspect it. This movement – known as a 'saccade' – is the fastest in the human body. We make four to five saccades every second, over 250,000 in a single day. Modern filmmakers mimic saccadic behaviour when editing. Psychologists examining the so-called 'Hollywood style' find the camera makes 'match action cuts' to new salient details just as a saccade might, and is drawn to similar events, such as bodily movement.

The job of all the senses is to pick up clues from the outside world in various forms: lightwaves, changes in air pressure, chemical signals. That information is translated into millions of tiny electrical pulses. Your brain reads these electrical pulses, in effect, like a computer reads code. It uses that code to actively construct your reality, fooling you into believing this controlled hallucination is real. It then uses its senses as fact-checkers, rapidly tweaking what it's showing you whenever it detects something unexpected.

It's because of this process that we sometimes 'see' things that aren't actually there. Say it's dusk and you think you've seen a strange, stooping man with a top hat and a cane loitering by a gate, but you soon realise it's just a tree stump and a bramble. You say to your companion, 'I thought I saw a weird guy over there.' You *did* see that weird guy over there. Your brain thought he was there so it put him there. Then when you approached and new, more accurate, information was detected, it rapidly redrew the scene, and your hallucination was updated.

Similarly, we often *don't* see things that *are* actually there. A series of iconic experiments had participants watch a video of people throwing a

ball around. They had to count the number of times the ball was passed. Half didn't spot a man in a gorilla suit walk directly into the middle of the screen, bang his chest three times, and leave after fully nine seconds. Other tests have confirmed we can also be 'blind' to auditory information (the sound of someone saying 'I am a gorilla' for nineteen seconds) as well as touch and smell information. There's a surprising limit to how much our brains can actually process. Pass that limit and the object is simply edited out. It's not included in our hallucinated reality. It literally becomes invisible to us. These findings have dire potential consequences. In a test of a simulated vehicle stop, 58 per cent of police trainees and 33 per cent of experienced officers 'failed to notice a gun positioned in full view on the passenger dashboard'.

Things naturally become worse when our fact-checking senses become damaged. When people's eyesight develops sudden flaws, their hallucinatory model of reality can begin to flicker and fail. They sometimes see clowns, circus animals and cartoon characters in the areas that have gone dark. Religious people have apparent visitations. These individuals are not 'mad' and neither are they rare. The condition affects millions. Dr Todd Feinberg writes of a patient, Lizzy, who suffered strokes in her occipital lobes. As can happen in such cases, her brain didn't immediately process the fact she'd gone 'suddenly and totally' blind, so it continued projecting its hallucinated model of the world. Visiting her hospital bed, Feinberg enquired if she was having trouble with her vision in any way. 'No,' she said. When he asked her to take a look around and tell him what she saw, she moved her head accordingly.

'It's good to see friends and family, you know,' she said. 'It makes me feel like I'm in good hands.'

But there was nobody else there.

'Tell me their names,' said Feinberg.

'I don't know everybody. They're my brother's friends.'

'Look at me. What am I wearing?'

'A casual outfit. You know, a jacket and pants. Mostly navy blue and maroon.'

Feinberg was in his hospital whites. Lizzy continued their chat smiling and acting 'as if she had not a care in the world'.

These relatively recent findings by neuroscientists demand a spooky question. If our senses are so limited, how do we know what's actually happening outside the dark vault of our skulls? Disturbingly, we don't

know for sure. Like an old television that can only pick up black and white, our biological technology simply can't process most of what's actually going on in the great oceans of electromagnetic radiation that surround us. Human eyes are able to read less than one ten-trillionth of the light spectrum. 'Evolution shaped us with perceptions that allow us to survive,' the cognitive scientist Professor Donald Hoffman has said. 'But part of that involves hiding from us the stuff we don't need to know. And that's pretty much all of reality, whatever reality might be.'

We do know that actual reality is radically different than the model of it that we experience in our heads. For instance, there's no sound out there. If a tree falls in a forest and there's no one around to hear it, it creates changes in air pressure and vibrations in the ground. The crash is an effect that happens in the brain. When you stub your toe and feel pain throbbing out of it, that, too, is an illusion. That pain is not in your toe, but in your brain.

There's no colour out there either. Atoms are colourless. All the colours we do 'see' are a blend of three cones that sit in the eye: red, green and blue. This makes us *Homo sapiens* relatively impoverished members of the animal kingdom: some birds have six cones; mantis shrimp have *sixteen*; bees' eyes are able to see the electromagnetic structure of the sky. The colourful worlds they experience beggar human imagination. Even the colours we do 'see' are mediated by culture. Russians are raised to see two types of blue and, as a result, see eight-striped rainbows. Colour is a lie. It's set-dressing, worked up by the brain. One theory has it that we began painting colours onto objects millions of years ago in order to identify ripe fruit. Colour helps us interact with the external world and thereby better control it.

The only thing we'll ever really know are those electrical pulses that are sent up by our senses. Our storytelling brain uses those pulses to create the colourful set in which to play out our lives. It populates that set with a cast of actors with goals and personalities, and finds plots for us to follow. Even sleep is no barrier to the brain's story-making processes. Dreams feel real because they're made of the same hallucinated neural models we live inside when awake. The sights are the same, the smells are the same, objects feel the same to the touch. Craziness happens partly because the fact-checking senses are offline, and partly because the brain has to make sense of chaotic bursts of neural activity that are the result of our state of temporary paralysis. It explains

this confusion as it explains everything: by roughing together a model of the world and magicking it into a cause-and-effect story.

One common dream has us falling off a building or tumbling down steps, a brain story that's typically triggered to explain a 'myoclonic jerk', a sudden, jarring contraction of the muscles. Indeed, just like the stories we tell each other for fun, dream narratives often centre on dramatic, unexpected change. Researchers find the majority of dreams feature at least one event of threatening and unexpected change, with most of us experiencing up to five such events every night. Wherever studies have been done, from East to West, from city to tribe, dream plots reflect this. 'The most common is being chased or attacked,' writes story psychologist Professor Jonathan Gottschall. 'Other universal themes include falling from a great height, drowning, being lost or trapped, being naked in public, getting injured, getting sick or dying, and being caught in a natural or manmade disaster.'

So now we've discovered how reading works. Brains take information from the outside world – in whatever form they can – and turn it into models. When our eyes scan over letters in a book, the information they contain is converted into electrical pulses. The brain reads these electrical pulses and builds a model of whatever information those letters provided. So if the words on the page describe a barn door hanging on one hinge, the reader's brain will model a barn door hanging on one hinge. They'll 'see' it in their heads. Likewise, if the words describe a ten-foot wizard with his knees on back to front, the brain will model a ten-foot wizard with his knees on back to front. Our brain rebuilds the model world that was originally imagined by the author of the story. This is the reality of Leo Tolstoy's brilliant assertion that 'a real work of art destroys, in the consciousness of the receiver, the separation between himself and the artist.'

A clever scientific study examining this process seems to have caught people in the act of 'watching' the models of stories that their brains were busily building. Participants wore glasses that tracked their saccades. When they heard stories in which lots of events happened above the line of the horizon, their eyes kept making micro-movements upwards, as if they were actively scanning the models their brains were generating of its scenes. When they heard 'downward' stories, that's where their eyes went too.

The revelation that we experience the stories we read by building hallucinated models of them in our heads makes sense of many of the rules of grammar we were taught at school. For the neuroscientist Professor Benjamin Bergen, grammar acts like a film director, telling the brain what to model and when. He writes that grammar 'appears to modulate what part of an evoked simulation someone is invited to focus on, the grain of detail with which the simulation is performed, or what perspective to perform that simulation from'.

According to Bergen, we start modelling words as soon as we start reading them. We don't wait until we get to the end of the sentence. This means the order in which writers place their words matters. This is perhaps why transitive construction – *Jane gave a Kitten to her Dad* – is more effective than the ditransitive – *Jane gave her Dad a kitten*. Picturing Jane, then the Kitten, then her Dad mimics the real-world action that we, as readers, should be modelling. It means we're mentally experiencing the scene in the correct sequence. Because writers are, in effect, generating neural movies in the minds of their readers, they should privilege word order that's filmic, imagining how their reader's neural camera will alight upon each component of a sentence.

For the same reason, active sentence construction – *Jane kissed her Dad* – is more effective than passive – *Dad was kissed by Jane*. Witnessing this in real life, Jane's initial movement would draw our attention and then we'd watch the kiss play out. We wouldn't be dumbly staring at Dad, waiting for something to happen. Active grammar means readers model the scene on the page in the same way that they'd model it if it happened in front of them. It makes for easier and more immersive reading.

A further powerful tool for the model-creating storyteller is the use of specific detail. If writers want their readers to properly model their story-worlds they should take the trouble to describe them as precisely as possible. Precise and specific description makes for precise and specific models. One study concluded that, to make vivid scenes, three specific qualities of an object should be described, with the researcher's examples including 'a dark blue carpet' and 'an orange striped pencil.'

The findings Bergen describes also suggest the reason writers are continually encouraged to 'show not tell'. As C. S. Lewis implored a young writer in 1956, 'instead of telling us a thing was "terrible", describe it so that we'll be terrified. Don't say it was "delightful"; make

us say “delightful” when we’ve read the description.’ The abstract information contained in adjectives such as ‘terrible’ and ‘delightful’ is thin gruel for the model-building brain. In order to experience a character’s terror or delight or rage or panic or sorrow, it has to make a model of it. By building its model of the scene, in all its vivid and specific detail, it experiences what’s happening on the page almost as if it’s actually happening. Only that way will the scene truly rouse our emotions.

Mary Shelley may have been a teenager writing more than 170 years before the discovery of our model-making processes, but when she introduces us to Frankenstein’s monster she displays an impressive instinct for its ramifications: filmic word order; specificity and show-not-tell.

> *It was already one in the morning; the rain pattered dismally against the panes, and my candle was nearly burned out, when, by the glimmer of the half-extinguished light, I saw the dull yellow eye of the creature open; it breathed hard, and a convulsive motion agitated its limbs. How can I describe my emotions at this catastrophe, or how delineate the wretch whom with such infinite care and pains I had endeavoured to form? His limbs were in proportion, and I had selected his features as beautiful. Beautiful! Great god! His yellow skin scarcely covered the work of muscles and arteries beneath; his hair was of a lustrous black, and flowing; his teeth was of a pearly whiteness; but these luxuriances only formed a more horrid contrast with his watery eyes, that seemed almost of the same colour as the dun-white sockets in which they were set, his shrivelled complexion and straight black lips.*

Immersive model worlds can also be summoned by the evocation of the senses. Touches, tastes, scents and sounds can be recreated in the brains of readers as the neural networks associated with these sensations become activated when they see the right words. All it takes is deployment of specific detail, with the sensory information (‘a cabbagey’) paired to visual information (‘brown sock’). This simple technique is used to magical effect in Patrick Süskind’s novel *Perfume*. It tells of an orphan with an awesome sense of smell who’s born in a malodorous fish market. He takes us into his world of eighteenth-century Paris by conjuring a kingdom of scent:

> *the streets stank of manure, the courtyards of urine, the stairwells stank of mouldering wood and rat droppings, the kitchens of spoiled cabbage and mutton fat; the unaired parlours stank of stale dust, the bedrooms of greasy sheets, damp featherbeds and the pungently sweet aroma of chamber-pots. The stench of sulphur rose from the chimneys, the stench of caustic lyes from the tanneries, and from the slaughterhouses came the stench of congealed blood. People stank of sweat and unwashed clothes; from their mouths came the stench of rotting teeth, from their bellies that of onions, and from their bodies, if they were no longer very young, came the stench of rancid cheese and sour*

milk and tumorous disease … [*the heat of day squeezed*] *its putrefying vapour, a blend of rotting melon and the fetid odour of burned animal horn, out into the nearby alleys.*

1.4

The brain's propensity for automatic model-making is exploited with superb effect by tellers of fantasy and science-fiction stories. Simply naming a planet, ancient war or obscure technical detail seems to trigger the neural process of building it, as if it actually exists. One of the first books I fell in love with as a boy was J.R.R. Tolkien's *The Hobbit*. My best friend Oliver and I obsessed over the maps it contained – 'Mount Gundabad'; 'Desolation of Smaug'; 'West lies Mirkwood the Great – there are spiders.' When his father made photocopies of them for us, these maps became the focus of a summer of blissful play. The places Tolkien sketched out, on those maps, felt as real to us as the sweet shop in Silverdale Road.

In *Star Wars*, when Han Solo boasts that his ship the *Millennium Falcon* 'made the Kessel Run in less than twelve parsecs' we have the strange experience of knowing it's an actor doing gibberish whilst simultaneously somehow *feeling* as if it's real. The line works because of its absolute specificity and its adherence to what sounds like truth (the 'Kessel Run' really could be a race while 'parsecs' are a genuine measurement of distance, equivalent to 3.26 light years). As ridiculous as some of this language actually is, rather than taking us out of the storyteller's fictional hallucination, it manages to give it even more density.

By merest suggestion, the Kessel Run becomes real. We can imagine the dusty planet on which the race begins, hear the whine and blast of the engines, smell the alien piss around the back of the mechanics' wind-flapping encampments. This is just what happens in *Bladerunner*'s most famous scene, in which the replicant Roy Batty, on the edge of death, tells Rick Deckard, 'I've seen things you people wouldn't believe. Attack ships on fire off the shoulder of Orion. I watched C-beams glitter in the dark near the Tannhäuser Gate.'

Those C-beams! That gate! Their wonder lies in the fact that they're merely suggested. Like monsters in the most frightening horror stories, they feel all the more real for being the creations, not of the writer, but of our own incessant model-making imaginations.

1.5

The hallucinated world our brain creates for us is specialised. It's honed towards our particular survival needs. Like all animals, our species can only detect the narrow band of reality that's necessary for us to get by. Dogs live principally in a world of smell, moles in touch and knife-fish in a realm of electricity. The human world is predominantly that of people. Our hyper-social brains are designed to control an environment of other selves.

Humans have an extraordinary gift for reading and understanding the minds of other people. In order to control our environment of humans, we have to be able to predict what they're going to do. The importance and complexity of human behaviour means we have an insatiable curiosity about it. Storytellers exploit both these mechanisms and this curiosity; the stories they tell are a deep investigation into the ever-fascinating whys of what people do.

We've been a social species, whose survival has depended upon human cooperation, for hundreds of thousands of years. But over the last 1,000 generations it's been argued that these social instincts have been rapidly honed and strengthened. This 'sharp acceleration' of selection for social traits, writes developmental psychologist Professor Bruce Hood, has left us with brains that are 'exquisitely engineered to interact with other brains'.

For earlier humans that roamed hostile environments, aggression and physicality had been critical. But the more cooperative we became, the less useful these traits proved. When we started living in settled communities, they grew especially troublesome. There, it would've been the people who were better at getting along with others, rather than the physically dominant, who'd have been more successful.

This success in the community would've meant greater reproductive success, which would've gradually led to the emergence of a new strain of human. These humans had thinner and weaker bones than their ancestors and greatly reduced muscle mass, their physical strength as much as halving. They also had the kind of brain chemistry and hormones that predisposed them to behaviour specialised for settled communal living. They'd have been less interpersonally aggressive, but more adept at the kind of psychological manipulation necessary for

negotiating, trading and diplomacy. They'd become expert at controlling their environment of other human minds.

You might compare it to the difference between a wolf and a dog. A wolf survives by cooperating as well as fighting for dominance and killing prey. A dog does so by manipulating its human owner such that they'd do *anything* for them. The power my beloved labradoodle Parker has over my own brain is frankly embarrassing. (I've dedicated this bloody *book* to her.) In fact, this might be more than a mere analogy. Researchers such as Hood argue that modern humans, just like dogs, have gone through a process of domestication. Support for the idea comes partly from the fact that, over the last 20,000 years, our brains have shrunk by between ten and fifteen per cent, the same reduction that's been observed in all the thirty or so other animals that humans have domesticated. Just as with those creatures, our domestication means we're tamer than our ancestors, better at reading social signals and more dependent on others. But, writes Hood, 'no other animal has taken domestication to the extent that we have.' Our brains may have initially evolved to 'cope with a potentially threatening world of predators, limited food and adverse weather, but we now rely on it to navigate an equally unpredictable social landscape.'

Unpredictable humans. This is the stuff of story.

For modern humans, controlling the world means controlling other people, and that means understanding them. We're wired to be fascinated by others and get valuable information from their faces. This fascination begins almost immediately. Whereas ape and monkey parents spend almost no time looking at their babies' faces, we're helplessly drawn to them. Newborns are attracted to human faces more than to any other object and, one hour from birth, begin imitating them. By two, they've learned to control their social worlds by smiling. By the time they're adults, they've become so adept at reading people that they're making calculations about status and character automatically, in one tenth of a second. The evolution of our strange, extremely other-obsessed brains has brought with it weird side-effects. Human obsession with faces is so fierce we see them almost anywhere: in fire; in clouds; down spooky corridors; in toast.

We sense minds everywhere too. Just as the brain models the outside world it also builds models of minds. This skill, which is an essential weapon in our social armoury, is known as 'theory of mind'. It enables

us to imagine what others are thinking, feeling and plotting, even when they're not present. We can experience the world from another's perspective. For the psychologist Professor Nicholas Epley this capacity, which is obviously essential for storytelling, gave us incredible power. 'Our species has conquered the Earth because of our ability to understand the minds of others,' he writes, 'not because of our opposable thumbs or handiness with tools.' We develop this skill at around the age of four. It's then that we become story-ready; equipped to understand the logic of narrative.

The human ability to populate our minds with imagined other minds is the start of religion. Shamans in hunter-gatherer tribes would enter trance states and interact with spirits, and use these interactions as attempts to control the world. Religions were also typically animistic: our storytelling brains would project human-like minds into trees, rocks, mountains and animals, imagining they were possessed by gods who were responsible for changeful events, and required controlling with ritual and sacrifice.

Childhood stories reflect our natural tendency for such hyperactive mind-detecting. In fairytales, human-like minds are everywhere: mirrors talk, pigs eat breakfast, frogs turn into princes. Youngsters naturally treat their dolls and teddies as if they're inhabited by selves. I remember feeling terrible guilt for preferring my pink bear, handmade by my Grandmother, to my shop-bought brown bear. I knew they both knew how I felt, and that left me distracted and sad.

We never really grow out of our inherent animism. Which one of us hasn't kicked a door that's slammed on our fingers believing, in that disorientating flash of pain, that it attacked us out of spite? Who among us hasn't told a self-assembly wardrobe to fuck off? Whose storytelling brain doesn't commit its own literary-style pathetic fallacy, allowing the sun to make them optimistic about the coming day or the brooding clouds pessimistic? Studies indicate that those who anthropomorphise a human personality onto their cars show less interest in trading them. Bankers project human moods onto the movements of the markets and place their trades accordingly.

When we're reading, hearing or watching a story we deploy our theory-of-mind skills by automatically making hallucinatory models of the minds of its characters. Some authors model the minds of their own characters with such force that they hear them talk. Charles Dickens,

William Blake and Joseph Conrad all spoke of such extraordinary experiences. The novelist and psychologist Professor Charles Fernyhough has led research in which 19 per cent of ordinary readers reported hearing the voices of fictional characters even after they'd put their books down. Some reported a kind of literary possession, with the character influencing the tone and nature of their thoughts.

But much as humans excel at such feats of theory of mind, we also tend to dramatically overestimate our abilities. Although there's an admitted absurdity in claiming to be able to quantify human behaviour with such absolute numerical precision, some research suggests strangers read another's thoughts and feelings with an accuracy of just 20 per cent. Friends and lovers? A mere 35 per cent. Our errors about what others are thinking are a major cause of human drama. As we move through life, wrongly predicting what people are thinking and how they'll react when we try to control them, we haplessly trigger feuds and fights and misunderstandings that fire devastating spirals of unexpected change into our social worlds.

Comedy, whether by William Shakespeare or John Cleese and Connie Booth, is often built on such mistakes. But whatever the mode of storytelling, well-imagined characters always have theories about the minds of other characters and – because this is drama – those theories will often be wrong.This wrongness will lead to unexpected consequences and yet more drama. The influential post-war director Alexander Mackendrick writes, 'I start by asking: What does A think B is thinking about A? It sounds complicated (and it is) but this is the very essence of giving some density to a character and, in turn, a scene.'

The author Richard Yates uses a theory-of-mind mistake to create a pivotal moment of drama in his classic *Revolutionary Road*. The novel charts the dissolving marriage of Frank and April Wheeler. When they were young, and newly in love, Frank and April dreamed of bohemian lives in Paris. But, when we meet them, middle-aged reality has struck. Frank and April have two children, with a third on the way, and have moved into a cookie-cutter suburb. Frank's secured a job at his father's old company and has found himself rather settling into a life of boozy lunches and housewife-at-home ease. But April isn't happy. She still dreams of Paris. They argue, bitterly. Sex is withheld. Frank sleeps with a girl at work. And then he makes his theory-of-mind mistake.

In order to break the impasse with his wife, Frank decides to confess his infidelity. His theory of April's mind appears to be that she'll be thrown into a state of catharsis that will jolt her back into reality. There'll be tears to mop up, sure, but those tears will just remind the ol' gal why she loves him.

This is not what happens. When he confesses, April asks, *Why?* Not why he slept with the girl, but why is he bothering to tell her? She doesn't care about his fling. This isn't what Frank was expecting at all. He wants her to care! 'I know you do,' April tells him. 'And I suppose I would, if I loved you; but you see I don't. I don't love you and I never really have and I never really figured it out until this week.'

1.6

As the eye darts about, building up its story world for you to live inside, the brain's choosy about where it tells it to look. We're attracted to change, of course, but also to other salient details. Scientists used to believe attention was drawn simply to objects that stood out, but recent research suggests we're more likely to attend to that which we find meaningful. Unfortunately, it's not yet known precisely what 'meaningful' means, in this context, but tests that tracked saccades found, for example, that an untidy shelf attracted more attention than a sun-splashed wall. For me, that untidy shelf hints of human change; of a life in detail; of trouble insinuating itself in a place designed for order. It's no surprise test-brains were drawn to it. It's story-stuff, whilst the sun is just a shrug.

Storytellers also choose carefully what meaningful details to show and when. In *Revolutionary Road*, just after Frank makes his changeful theory-of-mind mistake that throws his life in a new and unexpected direction, the author draws our attention to one brilliant detail. It's an urgent voice on the radio: 'And listen to this. Now, during the Fall Clearance, you'll find Robert Hall's *entire stock* of men's walk shorts and sport jeans drastically reduced!'

Both believable and crushing, it serves to intensify our feelings, at exactly the right moment, of the suffocating and dreary housewifey corner that April has found herself backed into. Its timing also implicitly defines and condemns what Frank has become. He used to think he was

bohemian – a thinker! – and now he's just Bargain Shorts Man. This is an advert for him.

The director Stephen Spielberg is famous for his use of salient detail to create drama. In *Jurassic Park*, during a scene that builds to our first sighting of *Tyrannosaurus rex*, we see two cups of water on a car dashboard, deep rumbles from the ground sending rings over their liquid surface. We cut between the faces of the passengers, each slowly registering change. Then we see the rear-view mirror vibrating with the stomping of the beast. Extra details like this add even more tension by mimicking the way brains process peak moments of stress. When we realise our car is about to crash, say, the brain needs to temporarily increase its ability to control the world. Its processing power surges and we become aware of more features in our environment, which has the effect of making time seem to slow down. In exactly this way, storytellers stretch time, and thereby build suspense, by packing in extra saccadic moments and detail.

1.7

There's a park bench, in my hometown, that I don't like to walk past because it's haunted by a breakup with my first love. I see ghosts on that bench that are invisible to anyone else except, perhaps, her. And I feel them too. Just as human worlds are haunted with minds and faces, they're haunted with memories. We think of the act of 'seeing' as the simple detection of colour, movement and shape. But we see with our pasts.

That hallucinatory neural model of the world we live inside is made up of smaller, individual models – we have neural models of park benches, dinosaurs, ISIS, ice cream, models of *everything* – and each of those is packed with associations from our own personal histories. We see both the thing itself and all that we associate with it. We feel it too. Everything our attention rests upon triggers a sensation, most of which are minutely subtle and experienced beneath the level of conscious awareness. These feelings flicker and die so rapidly that they precede conscious thought, and thereby influence it. All these feelings reduce to just two impulses: advance and withdraw. As you scan any scene, then, you're in a storm of feeling; positive and negative sensations from the

objects you see fall over you like fine drops of rain. This understanding is the beginning of creating a compelling and original character on the page. A character in fiction, like a character in life, inhabits their own unique hallucinated world in which everything they see and touch comes with its own unique personal meaning.

These worlds of feeling are a result of the way our brains encode the environment. The models we have of everything are stored in the form of neural networks. When our attention rests upon a glass of red wine, say, a large number of neurons in different parts of the brain are simultaneously activated. We don't have a specific 'glass of wine' area that lights up, what we have are responses to 'liquid', 'red', 'shiny surface', 'transparent surface', and so on. When enough of these are triggered, the brain understands what's in front of it and constructs the glass of wine for us to 'see'.

But these neural activations aren't limited to mere descriptions of appearance. When we detect the glass of wine, other associations also flash into being: bitter-sweet flavours; vineyards; grapes; French culture; dark marks on white carpets; your road-trip to the Barossa Valley; the last time you got drunk and made a fool of yourself; the first time you got drunk and made a fool of yourself; the breath of the woman who attacked you. These associations have powerful effects on our perception. Research shows that when we drink wine our beliefs about its quality and price change our actual experience of its taste. The way food is described has a similar effect.

It's just such associative thinking that gives poetry its power. A successful poem plays on our associative networks as a harpist plays on strings. By the meticulous placing of a few simple words, they brush gently against deeply buried memories, emotions, joys and traumas, which are stored in the form of neural networks that light up as we read. In this way, poets ring out rich chords of meaning that resonate so profoundly we struggle to fully explain why they're moving us so.

Alice Walker's 'Burial' describes the poet bringing her child to the cemetery in Eatonton, Georgia, in which several generations of her family are interred. She describes her grandmother resting

undisturbed
beneath the Georgia sun,
above her the neatstepping hooves

of cattle

and graves that ‘drop open without warning’ and

cover themselves with wild ivy
blackberries. Bittersweet and sage.
No one knows why. No one asks.

When I read ‘Burial’ for the first time, the lines at the end of this stanza made little logical sense to me, and yet I immediately found them beautiful, memorable and sad:

Forgetful of geographic resolutions as birds
the far-flung young fly South to bury
the old dead.

It’s these same associative processes that allow us to think metaphorically. Analyses of language reveal the extraordinary fact that we use around one metaphor for every ten seconds of speech or written word. If that sounds like too much, it’s because you’re so used to thinking metaphorically – to speaking of ideas that are ‘conceived’ or rain that is ‘driving’ or rage that is ‘burning’ or people who are ‘dicks’. Our models are not only haunted by ourselves, then, but also by properties of other things. In her 1930 essay ‘Street Haunting’ Virginia Woolf employs several subtle metaphors over the course of a single gorgeous sentence:

> *How beautiful a London street is then, with its islands of lights, and its long groves of darkness, and on the side of it perhaps some tree-sprinkled, grass-grown space where night is folding herself to sleep naturally and, as one passes the iron railing, one hears those little cracklings and stirrings of leaf and twig which seem to suppose the silence of fields all around them, an owl hooting, and far away the rattle of the train in the valley.*

Neuroscientists are building a powerful case that metaphor is far more important to human cognition than has ever been imagined. Many argue it’s the fundamental way that brains understand abstract concepts, such as love, joy, society and economy. It’s simply not possible to comprehend these ideas in any useful sense, then, without attaching them to concepts that have physical properties: things that bloom and warm and stretch and shrink.

Metaphor (and its close sibling, the simile) tends to work on the page in one of two ways. Take this example, from Michael Cunningham's *A Home at the End of the World*: 'She washed old plastic bags and hung them on the line to dry, a string of thrifty tame jellyfish floating in the sun.' This metaphor works principally by opening an information gap. It asks the brain a question: how can a plastic bag be a jellyfish? To find the answer, we imagine the scene. Cunningham has nudged us into more vividly modelling his story.

In *Gone with the Wind*, Margaret Mitchell uses metaphor to make not a visual point, but a conceptual one: 'The very mystery of him excited her curiosity like a door that had neither lock nor key.'

In *The Big Sleep*, metaphor enables Raymond Chandler to pack a tonne of meaning into just seven words: 'Dead men are heavier than broken hearts.'

Brain scans illustrate the second, more powerful, use of metaphor. When participants in one study read the words 'he had a rough day', their neural regions involved in feeling textures became more activated, compared with those who read 'he had a bad day'. In another, those who read 'she shouldered the burden' had neural regions associated with bodily movement activated more than when they read 'she carried the burden'. This is prose writing that deploys the weapons of poetry. It works because it activates extra neural models that give the language additional meaning and sensation. We *feel* the heft and strain of the shouldering, we *touch* the abrasiveness of the day.

Such an effect is exploited by Graham Greene in *The Quiet American*. Here, a protagonist with a broken leg is receiving unwanted help from his antagonist: 'I tried to move away from him and take my own weight, but the pain came roaring back like a train in a tunnel.' This finely judged metaphor is enough to make you wince. You can almost feel the neural networks firing up and borrowing greedily from each other: the tender limb; the snapped bone; the pain in all its velocity and unstoppableness and thunder, roaring up the tunnel of the leg.

In *The God of Small Things*, Arundhati Roy uses metaphorical language to sensual effect when describing a love scene between the characters Ammu and Valutha: 'She could feel herself through him. Her skin. The way her body existed only where he touched her. The rest of her was smoke.'

And here the eighteenth-century writer and critic Denis Diderot uses a one-two of perfectly contrasting similes to smack his point home: ‘Libertines are hideous spiders, that often catch pretty butterflies.’

Metaphor and simile can be used to create mood. In Karl Ove Knausgaard’s *A Death in the Family*, the narrator describes stepping outside for a cigarette break, in the midst of clearing out the house of his recently deceased father. There he sees, ‘plastic bottles lying on their sides on the brick floor dotted with raindrops. The bottlenecks reminded me of muzzles, as if they were small cannons with their barrels pointing in all directions.’ Knausgaard’s choice of language adds to the general deathly, angry aura of the passage by flicking unexpectedly at the reader’s models of guns.

Descriptive masters such as Charles Dickens manage to hit our associative models again and again, creating wonderful crescendos of meaning, with the use of extended metaphors. Here he is, at the peak of his powers, introducing us to Ebenezer Scrooge in *A Christmas Carol*.

> *The cold within him froze his old features, nipped his pointed nose, shrivelled his cheek, stiffened his gait; made his eyes red, his thin lips blue; and spoke out shrewdly in his grating voice. A frosty rime was on his head, and on his eyebrows, and his wiry chin. He carried his own low temperature always about with him; he iced his office in the dog-days; and didn’t thaw it one degree at Christmas. External heat and cold had little influence on Scrooge. No warmth could warm, nor wintry weather chill him. No wind that blew was bitterer than he, no falling snow was more intent upon its purpose, no pelting rain less open to entreaty.*

The author and journalist George Orwell knew the recipe for a potent metaphor. In the totalitarian milieu of his novel *Nineteen Eighty-Four*, he describes the small room in which the protagonist Winston and his partner Julia could be themselves without the state spying on them as ‘a world, a pocket of the past where extinct animals could walk.’

It won’t come as much of a surprise to discover the interminably correct Orwell was even right when he wrote about writing. ‘A newly invented metaphor assists thought by evoking a visual image,’ he suggested, in 1946, before warning against the use of that ‘huge dump of worn-out metaphors which have lost all evocative power and are merely used because they save people the trouble of inventing phrases for themselves.’

Researchers recently tested this idea that clichéd metaphors become ‘worn-out’ by overuse. They scanned people reading sentences that included action-based metaphors (‘they grasped the idea’), some of

which were well-worn and others fresh. ‘The more familiar the expression, the less it activated the motor system,’ writes the neuroscientist Professor Benjamin Bergen. ‘In other words, over their careers, metaphorical expressions come to be less and less vivid, less vibrant, at least as measured by how much they drive metaphorical simulations.’

1.8

In a classic 1932 experiment, the psychologist Frederic Bartlett read a traditional Native American story to participants and asked them to retell it, by memory, at various intervals. The War of the Ghosts was a brief, 330-word tale about a boy who was reluctantly compelled to join a war party. During the battle, a warrior warned the boy that he had been shot. But, looking down, the boy couldn’t see any wounds on his body. The boy concluded that all the warriors were actually just ghosts. The next morning the boy’s face contorted, something black came out of his mouth, and he dropped down dead.

The War of the Ghosts had various characteristics that were unusual, at least for the study’s English participants. When they recalled the tale over time, Bartlett found their brains did something interesting. They simplified and formalised the story, making it more familiar by altering much of its ‘surprising, jerky and inconsequential’ qualities. They removed bits, added other bits and reordered still more. ‘Whenever anything appeared incomprehensible, it was either omitted or explained,’ in much the same way that an editor might fix a confusing story.

Turning the confusing and random into a comprehensible story is an essential function of the storytelling brain. We’re surrounded by a tumult of often chaotic information. In order to help us feel in control, brains radically simplify the world with narrative. Estimates vary, but it’s believed the brain processes around 11 million bits of information at any given moment, but makes us consciously aware of no more than forty. The brain sorts through an abundance of information and decides what salient information to include in its stream of consciousness.

There’s a chance you’ve been made aware of these processes when, in a crowded room, you’ve suddenly heard someone in a distant corner speaking your name. This experience suggests the brain’s been

monitoring myriad conversations and has decided to alert you to the one that might prove salient to your wellbeing. It's constructing your story for you: sifting through the confusion of information that surrounds you, and showing you only what counts. This use of narrative to simplify the complex is also true of memory. Human memory is 'episodic' (we tend to experience our messy pasts as a highly simplified sequences of causes and effects) and 'autobiographical' (those connected episodes are imbued with personal and moral meaning).

There's no single part of the brain that's responsible for such story making. While most areas have specialisms, brain activity is far more dispersed than scientists once thought. That said, we wouldn't be the storytellers we are if it wasn't for its most recently evolved region, the neocortex. It's a thin layer, about the depth of a shirt collar, folded in such a way that fully three feet of it is packed into a layer beneath your forehead. One of its critical jobs is keeping track of our social worlds. It helps interpret physical gestures, facial expressions and supports theory of mind.

But the neocortex is more than just a people-processor. It's also responsible for complex thought, including planning, reasoning and making lateral connections. When the psychologist Professor Timothy Wilson writes that one of the main differences between us and other animals is that we have a brain that's expert at constructing 'elaborate theories and explanations about what is happening in the world and why,' he's talking principally about the neocortex.

These theories and explanations often take the form of stories. One of the earliest we know of tells of a bear being chased by three hunters. The bear is hit. It bleeds over the leaves on the forest floor, leaving behind it all the colours of autumn, then manages to escape by climbing up a mountain and leaping into the sky, where it becomes the constellation Ursa Major. Versions of the 'Cosmic Hunt' myth have been found in Ancient Greece, northern Europe, Siberia, and in the Americas, where this particular one was told by the Iroquois Indians. Because of this pattern of spread, it's believed it was being told when there was a land bridge between what's now Alaska and Russia. That dates it between 13,000 and 28,000 BC.

The Cosmic Hunt myth reads like a classic piece of human bullshit. Perhaps it originated in a dream or shamanistic vision. But, just as likely, it started when someone, at some point, asked someone else, 'Hey, why

do those stars look like a bear?' And that person gave a sage-like sigh, leaned on a branch and said, 'Well, it's funny you should ask …' And here we are, 20,000 years later, still telling it.

When posed with even the deepest questions about reality, human brains tend towards story. What is a modern religion if not an elaborate neocortical 'theory and explanation about what's happening in the world and why'? Religion doesn't merely seek to explain the origins of life, it's our answer to the most profound questions of all: What is good? What is evil? What do I do about all my love, guilt, hate, lust, envy, fear, mourning and rage? Does anybody love me? What happens when I die? The answers don't naturally emerge as data or an equation. Rather, they typically have a beginning, a middle and an end and feature characters with wills, some of them heroic, some villainous, all co-starring in a dramatic, changeful plot built from unexpected events that have meaning.

To understand the basis of how the brain turns the superabundance of information that surrounds it into a simplified story is to understand a critical rule of storytelling. Brain stories have a basic structure of cause and effect. Whether it's memory, religion, or the War of the Ghosts, it rebuilds the confusion of reality into simplified theories of how one thing causes another. Cause and effect is a fundamental of how we understand the world. The brain can't help but make cause and effect connections. It's automatic. We can test it now. BANANAS. VOMIT. Here's the psychologist Professor Daniel Kahneman describing what just happened in your brain: 'There was no particular reason to do so, but your mind automatically assumed a temporal sequence and a causal connection between the words bananas and vomit, forming a sketchy scenario in which bananas caused the sickness.'

As Kahneman's test shows, the brain makes cause and effect connections even where there are none. The power of this cause and effect story-making was explored in the early twentieth century by the Soviet filmmakers Vsevolod Pudovkin and Lev Kuleshov, who juxtaposed film of a famous actor's expressionless face with stock footage of a bowl of soup, a dead woman in a coffin and a girl playing with a toy bear. They then showed each juxtaposition to an audience. 'The result was terrific,' recalled Pudovkin. 'The public raved about the acting of the artist. They pointed out the heavy pensiveness of his mood over the forgotten soup, were touched and moved by the deep sorrow

with which he looked on the dead woman, and admired the light, happy smile with which he surveyed the girl at play. But we knew that in all three cases the face was exactly the same.'

Subsequent experiments confirmed the filmmakers' findings. When shown cartoons of simple moving shapes, viewers helplessly inferred animism and built cause-and-effect narratives about what was happening: this ball is bullying that one; this triangle is attacking this line, and so on. When presented with discs moving randomly on a screen, viewers imputed chase sequences where there were none.

Cause and effect is the natural language of the brain. It's how it understands and explains the world. Compelling stories are structured as chains of causes and effects. A secret of bestselling page-turners and blockbusting scripts is their relentless adherence to forward motion, one thing leading directly to another. In 2005, the Pulitzer prizewinning playwright David Mamet was captaining a TV drama called *The Unit.* After becoming frustrated with his writers producing scenes with no cause and effect – that were, for instance, simply there to deliver expository information – he sent out an angry ALL CAPS memo, which leaked online (I've de-capped what follows to save your ears): 'Any scene which does not both advance the plot and standalone (that is, dramatically, by itself, on its own merits) is either superfluous or incorrectly written,' he wrote. 'Start, every time, with this inviolable rule: the scene must be dramatic. It must start because the hero has a problem, and it must culminate with the hero finding him or herself either thwarted or educated that another way exists.'

The issue isn't simply that scenes without cause and effect tend to be boring. Plots that play too loose with cause and effect risk becoming confusing, because they're not speaking in the brain's language. This is what the screenwriter of *The Devil Wears Prada*, Aline Brosh McKenna, suggested when she said, 'You want all your scenes to have a "because" between them, and not an "and then".' Brains struggle with 'and then'. When one thing happens over here, and then we're with a woman in a car park who's just witnessed a stabbing, and then there's a rat in Mothercare in 1977, and then there's an old man singing sea shanties in a haunted pear orchard, the writer is asking a lot of people.

But sometimes this is on purpose. An essential difference between commercial and literary storytelling is its use of cause and effect. Change

in mass-market story is quick and clear and easily understandable, while in high literature it's often slow and ambiguous and demands plenty of work from the reader, who has to ponder and de-code the connections for themself. Novels such as Marcel Proust's *Swann's Way* are famously meandering and include, for example, a description of hawthorn blossom that lasts for well over a thousand words. ('You are fond of hawthorns,' one character remarks to the narrator, halfway through.) The art-house films of David Lynch are frequently referred to as 'dreamlike' because, like dreams, there's often a dearth of logic to their cause and effect.

Those who enjoy such stories are more likely to be expert readers, those lucky enough to have been born with the right kinds of minds, and raised in learning environments that nurtured the skill of picking up the relatively sparse clues in meaning left by such storytellers. I also suspect they tend to be higher than average in the personality trait 'openness to experience', which strongly predicts an interest in poetry and the arts (and also 'contact with psychiatric services'). Expert readers understand that the patterns of change they'll encounter in art-house films and literary or experimental fiction will be enigmatic and subtle, the causes and effects so ambiguous that they become a wonderful puzzle that stays with them months and even years after reading, ultimately becoming the source of meditation, re-analysis and debate with other readers and viewers – *why did characters behave as they did? What was the filmmaker really saying*?

But all storytellers, no matter who their intended audience, should beware of over-tightening their narratives. While it's dangerous to leave readers feeling confused and abandoned, it's just as risky to over-explain. Causes and effects should be *shown* rather than told; suggested rather than explained. Readers should be free to anticipate what's coming next and able to insert their own feelings and interpretations into why *that* just happened and what it all means. These gaps in explanation are the places in story in which readers insert themselves: their preconceptions; their values; their memories; their connections; their emotions – all become an active part of the story. No writer can ever transplant their neural world perfectly into a reader's mind. Rather, their two worlds mesh. Only by the reader insinuating themselves into a work can it create a resonance that has the power to shake them as only art can.

1.9

So our mystery is solved. We've discovered where a story begins: with a moment of unexpected change, or with the opening of an information gap, or likely both. As it happens to a protagonist, it happens to the reader or viewer. Our powers of attention switch on. We typically follow the consequences of the dramatic change as they ripple out from the start of the story in a pattern of causes and effects whose logic will be just ambiguous enough to keep us curious and engaged. But while this is technically true, it's actually only the shallowest of answers. There's obviously more to storytelling than this rather mechanical process.

A similar observation is made by a story-maker near the start of Herman J. Mankiewicz and Orson Welles's 1941 cinema classic *Citizen Kane*. The film opens with change and an information gap: the recent death of the mogul Charles Foster Kane, as he drops a glass globe that contains a little snow-covered house and utters a single, mysterious word: *rosebud*. We're then presented with a newsreel that documents the raw facts of his seventy years of life: Kane was a well known yet controversial figure who was extraordinarily wealthy and once owned and edited the *New York Daily Inquirer*. His mother ran a boarding house and the family fortune came after a defaulting tenant left her a gold mine, the Colorado Lode, which had been assumed worthless. Kane was twice married, twice divorced, lost a son and made an unsuccessful attempt at entering politics, before dying a lonely death in his vast, unfinished and decaying palace that, we're told, was, 'since the pyramids, the costliest monument a man has built to himself'.

With the newsreel over, we meet its creators – a team of cigarette-smoking newsmen who, it turns out, have just finished their film and are showing it to their boss Rawlston for his editorial comments. And Rawlston is not satisfied. 'It isn't enough to tell us what a man did,' he tells his team. 'You've got to tell us who he was … How is he different from Ford? Or Hearst, for that matter? Or John Doe?'

That newsreel editor was right (as editors are with maddening regularity). We're a hyper-social species with domesticated brains that have been engineered specifically to control an environment of humans. We're insatiably inquisitive, beginning with our tens of thousands of childhood questions about how one thing causes another. Being a domesticated species, we're most interested of all in the cause and effect

of other people. We're endlessly curious about them. What are they thinking? What are they plotting? Who do they love? Who do they hate? What are their secrets? What matters to them? Why does it matter? Are they an ally? Are they a threat? Why did they do that irrational, unpredictable, dangerous, incredible thing? What drove them to build 'the world's largest pleasure ground' on top of a manmade 'private mountain' that contained the most populous zoo 'since Noah' and a 'collection of everything so big it can never be catalogued'? Who is the person really? How did they become who they are?

Good stories are explorations of the human condition; thrilling voyages into foreign minds. They're not so much about events that take place on the surface of the drama as they are about the characters that have to battle them. Those characters, when we meet them on page one, are never perfect. What arouses our curiosity about them, and provides them with a dramatic battle to fight, is not their achievements or their winning smile. It's their flaws.

CHAPTER TWO:

THE FLAWED SELF

2.0

There's something you should know about Mr B. He's being watched by the FBI. They film him constantly and in secret, then cut the footage together and broadcast it to millions as 'The Mr B Show'. This makes life rather awkward for Mr B. He showers in swimming trunks and dresses beneath bedsheets. He hates talking to others, as he knows they're actors hired by the FBI to create drama. How can he trust them? He can't trust anyone. No matter how many people explain why he's wrong, he just can't see it. He finds a way to dismiss each argument they present to him. He *knows* it's true. He *feels* it's true. He sees evidence for it *everywhere*.

There's something else you should know about Mr B. He's psychotic. One healthy part of his brain, writes the neuroscientist Professor Michael Gazzaniga, 'is trying to make sense out of some abnormalities going on in another'. The malfunctioning part is causing 'a conscious experience with very different contents than would normally be there, yet those contents are what constitute Mr B's reality and provide experiences that his cognition must make sense of.'

Because it's being warped by faulty signals being sent out by the unhealthy section of his brain, the story Mr B is telling about the world, and his place within it, is badly mistaken. It's so mistaken he's no longer able to adequately control his environment, so doctors and care staff have to do it on his behalf, in a psychiatric institution.

As unwell as he is, we're all a bit like Mr B. The controlled hallucination inside the silent, black vault of our skulls that we experience as reality is warped by faulty information. But because this distorted reality is the only reality we know, we just can't see where it's gone wrong. When people plead with us that we're mistaken or cruel and acting irrationally, we feel driven to find a way to dismiss each argument they present to us. We *know* we're right. We *feel* we're right. We see evidence for it *everywhere*.

These distortions in our cognition make us flawed. Everyone is flawed in their own interesting and individual ways. Our flaws make us who we are, helping to define our character. But our flaws also impair our ability to control the world. They harm us.

At the start of a story, we'll often meet a protagonist who is flawed in some closely defined way. The mistakes they're making about the world will help us empathise with them. We'll warm to their vulnerability. We'll become emotionally engaged in their struggle. When the dramatic events of the plot coax them to change we'll root for them.

The problem is, in fiction and in life, changing who we are is hard. The insights we've learned from neuroscience and psychology begin to show us exactly *why* it's hard. Our flaws – especially the mistakes we make about the human world and how to live successfully within it – are not simply ideas about this and that which we can identify easily and choose to shrug off. They're built right into our hallucinated models. Our flaws form part of our perception, our experience of reality. This makes them largely invisible to us.

Correcting our flaws means, first of all, managing the task of actually seeing them. When challenged, we often respond by refusing to accept our flaws exist at all. People accuse us of being 'in denial'. Of course we are: we literally can't see them. When we *can* see them, they all too often appear not as flaws at all, but as virtues. The mythologist Joseph Campbell identified a common plot moment in which protagonists 'refuse the call' of the story. This is often why.

Identifying and accepting our flaws, and then changing who we are, means breaking down the *very structure of our reality* before rebuilding it in a new and improved form. This is not easy. It's painful and disturbing. We'll often fight with all we have to resist this kind of profound change. This is why we call those who manage it 'heroes'.

There are various routes by which characters and selves become unique and uniquely flawed, and a basic understanding of them can be of great value to storytellers. One major route involves those moments of change. The brain constructs its hallucinated model of the world by observing millions of instances of cause and effect then constructing its own theories and assumptions about how one thing caused the other. These micro-narratives of cause and effect – more commonly known as 'beliefs' – are the building blocks of our neural realm. The beliefs it's built from feel personal to us because they help make up the world that we inhabit and our understanding of who we are. Our beliefs feel personal to us because they *are* us.

But many of them will be wrong. Of course the controlled hallucination we live inside is not as distorted as the one that Mr B lives

inside. Nobody, however, is right about everything. Nevertheless, the storytelling brain wants to sell us the illusion that we are. Think about the people closest to you. There won't be a soul among them with whom you've never disagreed. You know *she's* slightly wrong about that, and *he's* got that wrong, and don't get *her* started on that. The further you travel from those you admire, the more wrong people become until the only conclusion you're left with is that entire tranches of the human population are stupid, evil or insane. Which leaves you, the single living human who's right about everything – the perfect point of light, clarity and genius who burns with godlike luminescence at the centre of the universe.

Hang on, that can't be right. You must be wrong about *something*. So you go on a hunt. You count off your most precious beliefs – the ones that really matter to you – one by one. You're not wrong about *that* and you're not wrong about *that* and you're certainly not wrong about *that* or *that* or *that* or *that*. The insidious thing about your biases, errors and prejudices is that they appear as real to you as Mr B's delusions appear to him. It feels as if everyone else is 'biased' and it's only you that sees reality as it actually is. Psychologists call this 'naive realism'. Because reality seems clear and obvious and self-evident to you, those who claim to see it differently must be idiots or lying or morally derelict. The characters we meet at the start of story are, like most of us, living just like this – in a state of profound naivety about how partial and warped their hallucination of reality has become. They're wrong. They don't know they're wrong. But they're about to find out …

If we're all a bit like Mr B then Mr B is, in turn, like the protagonist in Andrew Niccol's screenplay, *The Truman Show*. It tells of thirty-year-old Truman Burbank, who's come to believe his whole life is staged and controlled. But, unlike Mr B, he's right. *The Truman Show* is not only real, it's being broadcast, twenty-four hours a day, to millions. At one point, the show's executive producer is asked why he thinks it's taken Truman so long to become suspicious of the true nature of his world. 'We accept the reality of the world with which we're presented,' he answers. 'It's as simple as that.'

We certainly do. As wrong as we are, we rarely question the reality our brains conjure for us. It is, after all, our 'reality'. As well as this, the hallucination is functional. Each one of the tiny beliefs that make up our neural model is a little instruction that tells our brain how the outside

world works: *this is how you open a stuck jam jar lid; this is how you lie to a police officer; this is how you behave if you want your boss to believe you're a useful, sane and honest employee*. These instructions make our environment predictable. They make it controllable. Taken in sum, the vastly intricate web of beliefs can be seen as the brain's 'theory of control'. It's this theory of control that's often challenged at the story's start.

In his celebrated novel *The Remains of the Day*, Kazuo Ishiguro takes us into the warped and flawed neural realm of James Stevens, a proud head butler in a large stately home. We learn that his core beliefs about the world and how to control it came from his father, Stevens Senior, who was a butler of prodigious talent. Stevens is passionate about his calling and muses about the 'special quality' that made his father, and butlers like him, so great. 'Dignity', he decides, the key to which is 'emotional restraint'. Just as the English landscape is beautiful because of its 'lack of obvious drama or spectacle', a great butler 'will not be shaken out by external events, however surprising, alarming or vexing'.

Emotional restraint is why the English make the best butlers. 'Continentals are unable to be butlers because they are as a breed incapable of the emotional restraint which only the English race are capable of.' They, and the Celts for that matter, 'are like a man who will, at the slightest provocation, tear off his suit and his shirt and run about screaming.' Emotional restraint is the pivotal idea around which his neural model of the world is built. It's his theory of control. If he adheres to it, he'll be able to manipulate his environment in such a way that he'll get what he wants, namely, the reputation of a brilliant butler. This flawed belief defines him. It *is* him. It's characters like Stevens, who inhabit their flaw with such concentrated precision, that often prove to be the most memorable, immediate and compelling.

Ishiguro's book softly yet brutally exposes the ways in which Steven's flawed perceptions of reality have harmed him. Its most crushing scenes play out one evening, as Stevens is captaining an important function at the house. Upstairs, his elderly father, finally broken by a lifetime of service, has just come around after suffering a collapse. A preoccupied Stevens is persuaded to see him. Perhaps sensing the gravity of his situation, Stevens Senior breaks through his own ironclad armour of emotional restraint and expresses a hope that he's been a good father. His son can only respond with an awkward laugh. 'I'm so glad you're feeling

better now,' he says. His father tells him he's proud of him. Then he pushes the point, 'I hope I've been a good father to you. I suppose I haven't.'

'I'm afraid we're extremely busy now,' his son replies. 'But we can talk again in the morning.'

Later that evening, Stevens Senior has a stroke. He's on the edge of death. His son is coaxed up to see him again and, again, insists he must return to his duties. Downstairs his boss, Lord Darlington, senses something's wrong. 'You look as though you're crying,' he says. Stevens quickly dabs the corners of his eyes and laughs, 'I'm very sorry, sir. The strains of a hard day.' When his father dies, shortly afterwards, Stevens is again too busy to attend. 'I know my father would have wished me to carry on just now,' he remarks to a maid. And there's little doubt he's correct.

The brilliance of this sequence – its psychological truth – is that this is not a memory of shame and regret, for Stevens, but one of victory. In fact, it's his pitch for being held in the pantheon of the Britain's greatest and most dignified butlers. 'For all its sad associations,' he says, 'whenever I recall that evening today, I find I do so with a large sense of triumph.' The hallucinated model Stevens had of reality was built around the value of emotional restraint. That was the core of his brain's theory about how a person should control the world. And, as far as he was concerned, he'd aced it.

Stevens's neural world was warped and twisted and yet, just like Mr B, he saw evidence all around him that it was entirely accurate. After all, hadn't his model of reality and its theory of control worked? Hadn't his belief in the sacred value of emotional restraint given him his career, his status and protected him from the pain of losing his father? Ishiguro's novel is an exploration of the truth of that flaw and its ramifications – how, as Salman Rushdie has written, Stevens was, 'destroyed by the ideas upon which he has built his life'.

The mythologist Joseph Campbell said that 'the only way you can describe a human being truly is by describing his imperfections.' It's this imperfect person we meet in story and in life. But unlike in life, story allows us to crawl into that character's mind and understand them. For us hyper-social domesticated creatures, there's little more fascinating than the cause and effect of other people, the 'why' of what people do as they do. But story offers more than just this. Locked inside the black vault of

our skulls, stuck forever in the solitude of our own hallucinated universe, story is a portal, a hallucination within the hallucination, the closest we'll ever really come to escape.

2.1

When designing a character, it's often useful to think of them in terms of their theory of control. How have they learned to control the world? When unexpected change strikes, what's their automatic go-to tactic for wrestling with the chaos? What's their default, flawed response? The answer, as we've just seen, comes from that character's core beliefs about reality, the precious and fiercely defended ideas around which they've formed their sense of self.

But who we are, in all our partiality and weirdness, is also partly genetic. Our genes begin to guide the way our brains and hormonal systems are wired up when we're in the womb. We enter the world semi-finished. Then, early life events and influences work in combination with genes to build our core personality. Unless something terrible happens to psychologically break us, this personality is likely to remain relatively stable throughout our life, changing only modestly and in predictable ways as we age.

Psychologists measure personality across five domains, which can be useful for writers doing character work to know. Those high in extraversion are gregarious and assertive, seekers of attention and sensation. Being high in neuroticism means you're anxious, self-conscious and prone to depression, anger and low self-esteem. Lots of openness makes for a curious soul, someone artistic, emotional and comfortable with novelty. High-agreeable people are modest, sympathetic and trusting while their disagreeable opposites have a competitive and aggressive bent. Conscientious people prefer order and discipline and value hard work, duty and hierarchy. Psychologists have applied these domains to fictional characters. One academic paper included the following examples:

Neuroticism (high): Miss Havisham *(Great Expectations,* Charles Dickens*)*

Neuroticism (low): James Bond *(Casino Royale,* Ian Fleming*)*

Extraversion (high): The Wife of Bath *(The Canterbury* Tales, Geoffrey Chaucer*)*

Extraversion (low): Boo Radley *(To Kill a Mockingbird*, Harper Lee*)*

Openness (high): Lisa Simpson *(The Simpsons*, Matt Groening*)*

Openness (low): Tom Buchanan *(The Great Gatsby*, F. Scott Fitzgerald*)*

Agreeableness (high): Alexei Karamazov *(The Brothers Karamazov*, Fyodor Dostoyevsky*)*

Agreeableness (low): Heathcliff *(Wuthering Heights*, Emily Brontë*)*

Conscientiousness (high): Antigone *(Antigone*, Sophocles*)*

Conscientiousness (low): Ignatius J. Reilly *(A Confederacy of Dunces*, John Kennedy Toole*)*

These 'big five' personality traits aren't switches – we're not one thing or the other. Rather, they're dials, with us having more or less of each trait, our particular highs and lows combining to form our own peculiar self. Personality has a powerful influence over our theory of control. Different personalities have different go-to tactics for controlling the environment of people. When unexpected change threatens, some are more likely to jump to aggression and violence, some charm, some flirtation, others will argue or withdraw or become infantile or try to negotiate for consensus or become Machiavellian or dishonest, resorting to threat, bribery or con.

This, then, is how unique and interesting fictional characters generate unique and interesting plots. 'It is from character,' writes the psychologist Professor Keith Oatley, 'that flow goals, plans and actions.' As we interact with the world in our own characteristic way, so the world pushes back in ways which reflect it, setting us off in our own particular cause-and-effect journey – a plot specific to us. A disagreeable neurotic sending out grumpy, twitchy causes into the world has to deal with the negative effects that fly back. A feedback loop of grumpiness emerges, with the neurotic convinced they're behaving reasonably and rationally only to be tossed, once again, into an oubliette of hostility and disapproval. One extra episode of paranoia or irritation per week will trigger enough negativity in other people that they'll find themselves living in a neural realm that's entirely different from the average smiley

high-agreeable. It's in these ways that tiny differences in brain structure can add up to massively different lives and plots.

Personality can predict what kinds of futures we might have too. Conscientious people tend to enjoy greater than average job security and life satisfaction; extroverts are more likely to have affairs and car accidents; disagreeable people are better at fighting their way up corporate ladders into the highest-paying jobs; those high in openness are more likely to get tattoos, be unhealthy and vote for left-wing political parties while those low in conscientiousness are more likely to end up in prison and have a higher risk of dying, in any given year, of around 30 per cent. Although women and men are far more alike than they are different, there are gender differences. One of the most reliable findings in the literature is that males tend to be more disagreeable than females, with the average man scoring lower in agreeability than around 60 per cent (and, in some studies, 70 per cent) of women. A similar personality gap is found for neuroticism, where the average man scores lower than around 65 per cent of women.

As a person low in extraversion and high in neuroticism, writing to you from the corner of a darkened room in a cottage that lies at the end of a crumbling path, deep in the Kent countryside, I can attest to the extent to which traits can guide fates. The butler Stevens would've been attracted to his life of service in part because of his personality, which seems unusually high in conscientiousness and low in openness and extraversion. He'd have inherited these traits from his much-admired father because personality, of course, is significantly heritable. Charles Foster 'Citizen' Kane, meanwhile, was low in agreeableness, low in neuroticism and high in extraversion: he was monstrously ambitious, lacked self-doubt and craved the approval of others. It was these three qualities, more than any others, that defined his personality and dictated the decisions which formed the plot of his life.

2.2

Storytellers can show the personality of their characters in almost everything they do: it's in their thoughts, dialogue, social behaviours, memories, desires and sadnesses. It's in how they behave in traffic jams, what they think of Christmas and their reaction to a bee. 'Human

personalities are rather like fractals,' writes the psychologist Professor Daniel Nettle. 'It is not just that what we do in the large-scale narratives of our lives – love, career, friendships – tends to be somewhat consistent over time, with us often repeating the same kinds of triumph or mistakes. Rather, what we do in tiny interactions like the way we shop, dress or talk to a stranger on the train or decorate our houses, shows the same kinds of patterns as can be observed from examining a whole life.'

Human environments are rich with clues about those who occupy them. People make 'identity claims' to broadcast who they are. This could be through displaying certificates, books, tattoos or meaningful objects. Identity claims betray how these people want others to think of them. People use 'feeling regulators', motivational posters, scented candles or items that make them feel nostalgic, excited or loved. Extroverts who feel energised by bright colours are more likely to decorate their homes or dress accordingly, while introverts prefer the hush of muted tones. 'Behavioural residue' is what psychologists call the things we accidentally leave behind: the stashed wine bottle, the torn-up manuscript, the punch dent in the wall. The psychologist Professor Sam Gosling advises the curious to 'look out for discrepancies in the signals that people send to themselves and others'. Broadcasting one version of self in their private spaces and another in their hallways, kitchens and offices can hint at a tortuous 'fractionating of the self'.

In her novel *Notes on a Scandal*, Zoë Heller makes brilliant use of home environments to feed our neural models of its two central characters. When the narrator Barbara Covett (low in openness and agreeableness, high in conscientiousness) visits the home of Sheba Hart (the opposite) we're treated to a rich insight into their contrary personalities. Covett recalls that, on the rare occasion she has visitors to her flat she cleans it 'scrupulously' and even grooms the cat. And yet she still experiences 'the most terrible feeling of exposure … as if my dirty linen, rather than my unexceptional sitting room, were on display'. Not so Sheba. When Barbara enters her living room she sees in it a 'bourgeois confidence' and a 'level of disorder … I could never tolerate'. There is 'tatty, gigantic furniture', 'her children's stray underwear', 'a primitive wooden instrument, possibly African, which looked as if it might be rather smelly'. The mantelpiece is 'a gathering point for household flotsam. A child's drawing. A hunk of pink Play-Doh. A passport. One elderly-looking banana.'

The environment triggers, in Barbara, a reaction that surprises her: the clutter makes her envious. This, in turn, sparks a melancholy thought that illuminates her character further and also relies on the way personality helplessly leaks into the spaces we occupy.

> *When you live alone, your furnishings, your possessions, are always confronting you with the thinness of your existence. You know with painful accuracy the provenance of everything you touch and the last time you touched it. The five little cushions on your sofa stay plumped and leaning at their jaunty angle for months at a time unless you theatrically muss them. The level of the salt in your shaker decreases at the same excruciating rate, day after day. Sitting in Sheba's house – studying the mingled detritus of its several inhabitants – I could see what a relief it might be to let your own meagre effects be joined with other people's.*

In this vivid and touching passage we hear the howl of the lonely in five plumped cushions and salt.

Our habit of leaving revealing clues in our environment is why journalists prefer interviewing subjects in their homes. When Lynn Barber met the formidable architect Zaha Hadid, she was let into her 'bare white penthouse' by a publicist prior to Hadid's arrival. The flat, in which she'd lived for two and a half years, had 'all the intimacy of a car showroom', wrote Barber.

> *It is extremely, dauntingly, hard. There are no curtains, carpets, cushions or upholstery of any kind. The furniture, if that's the right word, consists of slippery amorphous shapes made of reinforced fibreglass and painted with car paint … Her bedroom is fractionally more inviting in that it does at least have a recognisable bed, a small oriental rug, and a table with all her jewellery and scent bottles laid out, but that's about it.'*

Rooms, she wrote, 'are supposed to provide clues to personality, but this seems to be a statement of impersonality'. Of course, Barber's vivid and telling descriptions richly fed our models of Hadid's mind. We began to know who she was before she'd even walked in.

2.3

As powerful a force as personality is, we're more than just introverts, extraverts and the rest. Our traits work with our cultural, social and economic environments, as well as the experiences we go through, to construct a neural world for us to live in that is unique.

There's little more thrilling, in a story, than suddenly encountering a mind that is utterly different to ours while being revealing of character

and the story to come. The protagonist's point of view orients us in the story. It's a map of clues, full of hints about its owner's flaws and the plot they're going to create. For me, it's the single most underrated quality of fiction writing. Too many books and films begin with characters that seem to be mere outlines: perfect, innocent human-shaped nothings, perhaps with a bolt-on quirk or two, waiting to be coloured in by the events of the plot. Far better to find ourselves waking up, on page one, startled and exhilarated to find ourselves inside a mind and a life that feels flawed, fascinating, specific and real.

Charles Bukowski manages this brilliantly in the opening paragraph of his novel *Post Office*:

> *It began as a mistake.*
>
> *It was Christmas season and I learned from the drunk up on the hill, who did the trick every Christmas, that they would hire damned near anybody, and so I went and the next thing I knew I had this leather sack on my back and was hiking around at my leisure. What a job, I thought. Soft! They only gave you a block or two and if you managed to finish, the regular carrier would give you another block to carry, or maybe you'd go back in and the soup would give you another, but you just took your time and shoved those Xmas cards in the slots.*

A world away from blue-collar Los Angeles, Zadie Smith's *White Teeth* opens in Cricklewood Broadway at the scene of the attempted suicide of 47-year-old Archie Jones, 'dressed in corduroy and sat in a fume-filled Cavalier Musketeer Estate … scrunched up in each fist he held his army service medals (left) and his marriage licence (right), for he had decided to take his mistakes with him … He wasn't the type to make elaborate plans – suicide notes and funeral instructions – he wasn't the type for anything fancy. All he asked for was a bit of silence, a bit of shush so he could concentrate … He wanted to do it before the shops opened.'

In most of the best contemporary fiction, objects and events aren't usually described from a God-like view, but from the unique perspective of the character. As in life, everything we encounter is a component not of objective external reality, but of that character's inner neural realm – the controlled hallucination that, no matter how real it seems, exists only in their head and is, in its own way, wrong. In fiction, it might not be going too far to say *all* description works as a description of character.

In an electrifying passage from his novel *Another Country*, James Baldwin shows Rufus Scott – a doomed African-American trying to survive in 1950s America – walking into a Harlem jazz club. Baldwin's description of the saxophonist playing on the stage crackles with as

much information about Scott, his world and his frustrated attempts at controlling it, as it does about the musician, who he perceives,

> *wide-legged, humping the air, filling his barrel chest, shivering in the rags of his twenty-odd years, and screaming through the horn Do you love me? Do you love me? Do you love me? And again Do you love me? Do you love me? Do you love me? This, anyway, was the question Rufus heard, the same phrase, unbearably endlessly, and variously repeated with all the boy had … the question was terrible and real; the boy was blowing with his lungs and guts out of his own short past; somewhere in that past, in the gutters or gang fights or gang shags; in the acrid room, on the sperm-stiffened blanket, behind marijuana or the needle, under the smell of piss in the precinct basement, he had received the blow from which he never would recover and this no one wanted to believe. Do you love me? Do you love me? Do you love me?*

2.4

Culture is another route by which characters in life and fiction become the flawed and peculiar people they are. We often think of ‘culture’ as surface phenomena, such as opera and literature and modes of dress, but culture is actually built deeply and directly into our model of the world. It forms part of the neural machinery that constructs our hallucination of reality. Culture distorts and narrows the lens through which we experience life, exerting a potent influence us, whether by dictating the moral rules we’ll fight and die to defend or defining the kinds of foods we’ll perceive as delicious. The Japanese eat *hachinoko*, a delicacy made from baby bees. The Korowai of Papua New Guinea eat people. Americans consume ten billion kilograms of beef a year, while in India, where cows are sacred, a vigilante might kill you for eating a steak sandwich. Orthodox Jewish wives shave their heads and wear wigs, lest any alluring trace of hair be glimpsed by dirty mortals. The Waorani of Ecuador wear almost nothing at all.

Such cultural norms are incorporated into our models in childhood, a period in which the brain is rapidly working out who it needs to be in order to best control its particular environment. Between the ages of zero and two, it generates around 1.8 million neural connections every second. It remains in this state of increased malleability – or ‘plasticity’ – until late adolescence or early adulthood. It learns, in part, through playing. Lots of animals enjoy these pleasurable, rule-based, exploratory interactions, including dolphins, kangaroos and rats. But our domestication, and the highly complex social realm we must learn to

control, has elevated the importance of play in humans. It's the main reason we have such greatly extended childhoods.

We've evolved different forms of play, from games to education to storytelling. Play, including storytelling, is typically overseen by adults who tell children what's fair and not fair, what's of value and not, and how we should behave, punishing and rewarding when we act in accordance, or not, to the models of our culture. Caregivers don't merely read morally charged stories to their children, they often add their own narration, underlining the narrative's message. Play is critical for the making of social minds. One study into the backgrounds of sociopathic murderers found no connection between them apart from an extreme lack of play, or a history of abnormal play such as sadism and bullying, in the childhoods of 90 per cent of them.

It's in our first seven years that culture mostly gets built into our models, honing and particularising our neural realm. Western children are raised in a culture of individualism which was birthed around 2,500 years ago in Ancient Greece. Individualists tend to fetishise personal freedom and perceive the world as being made up of individual pieces and parts. This gives us a set of particular values that strongly influence the stories we tell. According to some psychologists, it's a mode of thinking that arose from the physical landscape of Ancient Greece. It was a rocky, hilly, coastal place, and therefore poor for large group endeavours like farming. This meant you had to be something of a hustler to get by – a small business person tanning hides, perhaps, or foraging or making olive oil or fishing. The best way of controlling that world, in Ancient Greece, was by being self-reliant.

Because individual self-reliance was the key to success, the all-powerful individual became a cultural ideal. The Greeks sought personal glory and perfection and fame. They created that legendary competition of self versus self, the Olympics, practised democracy for fifty years and became so self-focused they felt compelled to warn of the dangers of runaway self-love in the story of Narcissus. This conception of the individual as the locus of their own power, free to choose the life they wanted, rather than being slave to the whims of tyrants, fates and gods, was revolutionary. It 'changed the way people thought about cause and effect,' writes the psychologist Professor Victor Stretcher, 'heralding in Western civilisation'.

Compare this pushy, freedom-loving self to the one that emerged in the East. The undulating and fertile landscape in Ancient China was perfect for large groupish endeavours. Getting by would have probably meant being a part of a sizeable wheat- or rice-growing community or working on a huge irrigation project. The best way of controlling the world, in that place, was ensuring the group, rather than the individual, was successful. That meant keeping your head down and being a team player. This collective theory of control led to a collective ideal of self. In the Analects, Confucius is recorded as describing 'the superior man' as one who 'does not boast of himself', preferring instead the 'concealment of his virtue'. He 'cultivates a friendly harmony' and 'lets the states of equilibrium and harmony exist in perfection'. He could hardly be more different than the pushy Westerner emerging seven thousand kilometres away.

For the Greeks, the primary agent of control was the individual. For the Chinese, it was the group. For the Greeks, reality was made up of individual pieces and parts. For the Chinese, it was a field of interconnected forces. Out of these differences in the experience of reality come different story forms. Greek myths usually have three acts, Aristotle's 'beginning, middle and end', perhaps more usefully described as crisis, struggle, resolution. They often starred singular heroes battling terrible monsters and returning home with treasures.

This was individualist propaganda, transmitting the notion that one courageous person really could change everything. These story outlines begin influencing a Western child's emerging self surprisingly early. On being asked by researchers to spontaneously tell a story, one three-year-old girl in the US produced a perfect sequence of crisis-struggle-resolution: 'Batman went away from his mommy. Mommy said, "Come back, come back." He lost and his mommy can't find him. He ran like this to come home. He eat muffins and he sat on his mommy's lap. And then him have a rest.'

Stories weren't like this in Ancient China. This was a realm so other-focused there was practically no real autobiography for two thousand years. When it did finally emerge, life stories were typically told stripped of the subject's voice and opinions and they were positioned not at the centre of their own lives but as a bystander looking in. Rather than following a straightforward pattern of cause and effect, Eastern fiction often took the form of Ryu–nosuke Akutagawa's 'In A Bamboo Grove',

in which the events surrounding a murder are recounted from the perspectives of several witnesses – a woodcutter, a priest, a policeman, an elderly woman, the accused murderer, the victim's wife, and finally from a spirit medium channelling the victim himself. All these accounts somehow contradict each other, with the reader left to puzzle out their meaning for themselves.

In such stories, according to the psychologist Professor Uichol Kim, 'you're never given the answer. There's no closure. There's no happily ever after. You're left with a question that you have to decide for yourself. That's the story's pleasure.' In Eastern tales that did focus on an individual, the hero's status tended to be earned in a suitably group-first way. 'In the West you fight against evil and the truth prevails and love conquers all,' he said. 'In Asia it's a person who sacrifices who becomes the hero, and takes care of the family and the community and the country.'

The Japanese form known as Kishõtenketsu comes with four acts: in act one ('ki') we're introduced to the characters, in act two ('sho') the actions follow on, in act three ('ten') a twist that's surprising or even apparently unconnected takes place and in the final act ('ketsu') we're invited, in some open-ended way, to search for the harmony between it all. 'One of the confusing things about stories in the East is there's no ending,' said Professor Kim. 'In life there are not simple, clear answers. You have to find these answers.'

Whereas Westerners enjoy having accounts of individual struggle and victory beamed into their neural realms, Easterners take pleasure from the narrative pursuit of harmony.

What these forms reflect is the different ways our cultures understand change. For Westerners, reality is made up of individual pieces and parts. When threatening unexpected change strikes, we tend to reimpose control by going to war with those pieces and parts and trying to tame them. For Easterners, reality is a field of interconnected forces. When threatening unexpected change strikes, they're more likely to reimpose control by attempting to understand how to bring those turbulent forces back into harmony so that they can all exist together. What they have in common is story's deepest purpose. They teach lessons in control.

2.5

It takes time for a self, with all its flaws and peculiarities, to bend itself out of the universe. It begins with us recognising our image in the mirror. Our caregivers tell us stories about the past and the present, what's happening around us and what we had to do with it. We begin to contribute to these little stories about ourselves. We realise we're goal-directed – we want things and we try to get them. We grasp that we're surrounded by other minds that are also goal-directed. We understand ourselves to be a certain category of human – a girl, a boy, working-class – of whom others have specific expectations. We have power and have done things. These pockets of story memory slowly begin to connect and cohere. They form plots that become imbued with character and theme. Finally, in adolescence, writes the psychologist Professor Dan McAdams, we endeavour to understand our life as a 'grand narrative, reconstructing the past and imagining the future in such a way as to provide it with some semblance of purpose, unity and meaning'.

Having undergone its adolescent narrative-making process, the brain has essentially worked out who we are, what matters, and how we should behave in order to get what we want. Since birth, it's been in a state of heightened plasticity that has enabled it to build its models. But now it becomes less plastic and harder to change. Most of the peculiarities and mistakes that make us who we are have become incorporated into its models. Our flaws and peculiarities have become who we are. Our minds have been made up.

Then the brain enters a state that's valuable to understand for anyone interested in human conflict and drama. From being model-builders we become model defenders. Now that the flawed self with its flawed model of the world has been constructed, the brain starts to protect it. When we encounter evidence that it might be wrong, because other people aren't perceiving the world as we do, we can find it deeply disturbing. Rather than changing its models by acknowledging the perspectives of these people, our brains seek to deny them.

This is how the neurobiologist Professor Bruce Wexler describes it: 'Once [the brain's] internal structures are established they turn the relationship between the internal and external around. Instead of the internal structures being shaped by the environment, the individual now acts to preserve established structures in the face of environmental challenges, and finds changes in structure difficult and painful.' We respond to such challenges with distorted thinking, argument and

aggression. As Wexler writes, ‘we ignore, forget or attempt to actively discredit information that is inconsistent with these structures’.

The brain defends our flawed model of the world with an armoury of crafty biases. When we come across any new fact or opinion, we immediately judge it. If it’s consistent with our model of reality our brain gives a subconscious feeling of *yes*. If it’s not, it gives a subconscious feeling of *no*. These emotional responses happen before we go through any process of conscious reasoning. They exert a powerful influence over us. When deciding whether to believe something or not, we don’t usually make an even-handed search for evidence. Instead, we hunt for any reason to confirm what our models have instantaneously decided for us. As soon as we find any half-decent evidence to back up our ‘hunch’ we think, ‘Yep, that makes sense.’ And then we stop thinking. This is sometimes known as the ‘makes sense stopping rule’.

Not only do our neural-reward systems spike pleasurably when we deceive ourselves like this, we kid ourselves that this one-sided hunt for confirmatory information was noble and thorough. This process is extremely cunning. It’s not simply that we ignore or forget evidence that goes against what our models tell us (although we do that too). We find dubious ways of rejecting the authority of opposing experts, give arbitrary weight to some parts of their testimony and not others, lock onto the tiniest genuine flaws in their argument and use them to dismiss them entirely. Intelligence isn’t effective at dissolving these cognitive mirages of rightness. Smart people are mostly better at finding ways to ‘prove’ they’re right and tend to be no better at detecting their wrongness.

It might seem odd that humans have evolved to be so irrational. One compelling theory has it that, because we evolved in groups, we’re designed to argue things out lawyer-style until the optimal way forward emerges. Truth, then, is a group activity and free speech an essential component. This would validate the screenwriter Russell T. Davies’s observation that good dialogue is ‘two monologues clashing. It’s true in life, never mind drama. Everyone is always, always thinking about themselves.’

Because our models make up our actual experience of reality, it’s little wonder that any evidence which suggests they are wrong is profoundly unsettling. ‘Things are experienced as pleasurable because they are familiar,’ writes Wexler, ‘while the loss of the familiar produces stress,

unhappiness and dysfunction.' We're so used to our aggressive model-defending responses – they're such an ordinary part of being alive – we become inured to their strangeness. Why do we dislike people we disagree with? Why do we feel emotionally repulsed by them?

The rational response, when encountering someone with alien ideas, would be to either attempt to understand them or shrug. And yet we become distressed. Our threatened neural models generate waves of sometimes overwhelming negative feelings. Incredibly, the brain treats threats to our neural models in the much same way as it defends our bodies from a physical attack, putting us into a tense and stressful fight-or-flight state. The person with merely differing views becomes a dangerous antagonist, a force that's actively attempting to harm us. The neuroscientist Professor Sarah Gimbel watched what happened when people in brain scanners were presented with evidence their strongly held political beliefs were wrong. 'The response in the brain that we see is very similar to what would happen if, say, you were walking through the forest and came across a bear,' she has said.

So we fight back. We might do so by trying to convince our opponent of their wrongness and our rightness. When we fail, as we usually do, we can be thrown into torment. We chew the conflict over and over, as our panicked mind lists more and more reasons why they're dumb, dishonest or morally corrupt. Indeed, language provides a stinking rainbow of words for people whose mental models conflict with ours: idiot, cretin, imbecile, pillock, berk, arsehole, airhead, sucker, putz, barnshoot, crisp-packet, clown, dick, divot, wazzock, fuckwit, fucknut, titbox, cock-end, cunt. After an encounter with such a person, we often seek out allies to help talk us down from the disturbance. We can spend hours discussing our neural enemies, listing all the ways they're awful, and it feels disgusting and delicious and is *such* a relief.

We organise much of our lives around reassuring ourselves about the accuracy of the hallucinated model world inside our skulls. We take pleasure in art, media and story that coheres with our models, and we feel irritated and alienated by that which doesn't. We applaud cultural leaders who argue for our rightness and, on encountering their opposite, feel defiled, disturbed, outraged and vengeful, perhaps wishing failure and humiliation on them. We surround ourselves with 'like-minded' people. Much of our most pleasurable social time is spent 'bonding' over the ways we agree we're right, especially on contentious issues. When

we meet people who have unusually similar models to us, we can talk to them nonstop. It's so blissful, reassuring ourselves like this, that time itself seems to vanish. We crave their company and put photos of them – arms across shoulders, smiles in beams – on our fridges and social-media feeds. They become friends for life. If the circumstances are right, we fall in love.

It's important to note, of course, that we don't defend all our beliefs like this. If someone approached me and argued that they can prove that every bipartite polyhedral graph with three edges per vertex has a Hamiltonian cycle, or that the Power Rangers could beat the Transformers in a fight, it would have little effect on me. The beliefs we'll fight to defend are the ones which we've formed our identity, values and theory of control around. An attack on these ideas is an attack on the very structure of reality as we experience it. It's these kinds of beliefs, and these kinds of attacks, that drive our greatest stories.

Much of the conflict we see in life and story involves exactly these model-defending behaviours. It involves people with conflicting perceptions of the world who fight to convince each other of their rightness, to make it so their opponent's neural model of the world matches theirs. If these conflicts can be deep and bitter and never-ending, it's partly because of the power of naive realism. Because our hallucination of reality seems self-evident, the only conclusion we can come to is that our antagonist, by claiming to see it differently, is insane, lying or evil. And that's exactly what they think of us.

But it's also by these kinds of conflicts that a protagonist learns and changes. As they struggle through the events of the plot, they'll usually encounter a series of obstacles and breakthroughs. These obstacles and breakthroughs often come in the form of secondary characters, each of whom experiences the world differently to them in ways that are specific and necessary to the story. They'll try to force the protagonist to see the world as they do. By grappling with these characters, the protagonist's neural model will be changed, even if subtly. They'll be led astray by antagonists, who'll represent perhaps darker and more extreme versions of their flaw. Likewise, they'll learn valuable lessons from allies, who are often the embodiment of new ways of being that our hero must adopt.

But before this dramatic journey of change has begun, our protagonist's neural model will probably still be convincing to them, even if it is, perhaps, beginning to creak at its edges – there might be

signs that their ability to control the world is failing, which they frantically ignore; there might be portentous problems and conflicts which rise and waft about them. Then something happens …

Good stories have a kind of ignition point. It's that wonderful moment in which we find ourselves sitting up in the narrative, suddenly attentive, our emotions switched on, curiosity and tension sparked. This often occurs when we sense an unexpected change has taken place in the plot that sends tremors to the core of the protagonist's flawed theory of control. Because it goes to the heart of their particular flaw, this event will cause them to behave in an unexpected way. They'll overreact or do something otherwise odd. This is our subconscious signal that the fantastic spark between character and event has taken place. The story has begun.

Typically, as their theory of control is increasingly tested and found wanting, the character will lose control over the events of the plot. In an archetypal tale, the more they struggle to regain control, the more trouble and chaos they'll often cause. The drama that is triggered compels the protagonist to make a decision: are they going to fix their flaw or not? *Who are they going to be?*

The cultural model that the butler Stevens had, in *The Remains of the Day*, was nineteenth-century British. It contained core beliefs about the value of dignity and emotional restraint. His model told him that these attributes were the best way to control his environment – that if you behaved with dignity and emotional restraint you would be safe and ultimately rewarded. This theory of control defined him.

And it had been true, in one place and time. But, when we first met Stevens, all that was changing. The power of the British aristocracy that he and his father served, and to which he owed these values, was fading, as was the power of Britain itself. For Stevens, the main practical consequence of these epochal shifts was that his new employer at Darlington Hall, Mr Farraday, was not an English Lord but an American businessman. This was an unexpected change that would challenge the very foundations of who Stevens was. It's a classic ignition point.

As the story starts, Stevens is struggling to meet the challenge of Farraday's not being able to afford the full complement of fourteen staff. Trying to keep the house running with just four people leads him to make 'a series of small errors in the carrying out of my duties' that vex him. But the arrival of his new boss triggers another problem, one that seems

to preoccupy Stevens even more: Farraday's 'unfamiliarity with what was and what was not commonly done in England'. Specifically, that his employer enjoys 'conversation of a light-hearted, humorous sort' and has a 'general propensity to talk with me in a bantering tone'.

This bantering makes Stevens profoundly uncomfortable. It's a direct attack on his identity, his beliefs, his theory of control. Bantering isn't what respectable people did. It isn't how you got on. It isn't dignified. It invites not emotional restraint but emotional warmth, and that way lies chaos.

On the one occasion Stevens tries to make a joke, it fails humiliatingly. He proves reluctant to change his core beliefs and his brain, as brains do, provides him with powerful excuses not to.

> *It is quite possible that my employer fully expects me to respond to his bantering in a like manner, and considers my failure to do so a form of negligence. This is, as I say, a matter which has given me much concern. But I must say this business of bantering is not a duty I feel I can ever discharge with enthusiasm. It is all very well, in these changing times, to adapt to one's work to take in duties not traditionally within one's realm; but bantering is of another dimension altogether. For one thing, how would one know for sure that at any given moment a response of the bantering sort is truly what is expected? One need hardly dwell on the catastrophic possibility of uttering a bantering remark only to discover it wholly inappropriate.*

2.6

We're all fictional characters. We're the partial, biased, stubborn creations of our own minds. To help us feel in control of the outside world, our brains lull us into believing things that aren't true. Among the most powerful of these beliefs are the ones that serve to bolster our sense of our moral superiority. Our brains are hero-makers that emit seductive lies. They want to make us feel like the plucky, brave protagonist in the story of our own lives.

In order to make us feel heroic, the brain craftily re-scripts our pasts. What we actually 'choose' to remember, and in what form, warps and changes in ways that suit the heroic story it wants to tell. When, in the laboratory, participants split money with anonymous people in ways that they themselves considered unfair, they were found to consistently misremember their own selfish behaviour, even when offered a financial incentive to recall the truth. 'When people perceive their own actions as

selfish,' the researchers concluded, 'they can remember having acted more equitably, thus minimising guilt and preserving their self image.'

Our sense of who we are depends, in significant part, on our memories. And yet they're not to be trusted. 'What is selected as a personal memory,' writes Professor of psychology and neuroscience Giuliana Mazzoni, 'needs to fit the current idea that we have of ourselves.' This isn't simply a matter of strategic forgetting. We rewrite and even invent our own pasts. Work by Mazzoni and others has shown that memories can be detailed, vivid and emotional and yet entirely invented. 'We often make up memories of events that never happened,' she writes. Memories are 'very malleable, they can be distorted and changed easily, as many studies in our lab have shown'.

For the psychologists Professors Carol Tavris and Elliot Aronson, the most important memory distortions 'by far' are the ones that serve to 'justify and explain our own lives'. We spend years 'telling our story, shaping it into a life narrative that is complete with heroes and villains, an account of how we came to be the way we are'. By this process, memory becomes, 'a major source of self-justification, one the storyteller relies on to excuse mistakes and failings'.

But the hero-maker lie goes far beyond memory. The psychologist Professor Nicholas Epley catches it in action when he asks his business students whether they're inspired to pursue careers in industry for heroic 'intrinsic' reasons – doing something worthwhile, pride in achievement, the joy of learning – or more suspect 'extrinsic' ones – pay, security and fringe benefits – and then say the same for their contemporaries. They give matching results every year. They show, writes Epley, 'a subtle dehumanisation of their classmates. My students think all of these incentives are important, of course, but they judge that the intrinsic motivators are significantly more important to them than they are to their fellow students. "I care about doing something worthwhile," their results say, "but others are mainly in it for the money."'

The hero-maker begins with our automatic and mostly subconscious emotional hunches. Say we have models of the world that include racist or sexist beliefs – that give us subtle sensations of 'no' when we encounter black people or white people or women or men. Because we start out convinced we're a good person, then it only logically follows there *must* be a good reason for our negative feelings. So the hero-maker goes on a mission to find them. And it does a good job. It's convincing.

After all, who better to fool us – to know *exactly* what to say to beguile us into believing our most incendiary and partisan instincts are morally justified – than our own mind? If we're a good person, the money we stole from our boss must be because they've been exploiting us. If we're a caring person, our political efforts to degrade the NHS must be an altruistic desire to increase efficiency or patient choice. At least that's my take on that situation. That's the moral truth that feels as inarguably real to me as rocks and trees and double-decker buses, because it's made out of the same stuff as those things. I'm blind to any other reasonable argument – I can't perceive them – because they're not part of my perception.

Everyone who's psychologically normal thinks they're the hero. Moral superiority is thought to be a 'uniquely strong and prevalent form of positive illusion'. Maintaining a 'positive moral self-image' doesn't only offer psychological and social benefits, it's actually been found to improve our physical health. Even murderers and domestic abusers tend to consider themselves morally justified, often the victims of intolerable provocation. When researchers tested prisoners on their hero-maker biases, they found them to be largely intact. The inmates considered themselves above average on a range of pro-social characteristics, including kindness and morality. The exception was law-abidingness. There, sitting in prison, serving sentences precisely because they'd made serious contraventions of the law, they were only willing to concede that, on law-abidingness, they scored about average.

The hero-maker delusion is implicated in more misery, fury and death than is possible to calculate. Mao and Stalin and Pol Pot believed they were right, as did Hitler, whose last words before shooting himself were, 'The world will be eternally grateful to National Socialism that I have extinguished the Jews in Germany and Central Europe.' Indeed, the brains of even the lowliest Nazis automatically generated reasons why what they were doing was morally correct. In the Holocaust's early stages, ordinary middle-aged Germans were recruited to efforts to exterminate Jews. One, a 35-year-old metal worker, remembered, 'it so happened that the mothers led the children by the hand. My neighbour then shot the mother and I shot the child that belonged to her, because I reasoned with myself that, after all, without its mother the child could not live any longer. It was supposed to be, so to speak, soothing to my conscience to release children unable to live without their mothers.'

Researchers have found that violence and cruelty has four general causes: greed and ambition; sadism; high self-esteem and moral idealism. Popular belief and clichéd stories tend to have it that greed and sadism are dominant. In fact, they're vanishingly small. It's actually high self-esteem and moral idealism – convictions of personal and moral superiority – that drive most acts of evil.

In Gillian Flynn's *Gone Girl*, the antagonist Amy Elliott Dunne is motivated, in part, by her pathologically high self-esteem. She's driven to frame her husband for her murder not because of his affair, precisely, but because of what his affair would do to her perceived reputation. On discovering his infidelity, she writes in her diary,

> *I could hear the tale, how everyone would love telling it: how Amazing Amy, the girl who never did wrong, let herself be dragged, penniless, to the middle of the country, where her husband threw her over for a younger woman. How predictable, how perfectly average, how amusing. And her husband? He ended up happier than ever. No. I couldn't allow that … I changed my name for that piece of shit. Historical records have been altered – Amy Elliott to Amy Dunne – like it's nothing. No, he does not get to win. So I began to think of a different story, a better story, one that would destroy Nick for doing this to me. A story that would restore my perfection. It would make me the hero, flawless and adored. Because everyone loves the Dead Girl.*

A hero-maker narrative based on moral superiority is convincingly captured in Graham Greene's *The Power and the Glory*, which is set in Mexico during the persecution of the Catholic Church. When a murderous police lieutenant examines a photograph of a wanted priest, the emotion comes first: 'Something you could almost have called horror moved him'. Next comes the self-justifying memory, followed instantly by a hero-maker narrative that ties it all together so that the killer is reassured he's a moral actor:

> *he remembered the smell of the incense in the churches of his boyhood, the candles and the laciness and the self-esteem, the immense demands made from the altar steps by men who didn't know the meaning of sacrifice. The old peasants knelt there before the holy images with their arms held out in an attitude of the cross: tired by the long day's labour … and the priest came round with the collecting-bag taking their centavos, abusing them for all their small comforting sins, and sacrificing nothing at all in return … He said, 'We will catch him.'*

A character's conviction in their rightness and superiority is precisely what gives them their terrible power. Great drama often forms itself around a clash of competing hero-maker narratives, one belonging to the protagonist, the other to their foe. Their respective moral perceptions of reality feel utterly genuine to their owners and yet are catastrophically

opposed. These are neural worlds that become locked in a fight to the death.

2.7

As irrational as we can be, it's important not to infer from all this that we're incapable of ever thinking straight. Of course, reason has power, people can think sensibly and minds can change. It's relatively rare, though, for people to shift significantly on the beliefs around which they form their identity, such as Ishiguro's butler Stevens's convictions about the value of emotional restraint. It's these brave souls we mythologise in story.

One such real-life hero is the former 'eco-terrorist' Mark Lynas. He belonged to a 'radical cell' of the anarchist environmental group Earth First and would hack down experimental genetically modified crops in the night. Earth First told a kind of David and Goliath story about the world, in which the overwhelming forces of industrialism were bringing about, 'environmental apocalypse. Big corporations and capitalism in general were destroying the earth.' Mark's struggle was against the monstrous machines of profit. 'We were protectors of the land and the inheritors of the natural forces,' he said. 'We were the pixies.'

But when he discovered that the science of genetically modified food didn't confirm what his neural models had been telling him, he went through a painful public conversion. As he did, his brain scripted a new story of the world, one in which he could still feel heroic. He'd once perceived the green movement as the brave, scrappy underdogs. But the more he looked now, the more little David took the form of Goliath. 'Just take the numbers,' he said. 'Greenpeace, the whole international group, is a $150m outfit. Bigger than the World Trade Organisation, and much more influential in terms of determining how people think. And there's very deep networks of money and power and influence there too.'

This division of the world into opposing forces of plucky David and almighty Goliath seems a signature manoeuvre of the hero-making brain. The broad narrative it tells of the world is that we're moral actors, struggling against great, Goliathine odds for the good of our lives and perhaps the world. This is a story that gives our lives meaning. It pulls

our eyes from the terrible void above and forces them into the urgent now.

The protagonist of *Citizen Kane* expresses just such a heroic narrative when he's challenged by an antagonist. Although the film begins with the death of Charles Foster Kane, the ignition point for his drama is his inheritance of the family fortune. Kane's models of the world are broken in such a way that he has a desperate craving for approval and attention. It's these specific flaws that ignite his story, when he makes the surprising decision to focus on a failing newspaper his estate acquired in a foreclosure proceeding. On his arrival at the paper, his flawed models, now unleashed, begin to exert their influence. At first, it seems as if they're not flawed at all – quite the opposite. He might be happy to be cavalier with the truth in pursuit of his mission ('You provide the prose poems, I'll provide the war!') but he's campaigning on behalf of the disadvantaged citizenry who, he argues, are being exploited by the captains of capitalism.

But then his wealthy, pro-capitalist former guardian – the aptly named Thatcher – confronts him, outraged at what he perceives as his newspaper's 'senseless attack on everything and everybody who's got more than ten cents in his pocket'. When Thatcher reminds him he's a major stockholder in one of the companies he's been attacking, Kane's hero-maker narrative rears up: 'I am the publisher of the *Inquirer*!' he says. 'As such it's my duty – I'll let you in on a little secret, it is also my pleasure – to see to it that decent, hard-working people in this community are not robbed blind by a group of money-mad pirates because they haven't anybody to look after their interests.'

2.8

A man's new boss likes to joke with him and he doesn't like it. It hardly seems like the stuff of great fiction. But it's of critical importance to the man to whom it happens. It shakes the foundations of the butler Stevens's beliefs about how the world correctly operates and who he should be in it. The model of reality he inhabits, inside his skull, comes under threat. When this unexpected change occurs, he tries to regain control over his external environment. He attempts a joke. In order to tackle the staffing problems his boss has created, he embarks on a road

trip to Cornwall in the hope of persuading a talented former housekeeper, Miss Kenton, to rejoin his team.

We soon learn that Kenton possesses the warmth Stevens lacked, and yet another loss caused by his devotion to the ideal of emotional restraint was a potential romance with her. Much of the surface drama in *The Remains of the Day* is organised around Stevens's road trip and our changing perceptions of his relationship with Kenton. But, in its depths, this isn't what the story's really about. Beneath the surface causes and effects of the plot, a deeper parallel process is going on. Stevens is changing. His model of the world is slowly and painfully breaking apart.

It's easy to think that a story's surface events – its twists, chases, explosions – are its point. Because we're experiencing it through the eyes of the characters, we, like them, can become distracted by the drama of these thrilling changeful episodes. But none of them mean anything without a specific person for them to happen to. A shark tank has no meaning without a 007 to fall into it. Even crowd-pleasing tales such as James Bond's rely on character for their drama. Those stories are gripping, not because of the bullets or high-speed ski chases in isolation, but because we want to know how *this* specific person, with *this* specific history and *these* strengths and *these* flaws will get out of it. They'll usually only do so by stretching who they are, by trying something new, by making a some unprecedented effort – by changing. Similarly, a police-procedural drama can feel like a straightforward information-gap heavy mystery about a corpse, but its story usually revolves around questions concerning the motives of various suspects: the always fascinating whys of human behaviour.

Of course, different kinds of story have different levels of emphasis and psychological complexity, but plot without character is just so much light and sound. Meaning is created by just the right change-event happening to just the right person at just the right moment. An opulent ball at the splendid home of the Marquis d'Andervilliers would be of only passing interest if it wasn't happening to the middle-class, status-obsessed and chronically unfulfilled Madame Bovary, who marvels at the wealthy guests' complexions that are the kind that 'comes with money' and 'looks well against the whiteness of porcelain' and which are 'best preserved by a moderate diet of exquisite foodstuffs', while she notices, grimly, that her dreary husband's trousers are 'too tight at the waist'. The ball has meaning only in its effects on Madame Bovary. No

matter how bedazzling the events of a plot might be, all story is ultimately about character.

A character's struggle, as we've discovered it so far, has been between themselves and the external world. They inhabit a model of the world, inside their skulls, that they experience as reality. Because that model is flawed, their ability to control the real, external world is harmed. When chaos strikes, their model will begin to break down. They'll slowly lose control and this will bring them into further dramatic conflict with the people and events around them.

But all this is complicated by the fact that characters in story aren't only at war with the outside world. They're also at war with themselves. A protagonist is engaged in a battle fought largely in the strange cellars of their own subconscious mind. At stake is the answer to the fundamental question that drives all drama: who am I?

CHAPTER THREE:

THE DRAMATIC QUESTION

3.0

Charles Foster Kane was a man of the people. He might have inherited a fortune, but he'd decided to reject the life of the mercenary rich. Instead, he chose to be an ally of the downtrodden, even as it went against his own financial interests. As editor of *The New York Daily Inquirer*, he fought for their rights relentlessly. In a bid to serve them even better, he ran for Governor of New York. Who could criticise such a selfless and noble man?

As it turns out, his oldest friend could. In the immediate aftermath of Kane's political campaign we find him alone and sorrowful, pacing his campaign office which is still hectic with streamers and posters and emptiness. He has lost. And then in staggers his best pal Jedediah Leland who, it soon becomes apparent, has been out with his sorrows for a few too many drinks. When Kane ruefully acknowledges 'the people have made their choice', Leland cuts him off. 'You talk about the people as if you owned them, as though they belonged to you,' he says, slurring slightly. 'Goodness. As long as I can remember you've talked about giving the people their rights, as if you could make them a present of liberty. As a reward for services rendered. Remember the working man? You used to write an awful lot about the working man. But he's turning to something called organised labour. You're not going to like that one little bit when you find out it means that your working man expects something as his right, not as your gift. When your precious underprivileged really get together … I don't know what you'll do. Sail away to a desert island, probably, and lord it over the monkeys.' Kane tells him he's drunk. 'Drunk?' Leland replies. 'What do you care? You don't care about anything except you. You just want to persuade people that you love them so much that they ought to love you back.'

Who was Charles Foster Kane really? That was the challenge that editor Rawlston made to his staff of storytellers at the beginning of *Citizen Kane*. Was he the man his old friend perceived: self-interested, delusional, desperate for approval and attention? Or was he the person his own hero-making brain told him he was: brave, generous and selfless?

Who is this person? This is the question all stories ask. It emerges first at the ignition point. When the unexpected change strikes, the protagonist overreacts or behaves in an otherwise unexpected way, we sit up, suddenly attentive. *Who is this person who behaves like this?* The question then re-emerges every time the protagonist is challenged by another or compelled to make a choice.

Everywhere in the narrative that the question is present, the reader or viewer will likely be engaged. Where the question is absent, and the events of drama move out of its narrative beam, they risk becoming detached – perhaps even bored. If there's a single secret to storytelling then I believe it's this. *Who is this person?* Or, from the perspective of the character, *Who am I?* It's the definition of drama. It is its electricity, its heartbeat, its fire.

Harnessing the energy of the dramatic question means understanding that the answer is not easily found. This is because, even at the best of times, most of us don't actually know who we are. If you were to ask Kane who he was, he'd surely say he was noble and selfless, the opposite of his old friend's drunken accusations. He'd mean it too. But, as the screenplay carefully shows, he'd be wrong.

If Kane was to argue he was noble and selfless, it would be because he'd been listening to a voice in his head – one that was telling him all the ways he was morally right. It's not only psychotics like Mr B who hear such voices. We all do. You can hear yours now. It's reading this book to you, commenting here and there as it goes. Flawed characters, in life and story, are often badly led astray by this inner voice, which is generated by word and speech-making circuitry that is mostly located in the brain's left hemisphere. This voice is not to be trusted.

This isn't simply because it's relaying all those flattering hero-making half-truths to us. The narrator can't be trusted because it has no direct access to the truth of who we really are. It *feels* as if that voice is the thing that's in control of us. It feels as if that voice *is* us. But it's not. 'We' are our neural models. Our narrator is just observing what's happening in the controlled hallucination in our skulls – including our own behaviour – and explaining it. It's tying all the events together into a coherent tale that tells us who we are, why we're doing what we're doing and feeling what we're feeling. It's helping us feel in control of our thrilling neural show. And it's not lying, exactly. It's confabulating. As the philosopher of psychology Professor Lisa Bortolotti explains, when

we confabulate ‘we tell a story that is fictional, while believing that it is a true story.’ And we’re confabulating all the time.

This disturbing fact was exposed in a series of famous experiments by neuroscientists Professors Roger Sperry and Michael Gazzaniga. Their studies answered a strange question – what would happen if you planted an instruction into a brain and somehow hid it from the narrator? Say, for example, you managed to insert the instruction WALK into a person’s mind. And that person started walking. Without the narrator telling the brain’s owner *why* they were walking, how would they explain what they were doing? Would they be like a zombie? Would they just shrug? Or what?

Because most of the circuitry that the narrator relies upon is in the brain’s left hemisphere, they’d need to find a way of getting information into the right side and keeping it there, hidden away from it. This would mean recruiting so called ‘split-brain’ patients – epileptics who, as part of their treatment, had had the wiring that connected their hemispheres cut, but who lived otherwise normal lives.

So that’s what they did. They showed a card saying WALK to a split-brain patient such that only their left eye saw it. Because of the way the brain’s wired up, this information was sent into the right hemisphere. And, because the wiring between their hemispheres had been cut, that’s where it stayed, hidden away from the narrator.

So what happened? The patient stood up and walked. When the experimenters asked him why, he said, ‘I’m going to get a Coke.’ His brain observed what was happening, in his neural realm, and made up a cause-and-effect story to explain it. It confabulated. It had no idea why he’d really stood up. But it instantly invented a perfectly credible tale to account for the behaviour – a tale that its owner unquestioningly believed.

This happened again and again. When a woman’s silent hemisphere was shown a picture of a pin-up girl she giggled. She blamed it on their ‘funny machine’. When another woman’s silent hemisphere was shown a video of a man being pushed into a fire, she said, ‘I don’t really know why, but I’m kind of scared. I feel jumpy. I think maybe I don’t like this room. Or maybe it’s you. You’re making me nervous. I know I like Dr Gazzaniga, but, right now, I’m scared of him.’

The job of the narrator, writes Gazzaniga, is to ‘seek explanations or causes for events’. It is, in other words, a storyteller. And facts, while

nice, don’t really matter to it: ‘The first makes-sense explanation will do.’ Our narrator has no wired-in access to the neural structures that that are largely (or wholly, depending on who you ask) controlling how we feel and what we do. Because the narrator exists separately from the circuits that are the true causes of our emotions and behaviour, it’s forced to rapidly hash together any makes-sense (and usually heroic) story it can about what we’re up to and why.

It’s because of such findings, writes Professor Nicholas Epley, that ‘no psychologist asks people to explain the causes of their own thoughts and behaviour anymore unless they’re interested in storytelling’. It’s why a neuroscientist colleague of Professor Leonard Mlodinow said that years of psychotherapy had allowed him to construct a helpful story about his feelings, motivations and behaviour, ‘but is it true? Probably not. The real truth lies in structures like my thalamus and hypothalamus, and my amygdala, and I have no conscious access to those no matter how much I introspect.’

The terrible and fascinating truth about the human condition is that none of us really know the answer to the dramatic question as it pertains to ourselves. We don’t know why we do what we do, or feel what we feel. We confabulate when theorising as to why we’re depressed, we confabulate when justifying our moral convictions and we confabulate when explaining why a piece of music moves us. Our sense of self is organised by an unreliable narrator. We’re led to believe we’re in complete control of ourselves, but we’re not. We’re led to believe we really know who we are, but we don’t.

This is why life can be such a vexing struggle. It’s why we disappoint ourselves with behaviour that’s mysterious and self-destructive. It’s why we shock ourselves by saying the unexpected. It’s why we find ourselves telling ourselves off, giving ourselves pep talks or asking, ‘What the hell was I thinking?’ It’s why we despair of ourselves, wondering if we’ll ever learn.

In stories, the dramatic question has the power to unfold so unexpectedly and endlessly because the protagonists themselves don’t know the answer. They’re discovering who they are, moment by moment, as the pressure of the drama is applied. And, as the plot turns, they’re often surprised by who they turn out to be. Every time you read something like ‘she heard herself say’ or ‘he found himself doing’, these

forces are likely at play. Characters – and readers and viewers – are being shown fascinating new answers to the dramatic question.

Often, characters are such a mystery to themselves that they seem in complete ignorance of the truth of their own feelings and motives. In *The Idea of Perfection*, Kate Grenville brilliantly exposes the gap between a character's confabulation and the reality of who they are in an encounter between married Felicity Porcelline and her local butcher, Alfred Chang. Felicity is convinced that Alfred's in love with her. She feels so awkward about the situation that she's taken to dawdling outside his shop until another customer arrives that she can enter with. One evening, when Felicity turns up after hours to ask a favour, she finds herself alone with him. The scene that unfolds causes us to doubt Felicity's confabulation of who, exactly, desires who.

When Felicity first spots Alfred she feels a 'a little pulse of something … like apprehension, or stage-fright, but it was not those'. Her narrator provides an immediate confabulation to explain this acute sensation: 'It was knowing he was in love with her.' Felicity's eyes prowl Chang's face and body, noticing an opening in his shirt. 'She could actually see a crease of honey-coloured stomach and his neat little navel.' As they talk, she finds herself calling him by his first name. 'She had never done it before and she did not know why she had done so now. It would only encourage him.' When he hoists his trousers up, she sees 'a bulge just there. They were frayed just there, too, around the zip. She looked away, naturally, but could not help noticing. It was really very badly frayed. She heard herself giggle.' She makes herself 'smile slightly, the way she knew smoothed out the skin of her face in a nice way'. Commenting on his family photos, she surprises herself. 'They're lovely photos, she heard herself gushing. So … intimate. That was not really the word she had meant. Intimate. It did not sound quite right. She hurried on, before the word could become large in the silence.'

At this stage, it would be an unbelievable shock to Felicity to learn that she ends up in bed with Alfred. But it wouldn't surprise you or me. That 'little pulse of something' she felt on spotting him was her own lust. Like Jedediah Leland in his coruscating view of his old friend Kane, we can clearly see answers to the dramatic question to which Felicity herself is blind. The scene works so brilliantly because the answer keeps changing, paragraph by paragraph, line by gripping line.

3.1

For years I've struggled with cravings and addictions. In middle age, I battle with food. Because the culture I'm immersed in is obsessed with bodily perfection and youth, and because that culture is in me, I find myself engaged in a hopeless quest to make my stomach appear as it did when I was eighteen. What I've discovered, as I've waged these tedious wars against myself, is that who I am seems to be in constant flux.

On the Monday morning following a large roast dinner, I am Captain Abstemious himself, determined, rigid, positively Victorian in my values. I will clean out my cupboards and sort out my life. But by 17:00 Wednesday evening, Captain Abstemious has vanished. In his place stands Billy Pillock Jnr who believes it's pathetic for a man in his forties to worry about a bit of belly flub. He's earned a bit of a treat, with the week he's been having. And what sort of person are you anyway, beating yourself up over a mouthful of Roquefort? How joyless, how vain, how positively Victorian! The problem of self-control, I've come to think, isn't really one of willpower. It's about being inhabited by many different people who have different goals and values, including one who's determined to be healthy, and one who's determined to be happy.

As well as having models of everything in the world, inside our heads, we have different models of self that are constantly fighting for control over who we are. At different times, under different circumstances, a different version of us becomes dominant. When it does, it takes over the role of neural narrator, arguing its case passionately and convincingly and usually winning. Beneath the level of consciousness we're a riotous democracy of mini-selves which, writes the neuroscientist Professor David Eagleman, are 'locked in chronic battle' for dominion. Our behaviour is 'simply the end result of the battles'. All the while our confabulating narrator 'works around the clock to stitch together a pattern of logic to our daily lives: what just happened and what was my role in it?' Fabrication of stories, he adds, 'is one of the key businesses in which our brain engages. Brains do this with the single minded goal of getting the multifaceted actions of the democracy to make sense.'

The truth of our multiplicity is revealed in a condition known as Alien Hand Syndrome. In these patients a behaviour that would usually have been suppressed takes independent control of a limb. The German neurologist Dr Kurt Goldstein recalled a woman whose left hand

‘grabbed her own neck and tried to throttle her, and could only be pulled off by force’. The American neurologist Dr Todd Feinberg saw a patient whose hand ‘answers the phone and refuses to surrender the receiver to the other hand’. The BBC told of a patient whose doctor asked why she was undressing. ‘Until he said that, I had no idea that my left hand was opening up the buttons of my shirt,’ she said. ‘So I start rebuttoning with the right hand and, as soon as I stopped, the left hand started unbuttoning them.’ Her alien hand would remove items from her handbag without her knowing. ‘I lost a lot of things before I realised what was going on.’ Professor Michael Gazzaniga describes a patient who ‘grabbed his wife with his left hand and shook her violently, while with the right hand trying to come to his wife’s aid.’ One day Gazzaniga saw that patient’s left hand pick up an axe. ‘I discreetly left the scene.’

Our multiplicity is revealed whenever we become emotional. When we’re angry, we’re like a different person with different values and goals in a different reality than when we feel nostalgic, depressed or excited. As adults, we’re used to such weird shifts in selfhood and learn to experience them as natural and fluid and organised. But for children, the experience of transforming from one person to another, without any sense of personal volition, can be deeply disturbing. It’s as if a wicked witch has cast an evil spell, magicking us from princess to witch.

In his pioneering classic *The Uses of Enchantment* the psychoanalyst Professor Bruno Bettelheim argues that making sense of such terrifying transformations is a core function of fairytales. A child can’t consciously accept that an overwhelming mood of anger may make him ‘wish to destroy those on whom he depends for his existence. To understand this would mean he must accept the fact that his own emotions may so overpower him that he does not have control over them – a very scary thought.’

Fairytales take those scary inner selves and turn them into fictional characters. Once they’ve been defined and externalised, like this, they become manageable. The story these characters appear in teaches the child that, if they fight with sufficient courage, they can control the evil selves within them and help the good to become dominant. ‘When all the child’s wishful thinking gets embodied in a good fairy; all his destructive wishes in an evil witch; all his fears in a voracious wolf; all the demands of his conscience in a wise man encountered on an adventure; all his jealous anger in some animal that pecks out the eyes of arch-rivals – then

the child can finally begin to sort out his contradictory tendencies,' writes Bettelheim. 'Once this starts, the child will be less and less engulfed by unmanageable chaos.'

Of course, the idea of multiplicity has limits. We don't transform completely, like Jekyll and Hyde. We have a core personality, mediated by culture and early life experience, which is relatively stable. But that core is a pole around which we're constantly, elastically moving. How we behave, in any given moment, is a combination of personality and situation.

In well-told stories, characters reflect this. They're 'three-dimensional' or more. They're both recognisably who they are and yet constantly shifting as their circumstances change. A scene in John Fante's *Ask the Dust* captures this well. The novel tells of young Arturo Bandini's unrequited love for waitress Camilla Lopez. In one dark and dynamic sequence, the character of Bandini comes alive in all his convincing multiplicity when he visits Camilla at the Columbia Buffet, where she works.

Watching her laughing with some male customers Bandini bristles with jealousy. He politely beckons her over, telling himself, 'Be nice to her, Arturo. Fake it.' He asks to see her later. She tells him she's busy. He 'gently' requests she postpone her engagement. 'It's very important that I see you.' When she declines again, his angry self rears up. He pushes his chair back and shouts, 'You'll see me! You little insolent beerhall twirp! You'll see me!' He stalks out and waits by her car, telling himself 'she wasn't so good that she could excuse herself from a date with Arturo Bandini. Because, by God, I hated her guts.'

When she finally emerges, Bandini tries to force her to leave with him. After a tussle she escapes with a barman. Bandini is left in a stew of self-hatred.

> *Bandini, the idiot, the dog, the skunk, the fool. But I couldn't help it. I looked at the car certificate and found her address. It was a place near 24th and Alameda. I couldn't help it. I walked to Hill Street and got aboard an Alameda trolley. This interested me. A new side to my character, the bestial, the darkness, the unplumbed depth of a new Bandini. But after a few blocks the mood evaporated. I got off the car near the freight yards. Bunker Hill was two miles away, but I walked back. When I got home I said I was through with Camilla Lopez forever.*

In this passage, Fante shows Bandini in all his contradiction and multiplicity. One moment he loves her, the next he hates her. One moment he's swollen with arrogance, the next he's a skunk and a fool.

His decision to stalk her is an urge that plumes out of his subconscious. When it suddenly dissipates, he doesn't question the madness of his own sudden reversal.

This is a man riding the tumultuous forces of his own hidden brain. He's only barely managing to keep his illusion of self-control intact. It's hard to read this scene without recalling those alien hands discharging unrepressed wills, unbuttoning, throttling and grabbing for the axe. It's structurally effective because of its adherence to cause and effect, with one event leading to another unexpected event which leads to another, and so on. It's meaningfully effective because it keeps asking and answering that essential dramatic question: who is Bandini?

3.2

Nobody can agree which tree is the most photographed in the world. Some say it's a Cypress in Monterey, California, others a Jeffry Pine in nearby Yosemite and others still a Willow in Lake Wanaka, New Zealand. Even if you've never seen them, you can probably guess what these trees look like. They stand alone in endless vistas of water, sky or rock.

Millions of brains have been attracted to the hidden and half-hidden truths that emit from these solitary trees. They triggered something in the photographers' subconscious which responded by giving their owners a pleasurable hit of *feeling*. Lonely, brave, relentless and beautiful, those who stop and snap are not taking pictures of trees, but of themselves.

What these photographs reveal is that human consciousness works on two levels. There's the top level on which occurs the drama of our day-to-day lives – that meeting of sight, sound, touch, taste and smell which is narrated by the hero-making inner voice. And then, beneath that, there's the subconscious level of the neural models, a stewing night ocean of feelings, urges and broken memories in which competing urges engage in a constant struggle for control.

The stories we tell also work on these levels. They operate 'in two realms', writes the psychologist Professor Jerome Bruner, 'one a landscape of action in the world', the other a landscape of the mind in which the 'protagonists' thoughts and feelings and secrets play themselves out'. On the plot's conscious top layer we experience the

visible causes and effects of the drama. Then there's the story's subconscious that heaves beneath the visible. It's a place of symbolism and division, in which characters are multiple and contradictory and surprising, even to themselves.

Some of the most moving moments in story come when the second subconscious layer erupts into the first. Jill Soloway's TV drama *Transparent* brought me to tears when the character Josh Pfefferman suddenly revealed himself in a way that surprised even him. The series tracks the ramifications of a family patriarch's decision to transition to a woman, from Mort to Maura. Josh, Maura's son, is jovial, wry and essentially decent. He's a record company executive and thoroughly modern, always wanting to be supportive of Maura's journey.

But things start slipping for Josh. Towards the end of the second series, he's driving with some band members and starts uncharacteristically ranting: 'Look at this traffic! They time it out so you can't get anywhere. It's a fucking conspiracy.' He honks his horn at other drivers. 'Fucking go, you piece of shit! They're fucking boxing me in!' He's losing control. The woman beside him insists he pulls over. Josh is hyperventilating.

Sometime afterwards, he calls to see his mother Shelley only to discover she's out. Her new boyfriend Buzz lets him in. 'Nothing's adding up,' Josh confides to Buzz. 'I thought stuff would add up by now, but everything's slipping through.' Buzz, with his grey ponytail and hippy shirt, is of a different generation to Josh. His model of the world comes from an earlier time. He suggests Josh is in 'shock' about the 'loss' of his father. Josh pushes back. Buzz doesn't get it, nobody has died. 'You think I miss Mort?' he asks, irritated.

'What do you think?' says Buzz.

'Well, it's like politically incorrect to say that you miss someone who has transitioned, so …'

'This isn't about correct, Joshua, this is … This is about grieving. Mourning. Have you grieved and mourned the loss of your father?'

'Him? Like losing him? No, I'm … I don't know how to do that.'

There's a moment of silence. Josh crumbles into the arms of the older man and sobs.

In well-told stories, there's a constant interplay between the surface world of the drama and the subconscious world of the characters. The bedlam that takes place on the top often has seismic subconscious

ramifications for who the character is beneath. As the psychologist Professor Brian Little writes, 'All individuals are essentially scientists erecting and testing their hypothesis about the world and revising them in the light of their experience.' As these subtle revisions in who they are take place, on the subconscious second level, the answer to the dramatic question changes. And as their character changes this, in turn, alters their behaviour on the surface level of the drama. And so and so on.

This is how plots develop as they should – from character. At the ignition point, when the drama starts flying at them, their subconscious model of the world receives its first serious crack. They'll try to reimpose control. These attempts will fail. They might even make the situation worse. With their neural model of the world increasingly foundering, they enter a subconscious state of panic and disorder.

As their models fracture and break down, previously repressed wills, thoughts and versions of self rise up and become dominant. This can be seen as the brain's experiments in novel ways of controlling its environment. They might find themselves behaving in ways they weren't expecting, as Arturo Bandini did when he unexpectedly turned stalker. These unexpected behaviours might cause them to learn something about themselves, as Josh Pfefferman did when he collapsed sobbing.

Some of the most memorable scenes in drama allow us to watch the dramatic question battle itself in the mind of the character. In such scenes, the character appears divided and in a state of internal conflict. What they're saying, for example, might contradict how they're behaving in ways that show they're manifesting as two different versions of self at once. We can't quite tell what they're going to do next. Who they are is changing before our eyes.

And so the plot moves on, in all its depth, truth and unpredictability, each new development coming from character. Inch by inch, scene by scene, characters and plot interact, each altering the other. Throughout the plot, as the character confronts the fact that they're failing to control the world, they're gradually forced to readdress their deepest beliefs about how it works. Their precious theory of control comes under question. Beneath the level of consciousness, they're compelled to repeatedly ask themselves that fundamental dramatic question: who am I? Who do I need to be in order to make this right?

This is the process that drives Robert Bolt and Michael Wilson's cinematic masterpiece *Lawrence of Arabia*. An approximate definition of

Lawrence's flaw would be something like *vanity that manifests as rebellion*. He's rather insolent and self-important. This is how he controls the world of people around him. It's how he makes himself feel superior – in one early scene, he showily extinguishes a lit match with his bare fingers. When we meet him he's a lieutenant in the British Army during the First World War. He fails to salute his superior, General Murray, who complains, 'I can't make out if you're bloody bad-mannered or just half-witted.'

'I have the same problem, sir,' replies Lawrence with a supercilious lilt.

'Shut up.'

'Yes sir.'

Lawrence is sent to the Middle East on an intelligence mission. The ignition point comes when he's journeying through the desert to begin his work and his local guide is shot dead by an Arab leader, Sherif Ali, because he drank from his well. This unexpected change connects specifically with Lawrence's flawed theory of control, which is based around rebelliousness and vanity. He reacts in an unexpected way. His flaw causes him not to flee or grovel for his life but to grandiosely berate the killer: 'Sherif Ali! So long as the Arabs fight tribe against tribe, so long will they be a little people, a silly people, greedy, barbarous and cruel – as you are.' Gone is the insolent wally of the previous scenes. The dramatic question has been posed.

After Lawrence experiences a brutal attack on the Arabs by their enemies, the Turks, his rebellious vanity rises again. He becomes engaged in the Arabs' fight and suggests they all trek through the hellish Nefud desert and launch a surprise attack on a Turkish stronghold. On the journey, Lawrence's rebellious vanity kicks up when, against everyone's advice, he insists on making an insanely dangerous journey back into the desert to rescue a lost Arab. When he returns with the man, the Arabs ecstatically cheer him. Once again, the first layer of drama affects the second layer of subconscious. His theory of control – that you got what you wanted with vain rebelliousness – has been proven right. And so he becomes yet more vain and rebellious. He's accepted into the tribe. In a deeply symbolic moment, Sherif Ali, the man who shot his guide, burns his western clothes and dresses him in 'the robes of a Sherif'. When Lawrence leads the Arabs on a successful assault on the Turkish stronghold, his vanity soars even more.

And yet, beneath the level of the surface drama, things have started cracking. Just before the successful assault, Lawrence had been compelled to execute a man in order to prevent factions of his Arab force attacking one another. After the assault, he accidentally leads his men into quicksand. One of them dies. These experiences disturb him. When he finally makes it out of the desert, to the shores of the Suez Canal, a motorcyclist on the opposite bank spots him. Curious about this strange white man in Arab robes emerging from the desert, the motorcyclist shouts across the water: ‘Who are you? Who are you?’ As the question fills the baking air, the camera freezes on Lawrence’s troubled face.

Who is he? Is he the man his flaw of rebellious vanity tells him he is? Is he extraordinary? Or is he just ordinary? This simple question underpins every gripping scene of the film. So far, he’s proved to be mostly extraordinary. His theory of control has worked. His vain rebelliousness has led him to success after success. We cheer when he berates the killer Sherif Ali! We applaud when he rescues the fallen soldier! We roar when he wins his battle! But if this was all there was to the story, it wouldn’t have won seven Academy Awards.

The pressure of the drama is beginning to crack Lawrence’s model of the world. Adherence to his theory of control might be leading him to great victories but it’s also causing him deep subconscious distress. Our first real clue about these dark changes that are happening to him arrives when he comes in from the desert and General Murray promotes him and asks him to go back. Lawrence refuses. ‘I killed two people,’ he explains. ‘I mean, two Arabs. One was a boy. That was yesterday. I led him into quicksand. The other was a man … I had to execute him with my pistol. There was something about it I didn’t like.’

‘Well, naturally,’ says Murray.

‘No, something else,’ he says. ‘I enjoyed it.’

In this highly dramatic scene, we see Lawrence divided. He’s learned to control the world by adherence to a vanity that manifests as rebellion. This theory of control has driven him to huge success. It’s enabling him to become an extraordinary man. But it’s also led to unexpected effects. He has glimpsed what he’s turning into, and what ‘success’ actually means, and it’s terrified him.

But the military chiefs ignore Lawrence’s pleas. And they know just how to convince a vain man like him – by shoring up his leaking theory of control. They tell him his feats in the desert were superhuman and

recommend him for a medal. He's a brilliant soldier, they say. He's *extraordinary*. Precisely because of the nature of Lawrence's flaw, their manipulations work. He returns to the desert more vain and rebellious than ever. He leads an attack on a Turkish train. The Arabs loot it and hail him almost as a living god: 'Lawrence! Lawrence! Lawrence!'

His flaw deepens. He begins demanding the impossible of his men – 'My friends, who will walk on water with me?' When Sherif Ali protests that he's asking too much of them, Lawrence pushes back: 'Whatever I ask them to do can be done … Do you think I'm just anybody, Ali? Do you?'

By now Lawrence has become so vain and rebellious he behaves as if he has magical powers. With a nervous Sherif Ali at his side, he swans into a Turkish garrison, splashing through puddles, utterly convinced he won't be seen despite his glaring whiteness. 'Do you not see how they look at you?' Ali hisses.

'Peace, Ali,' he replies. 'I am invisible.'

But he's not invisible. Lawrence is caught and brutally tortured. His beating is such that he's forced to realise his theory of control was wrong. His most fundamental beliefs about who he was were mistaken, and catastrophically so. Back at base, still bleeding from his wounds, he hands General Murray a written request to leave Arabia.

'For what reason?' demands Murray.

'The truth is,' he says, 'I'm an ordinary man.' But Murray knows how to get around him. 'You're the most extraordinary man I've ever met.'

'Leave me alone,' begs Lawrence. 'Leave me alone.'

'Well that's a feeble thing to say.'

'I know I'm not ordinary.'

'That's not what I'm saying.'

'Alright!' says Lawrence. 'I'm extraordinary. What of it?'

Soon afterwards, in the film's most iconic sequence, Lawrence leads his Arab army in a gruesome attack on fleeing Turks. 'No prisoners!' he yells. 'No prisoners!' When his handgun runs out of bullets, he starts madly slashing at people with his dagger. Sherif Ali, the man he berated at as 'barbarous' and a 'murderer' at the film's start, begs him to stop. Soaked in blood, surrounded by fresh corpses, Lawrence lifts the gory blade of his knife and gazes in horror at his reflection.

Stories such as this are like life itself, a constant conversation between conscious and subconscious, text and subtext, with causes and effects

ricocheting between both levels. As incredible and heightened as they often are, they also tell us a truth about the human condition. We believe we're in control of ourselves but we're continually being altered by the world and people around us. The difference is that in life, unlike in story, the dramatic question of who we are never has a final and truly satisfying answer.

3.3

Tragedies such as *Lawrence of Arabia* can be especially useful, for the purposes of analysis, because the causes and effects of character change tend to have greater emphasis in the narrative and are therefore clearer to see. But all archetypal stories are like this, even if the process is less overt in some. They're about flawed selves being offered the opportunity to heal. Whether their endings are happy or otherwise depends on whether or not they take it. If they choose to heal, like Ebenezer Scrooge in Charles Dickens's *A Christmas Carol* or, say, Charlie Simms and Lieutenant Colonel Frank Slade, the twin protagonists of Bo Goldman's Academy Award-winning *Scent of a Woman*, the audience will be profoundly cheered. But whatever happens, we're usually left in little doubt as to what conclusion the writer wanted us to come to. In the closing scenes, the dramatic question will have been answered. We'll leave the story with that lovely emotional sense that something, perhaps just beyond the level of conscious comprehension, has been completed.

Modernist stories are different. Whilst they're built from the same dance between surface drama and subconscious change, their causes and effects are often left ambiguous. Character change occurs, but it's less clear how these changes are being triggered by the drama and what message we're supposed to glean from them. More space is left for the reader to insert their own interpretations into the text.

Franz Kafka's short story 'The Passenger' shows an enigmatic movement of cause and effect between consciousness and subconscious. It tells of a man on a tram feeling uncertain about himself and his place in the world. He becomes lost, for a moment, in the abstract physical details of a woman waiting to disembark – the position of her hands, the shape of her nose, the shadow her ear makes against her skull. These conscious observations trigger something deep in his subconscious. He

asks, ‘How is it that she is not astonished at herself, that she keeps her mouth closed, and expresses nothing of any wonderment?’ In a way that recalls eastern story forms such as Kishõtenketsu, the reader is invited to ponder how one level connects to the other and thereby bring them into harmony.

Virginia Woolf’s *Mrs Dalloway* tracks such movements between consciousness and subconscious in longer form, as it follows a day in the life of eponymous Clarissa, and various characters orbiting her, as she prepares for and hosts a party. The story is told not as if the protagonist is talking out loud to the reader, as is common in first-person narratives. Rather, it’s as if we’re privy to her inner narrator as it bounces between the external and internal – from event in the world to thought, memory, to sudden revealing insight – bringing it all together into a compelling and believable composite of self.

In a similar style, Knut Hamsun’s *Hunger* tracks its unnamed protagonist’s struggle to survive mentally and physically while trying to earn money as a writer. Published in 1890, it’s a stunningly prescient exploration of human cognition. The central character, who ruefully describes himself as ‘nothing but a battleground for invisible forces’ is thrown relentlessly between the two levels of cause and effect. On seeing an attractive woman he becomes ‘possessed by a strange desire’ to frighten her and makes ‘stupid faces’ behind her back: ‘No matter how much I told myself I was acting idiotically, it did not help.’

One morning, for some unknowable reason, the noises of the street send his mood soaring. ‘I was powerful as a giant and could stop a wagon with my shoulders … I started to hum for pure joy and for no particular reason.’ In desperation, he tries to pawn a tattered blanket and is humiliated when the pawnbroker sends him away. After taking it back home: ‘I acted as though nothing had happened, spread the blanket out again on the bed, smoothed out the wrinkles as I always did, and tried to erase every trace of my last action. I couldn’t possibly have been in my right mind when I decided to try this filthy trick. The more I thought of it, the more irrational it seemed. It must have been some failure of energy far inside that had caught me off guard.’

Generations before science caught up, Hamsun showed how we are multiple and confabulatory, skating on the thin ice of sanity, all of us a battleground for the invisible forces of our own subconscious minds.

3.4

It's not uncommon for a character to *want* something on the conscious level and yet subconsciously *need* something entirely different. As the story theorist Robert McKee writes, 'the most memorable, fascinating characters tend to have not only a conscious but an unconscious desire. Although these complex protagonists are unaware of their subconscious need, the audience senses it, perceiving in them an inner contradiction. The conscious and unconscious desires of a multidimensional protagonist contradict each other. What he believes he wants is the antithesis of what he actually but unwittingly needs.'

Alan Ball's Academy Award-winning screenplay *American Beauty* focuses on just such a character. When we meet 42-year-old Lester Burnham, he's bullied by his boss, his daughter and especially his disdainful and unfaithful wife. Miserable and trapped, Lester suffers a midlife crisis, deciding that happiness lies in his becoming young and carefree again. He buys a fast car, starts working out in his garage, finds a job at a drive-through burger restaurant and smokes marijuana. He stands up to his boss and wife. Much of the surface-level plot is taken up with Lester's blackly comic attempts at sleeping with his daughter's best friend, the apparently streetwise and experienced Angela.

When he finally gets the opportunity to do so we're shown the contradiction between his shallow, short-term conscious desires and his deep subconscious needs. Lying half-naked beneath him, Angela confesses she's not as experienced as she'd appeared: 'This is my first time.'

'You're kidding,' says Lester. He crumbles, refusing to carry on. Angela becomes upset. Lester wraps her in a blanket and holds her as she sobs – a responsible adult, finally.

While Lester *wanted* to be young again, what he'd *needed* was to mature and become truly powerful. In this touching and revelatory moment, as a better version of his self bubbles up from his subconscious, we realise that the answer to the dramatic question has suddenly flipped to its opposite.

The scene has additional power because it doesn't only show a transformation in who we understand Lester to be. We see Angela in a new way too. In all great stories, each major character is altered somehow by their interpersonal encounters. As they clash, they send

each other spinning outwards, only to clash again in new and altered ways, and then spin out again, and meet again and so on and so on, out across the plot, in an elegant and gripping dance of change.

3.5

Story time is compressed time. An entire life can be told in the space of just ninety minutes and still somehow feel complete. It's this compression that's the secret of arresting dialogue. The words characters speak should both sound true and writhe with meaning, making for a rich source of data for the model-making brain. Speech should be crammed with deep facts that can be greedily absorbed by readers and viewers, whose hyper-social brains rapidly construct models of the fictional characters' minds.

Some of the most famous lines of dialogue in film history derive their power from the fact that they're so dense with narrative information it's as if the entire story is packed into just a few words:

I love the smell of napalm in the morning.
Apocalypse Now, *Francis Ford Coppola, John Milius, Michael Herr*

I wish I knew how to quit you.
Brokeback Mountain, *Larry McMurtry and Diana Ossana via Annie Proulx*

I'm as mad as hell, and I'm not going to take this anymore.
Network, *Paddy Chayefsky*

The greatest trick the devil ever pulled was convincing the world he didn't exist.
The Usual Suspects, *Christopher McQuarrie*

I'm just a girl, standing in front of a boy, asking him to love her.
Notting Hill, *Richard Curtis*

These go to eleven.
This is Spinal Tap, *Rob Reiner, Christopher Guest, Michael McKean, Harry Shearer*

I am big! It's the pictures that got small.
Sunset Boulevard, *Billy Wilder, Charles Brackett, D. M. Marshman Jr*

You're gonna need a bigger boat.
Jaws, *Peter Benchley*

All the principles of storytelling combine into the art of dialogue. Dialogue should be changeful, it should want something, it should drip with personality and point of view, and it should operate on the two story levels – both conscious and subconscious. It can give us clues about everything we need to know about the character: who they are, what they want, where they're going, where they've been, their social background, their personality, their values, their sense of status, the tension between their true self and the false front they're presenting, their relationships to other characters, the secret torments that will drive the narrative forwards.

Take this opening monologue from the TV series *Marion and Geoff* by Rob Brydon and Hugo Blick. How much do we learn in just eighty-three seconds of screen time about the taxi driver Keith Barrett?

> *KEITH: [sliding into his car seat]: Good morning, good morning! Another day, another dollar. [speaks into handheld radio] My first pick up please? [white noise – he shrugs.] I'll just drive around. It's like that some days. You just ease your way into the day.*
>
> *[Cut to Keith driving] KEITH: These sleeping policemen are a wonderful idea, but they're a pain in the bloomin' neck, I'll tell you that. I mean, I'm not against them. I would never say that. If they only save one life … then probably not very cost-effective.*
>
> *[Cut] KEITH: It's not that the kids think of Geoff as their father, because they don't. They think of him as an uncle. A special uncle. A new uncle. I like him. If you like someone you like someone, you can't help it. I mean, I actually said to him, 'I don't feel like I've lost a wife, I feel like I've gained a friend.' I would never have met Geoff if Marion hadn't left me. Not a chance of it. We're in different worlds. He's in pharmaceuticals, I'm in cars. Literally – I'm in the car. I bear you no ill, sir. I bear you no ill.*

Similarly, how much do we learn in this brief exchange between the ageing salesman Willy Loman and his wife Linda, from Arthur Miller's *Death of a Salesman*?

> *WILLY: If old man Wagner was alive I'd a been in charge of New York now! That man was a prince, he was a masterful man. But that boy of his, that Howard, he don't appreciate. When I went up north the first time, the Wagner company didn't know where New England was!*
>
> *LINDA: Why don't you tell those things to Howard, dear?*
>
> *WILLY (encouraged): I will, I definitely will. Is there any cheese?*

3.6